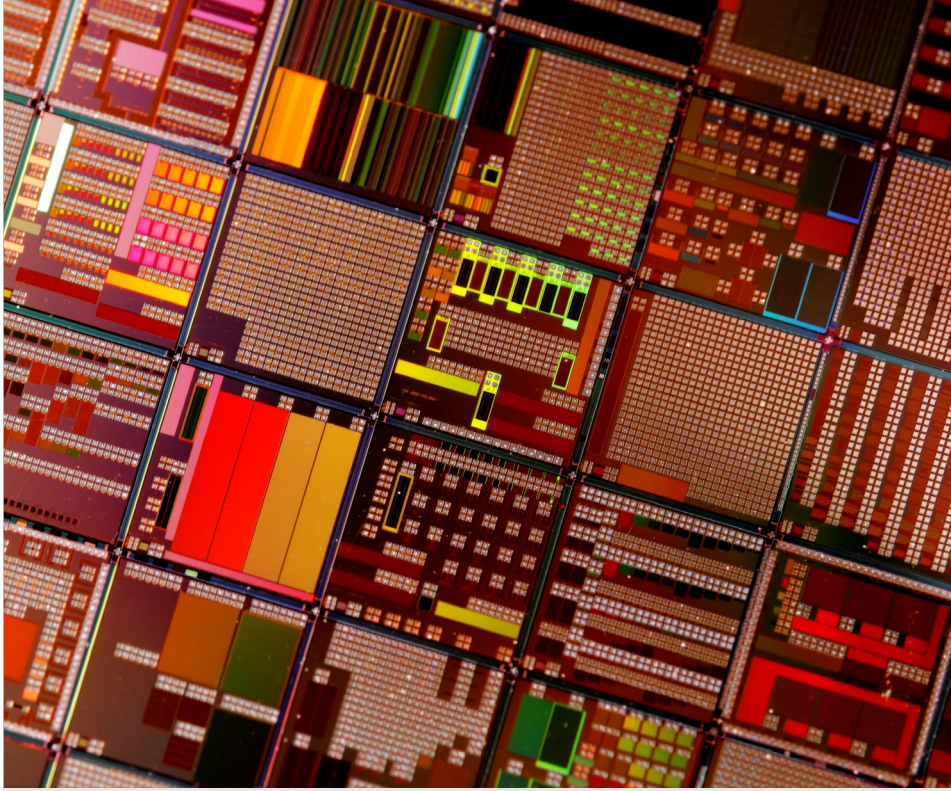




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TESİD ALMANACS WITH
THIS QR CODE

Our dreams of a smart life
and a better future for Türkiye
continue to grow.

2024



Turkish
Electronics
Industry
Almanac

2025

TESİD

Türk Elektronik
Sanayicileri Derneği
Turkish Electronics
Manufacturers Association

www.tesid.org.tr

empa:::electronics

Creating Value with Technology

We are also involved in Turkey's visionary projects

We are in the air, on land, in space, at sea, wherever there is technology. From defense industry to electric vehicle production, from industrial electronics to lighting, we take pride in contributing to Turkey's domestic and national visionary projects by supplying technology.

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Aerospace &
Defence



AI & Cloud



IoT & Sensor



E-Mobility



Lighting



Power



PRECISION CLOCK GENERATOR

*Uninterrupted and Precise
Timing Information*

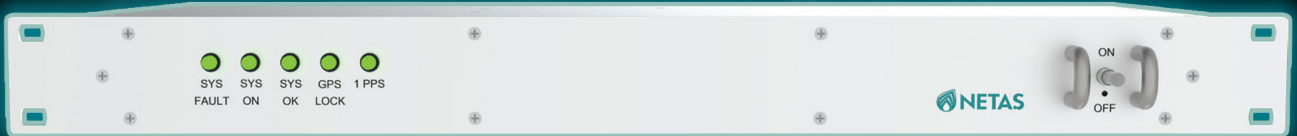
*Power of
GNSS Technology*

*Easy Integration
Quick Deployment*

*Future-Ready
Solution*



In every field where time information is critical,
With the power of GNSS technology and uninterrupted operation
Make sure your operations are in safe hands!



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Yaman Tunaoğlu
TESİD Chairman of the Board

Dear Electronics Industry Stakeholders,

We are proud to once again welcome the 2024 issue of the TESİD ALMANAK. This valuable publication, which has been taking the pulse of our sector and becoming a reference source since 1990, continues to increase the profits of the Turkish electronics industry.

In this issue, you will find valuable articles on a wide range of topics, from ways to increase our global competitiveness to the critical role of our SMEs, from our export potential to the vital importance of R&D and innovation in our sector. You will read various assessments on all the key topics that will shape our sector's capabilities, from human resource issues to digital and green transformation, from cybersecurity to the use of artificial intelligence.

2024 brought with it significant opportunities for the Turkish electronics industry. This period, marked by the unabated pace of global economic changes in currencies and technological change, once again demonstrated the dynamism and adaptability of our sector. The increase in our exports,

advancements in R&D and innovation, and our extensive human resources allow us to look with optimism at potential developments in the sector.

However, we recognize that we must work even harder together to stand out from the competition, grow sustainably, and play a more effective role in global markets. This almanac will be an important resource for developing solutions to the challenges facing our sector, its current state, and for developing future strategies and collaborations.

As TESİD, I would like to be open to all kinds of collaborations for the development of our sector. I hope the information you will gain through this almanac will add value to your work and contribute to the advancement of our sector.

Sincerely,
Yaman Tunaođlu
TESİD Chairman of the Board

ABOUT TESİD

TESİD (Turkish Electronics Manufacturers Association) was founded in 1989 by 24 members pursuing the initiatives of the representatives of the electronics industry companies and electronics faculty members in of the universities with the encouragement of the Turkish Ministry of Industry and Trade officials. The association started its activities under ESİD title then the name was registered as the Turkish Electronics Manufacturers Association (TESİD) in 1992 with the decision of the Council of Ministers. All organizations conducting R&D work and production in electronics industry, information technologies and related service sector in Türkiye are eligible for membership. TESİD currently has 147 members from 80 industrial organizations.

OUR MISSION

Leading the Turkish Electronics Industry, Information Technologies and related service sectors towards continuous competitiveness and increasing its contributions to the national economy and the people.

OUR GOALS

1. Encouraging and supporting technological creativity to achieve a common goal among universities, industry and the government so that competitive, flexible, productive and highquality goods and services are produced.

2. To support:

- a) the development of a worldwide competitive electronics industry.
- b) the expansion of capacity and productivity as well as the enchancement of the investment opportunities of the industry.
- c) the improvement of the standard of living of employees, for greater employee satisfaction.

3. Concerning policies, strategies, standards and development within the electronics industry;

- (a) Leading their implementation for the benefit of the country,
- (b) Forming opinions and policies,
- (c) Compiling the necessary data.

4. Supporting the Electronics Industry to develop into a strong, environmentally aware, safety conscious establishment that is an overall positive contributor to the community.

It is our wish to develop TESİD into an organisation which is perceived as

- * Reliable, innovative,
- * Independent, continuous
- * liberal and participative

by its members and the community.

TESİD

Türk Elektronik
Sanayicileri Derneği
*Turkish Electronics
Manufacturers Association*

CONTACT INFORMATION

Türk Elektronik Sanayicileri Derneği
Değirmenbahçe Caddesi İSTWEST Sitesi B
Blok D:96 Bahçelievler-İSTANBUL
www.tesid.org.tr tesid@tesid.org.tr

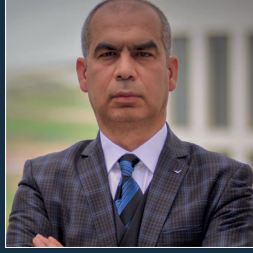
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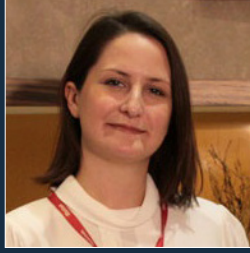
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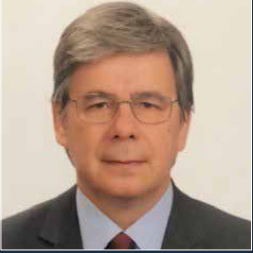
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► TESİD Chairman Yaman Tunaoğlu emphasized that the electronics sector is undergoing a major transformation, stating that Türkiye has become a major manufacturer in this field, but that greater emphasis must be placed on R&D investments, new technologies, and collaborations for greater growth and efficiency.



The Electronics Sector Gathers at the TESİD SUMMIT

The Turkish Electronics Industrialists Association (TESİD) brought together key players at a summit held at the Istanbul Cevahir Hotel on December 11th to shape the future of the sector together with all its stakeholders. Panels titled “Horizon Tour and Target-Oriented Strategy in Technology” and “Technology and Art Collaboration” were held as part of the summit. The impact of technologies such as artificial intelligence, big data, and virtual reality on the sector and the steps that should be taken to increase Türkiye’s competitiveness in this field were discussed.

TESİD Chairman Yaman Tunaoğlu emphasized that the electronics sector is undergoing a major transformation, stating that Türkiye has become a major manufacturer in this field, but that greater emphasis must be placed on R&D investments, new technologies, and collaborations for greater growth and efficiency. In the “Technology Horizon Tour and Target-Focused Strategy” panel held by



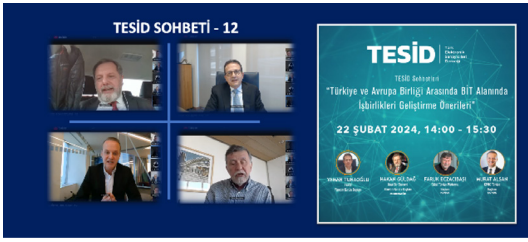
the Turkish Electronics Industrialists' Association, GE Aerospace Türkiye General Manager Dr. Aybike Molbay and Sabancı University's Prof. Dr. Oğuz Babüroğlu discussed the impact of future technologies such as artificial intelligence, autonomous vehicles, and quantum computers on the sector and the steps that must be taken to increase Türkiye’s competitiveness in this field.

In the “Technology and Art Collaboration” panel, moderated by TESİD Board Member Prof. Dr. Sıddık Yarman, Prof. Dr. Tayfun Akgül from ITU and businessman and artist Edi Cavit Yakar shared inspiring insights on how art is inspired by technology and how technology transforms art. The panelists' works, exhibited in the foyer throughout the summit, were viewed with interest by attendees. We were proud to host Dr. Fikret Yücel, founder of TESİD and a doyen of our sector, as a guest speaker at the Gala Dinner held following the panels and awards ceremony held as part of the summit.

We would like to thank our sponsors, Savronik, Karel, Makelsan, Daiichi, Deico, Empa, Entes, Multitek, Netelsan, Onur, Udea, Electra, Elektrotel, Eta, and Netaş, who made the TESİD Summit possible..

TESİD Talks -12 “Developing Collaboration Between Türkiye and the EU in the Information and Communication Technologies (ICT) Sector”

TESİD TALK-12 discussed proposals for “Developing Collaboration Between Türkiye and the EU in the Information and Communication Technologies (ICT) Sector.” The conversation, opened by Yaman Tunaoğlu, Chairman of the Board of Directors of TESİD (ECONOMY Newspaper), continued with Hakan Gültaş, Chairman of the Board of Directors of the ECONOMY Newspaper, and Murat Alsan. The discussion also included discussions on the findings and proposed solutions from the report prepared by the Digital Türkiye Platform and KPMG. Possible actions regarding Information and Communication Technology Projects in



Türkiye were evaluated. The importance of effective communication for collaborations was emphasized. It was discussed that European countries are in dire need of engineers working in the field of Information and Communication Technology, and that to maintain Türkiye's capacity to maintain its skilled engineers in this field, participating in projects and/or providing services through projects that meet the needs of the EU could be effective. It was also discussed that undertaking high-value-added projects could provide engineers with the opportunity to receive salaries equivalent to those in EU countries.

TESİD Talks - 13 Artificial Intelligence and Robotics

Google Türkiye Marketing Director Serkan Girgin and Boston Dynamics Software Engineer (Perception Software) Mustafa Yasin Hasekioğlu participated in the chat.

The chat was moderated by Hakan Güladağ, Chairman of the Board of Directors of "Nesil Bir Ekonomi Newspaper." TESİD Chairman Yaman Tunaoğlu provided information about the brief history of artificial intelligence, explaining that these developments are important for the benefit of humanity and a comfortable life. The contributions of artificial intelligence applications to encouraging entrepreneurship were also discussed.

During the chat: The latest developments in artificial intelligence and robotics, the transformations these fields will create in the next 5-10 years, ethical and legal concerns in artificial intelligence and robotics, ethical and legal issues, the impact of artificial intelligence and robotics on education and the labor market, developments in sub-branches of artificial intelligence such as deep learning, natural language processing, and computer vision, the possibility of artificial intelligence surpassing human intelligence, the potential for bias and discrimination in artificial intelligence, the accuracy (scientific accuracy) and ethics of what artificial intelligence does, the extent to which artificial intelligence will replace the human workforce in the workplace, recent developments in robotics, studies aimed at making robots more natural and interactive with

humans, the contribution of robotics to health, business life, storage, and security, the impact of home robots and artificial intelligence assistants on our daily lives, studies conducted in Türkiye, and advice for young engineers were discussed..

TESİD Talks - 14 Cybersecurity-Focused Product Development in the Internet of Things

Professor Dr. Muhammed Ali Aydın, Head of the Istanbul University-Cerrahpaşa Internet of Things Ecosystem Security Testing and Evaluation Center, participated as a guest in the 14th TESİD Talk, titled "Cybersecurity-Focused Product Development in the Internet of Things."

As is known, the Internet of Things (IoT) is a vast network where smart devices, increasingly integrated into our daily lives, communicate with each other over the Internet. While the number and diversity of devices in this network are rapidly increasing, cybersecurity threats are also growing at the same rate. Therefore, ensuring the security of IoT devices has become one of today's most important technological challenges. Cybersecurity-Focused Product Development is an approach that aims to close these security gaps in the IoT ecosystem. This approach integrates cybersecurity into the design, development, and production processes of IoT devices, resulting in products that are more resilient to potential attacks.

TESİD Participates in Defense and Aerospace Cooperation Days Fair

The "Industrial Cooperation Days in Defense and Aerospace"-ICDDA event, organized by the OSTİM Defense and Aviation Cluster (OSSA), brings together key industry and SME companies operating in the military, civilian, defense, aviation, and space sectors to explore new markets, seize business opportunities, and establish business partnerships. This year, TESİD also participated in the event held at the ATO Congress Center in Ankara from April 17-19, 2024.

Sector Issues and Reporting Working Group Established

The 22nd TESİD Innovation and Creativity Awards, organized to support innovation and creativity in the electronics industry, were presented at the awards ceremony held this year as part of the Summit. A total of 17 successful projects were recognized in the Large Company, SME, Startup, and Doctoral Thesis categories.

► IoT devices has become one of today's most important technological challenges. Cybersecurity-Focused Product Development is an approach that aims to close these security gaps in the IoT ecosystem. This approach integrates cybersecurity into the design, development, and production processes of IoT devices, resulting in products that are more resilient to potential attacks.

The 22nd TESİD Innovation and Creativity Awards Found Their Winners

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Award Winners and Their Projects

Special Jury Prize
Summit Prize

SAVRONİK

Electronic Activation Unit Product Family

EAB is a unit that generates and stores the high voltage required to activate the firing chain of the relevant platforms, switches the energy upon activation, and safely discharges this energy upon return to the safe state.

Special Jury Prize

NETAŞ

Visium Manage

Visium Manage serves as our robust test case management software designed to centralize and streamline your test process and ensure the effective organization and management of your test activities.

Special Jury Award

ONUR

Integrated Tactical Mission System

The product provides processing power and memory for voice and data switching/recording, radio-link-satellite-broadband integration, local/wide area network, tactical guidance, time distribution, and command and control software within a reinforced and integrated structure.

Special Jury Award

EMPA ELECTRONICS

TIREMO

Tiremo is an automatic machine learning platform that collects data via cloud-based IoT infrastructure, enabling the training of artificial intelligence models and the productization of these developed models on microcontrollers at the edge, without the need for code development. It enables the creation of conditions and the fully automated chemical bonding process.

Special Jury Award

ARVENTO

Driving Safety and Fuel Savings Project with Arvento

Arvento's Technical Performance Report, currently available to its customers, calculates safe and economical driving scores for the vehicle and driver, using parameters such as driving distance, speed, total fuel consumption, engine speed, etc.

Special Jury Award

NETELSAN

Two-Wire Intercom

This intercom system provides voice, video, data, and power transmission over two cables for use in apartments, complexes, and other residential properties.

Special Jury Award

EHSİM

Expendable RF Active Decoy

Expendable RF (Radio Frequency) Active Decoy is a countermeasure electronic warfare system developed to protect aerial platforms from radar-guided active/semi-active missiles.

Special Jury Award

ELEKTRA

Dynamix Active Harmonic Filter

The Active Harmonic Filter offers a solution for facilities with high harmonic load density, dynamically changing harmonic levels, low power factor, load imbalance, high neutral current, and unbalanced distribution of single-phase harmonic loads.

Special Jury Award

MULTITEK

DIAPHONBOX - Cloud Gateway for Analog Intercom Systems

The Active Harmonic Filter offers a solution for facilities with high harmonic load density, dynamically changing harmonic levels, low power factor, load imbalance, high neutral current, and unbalanced distribution of single-phase harmonic loads.

22nd TESID Innovation and Creativity Awards



Special Jury Award

BARFAS

Mobile App-Supported Smart Lock

This electronic lock, equipped with fingerprint, card reader, and password-enabled access features, is fully compatible with home, office, hotel, and hospital doors. Access times, temporary passwords, and records can be controlled via a mobile app.

Product Development and Commercialization Award in the SME Category

ASIS

FUELEYE + PETECH-AI

The product was developed using artificial intelligence technologies to recognize vehicles arriving at a fuel station for refueling and various objects within the station, to allow/deny fuel transfers, and to prevent the wrong type of fuel being filled.

Jury Special Award

BIYOMOD

PingBit-Mate - Smart Health Assistant for Elderly Individuals

This smartwatch solution provides independent and healthy living support for elderly individuals without the need for a smartphone or mobile app.

Special Jury Award

IN HELDS

ThermTrap Latent Thermal Energy Storage Unit

ThermTrap is a latent thermal energy storage unit that allows users to store waste heat at a high energy density and constant temperature, enabling them to use it most efficiently when heating or process heat is needed, with the help of a smart control unit, thus reducing energy consumption and carbon footprint.

Innovative and Creative Product Award in the Large Company Category

HAVELSAN

OPKIS

Developed for remote energy control and monitoring of commercial or military unmanned autonomous marine vehicles, it is a system with special security modes that allows control of on-platform systems (such as engines, sensors, crane controls, etc.).

Doctoral Thesis: The Most Successful Scientific Application in University-Industry Collaboration

UMUT FIRAT

Compressive Sensing of Cyclostationary Propeller Noise

This is the application of compressed sensing methods to problems such as signal detection and direction of arrival estimation by exploiting the sparsity created by cavitation noise from ship propellers.

Innovative and Creative Product Award in the SME Category

DEICO

Aviolinks Modular USB/Ethernet Avionic Interface Converter Project

The Aviolinks modular USB/Ethernet avionic interface converter is a modular data bus converter unit that converts avionic data bus protocols such as MIL-STD-1553, ARINC 429, ARINC 825, and RS-485 to USB and Ethernet interfaces.

Large Company Category Product Development and Commercialization Award

KAREL

GENTSİS

Developed to monitor potential smuggling and illegal activities in vehicles transiting through Türkiye. It incorporates CO2, light, pressure, temperature, humidity, and radar sensors.

TESİD

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TESİD 2024
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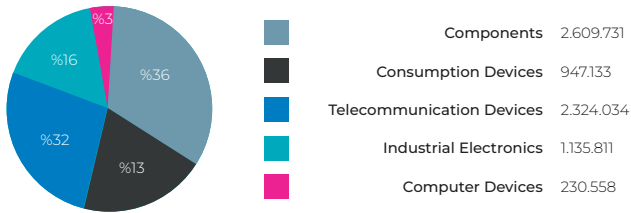


TURKISH ELECTRONICS INDUSTRY

2024 OVERVIEW OF THE ELECTRONICS INDUSTRY IN TÜRKİYE

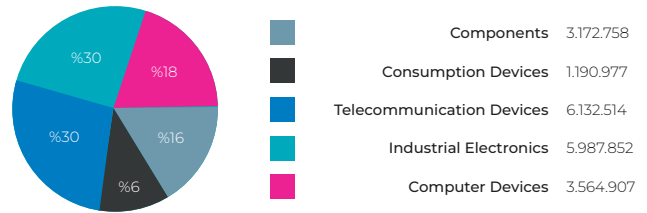
OVERVIEW OF 2024 TÜRKİYE ELECTRONICS INDUSTRY

TOTAL EXPORTS OF THE SECTOR 2024



TOTAL 7.247.267 DOLLAR

TOTAL IMPORTS OF THE SECTOR 2024



TOTAL 20.049.008 DOLLAR

ELECTRONIC INDUSTRY PRODUCTION IMPORT AND EXPORT BY YEARS

YEARS	Import (Thousand \$)	Export (Thousand \$)
2007	14.097.728	4.896.361
2008	13.775.958	5.955.081
2009	12.227.079	4.885.754
2010	14.510.748	5.585.804
2011	16.726.134	6.498.182
2012	16.109.973	6.838.803
2013	17.373.695	6.574.173
2014	18.198.691	6.632.417
2015	17.286.392	5.767.682
2016	18.643.639	5.317.274
2017	20.234.296	5.384.779
2018	19.064.372	5.987.131
2019	18.176.382	6.108.196
2020	18.101.749	4.832.091
2021	18.960.334	5.771.766
2022	18.579.308	5.796.818
2023	21.094.732	6.865.262
2024	20.049.008	7.247.267

THOUSAND US DOLLARS

BREAKDOWN OF ELECTRONIC INDUSTRY PRODUCTION BY SUBSECTORS

	2018	2019	2020	2021	2022	2023	2024
Total Import	223.047	202.703	219.4	260.6	363.7	339.05	344.20
Electronics Industry	19.064	18.176	18.101	18.960	18.579	21.094	20.049
% Share of the Electronics Industry	8,5	8,9	8,25	8,25	5,11	5,04	5,81
Total Export	167.920	171.480	169.5	213.6	254.1	232.3	261.8
Electronics Industry Export	5.987	6.108	4.832	5.771	5.796	6.865	7.247
% SHARE	3,56	3,56	2,56	2,56	2,56	2,68	2,68

MILLION US DOLLARS

DISTRIBUTION OF EXPORT AND IMPORT OF THE ELECTRONICS INDUSTRY OVER YEARS

SUB SECTORS	Import (THOUSAND \$)			Export (THOUSAND \$)		
	2022	2023	2024	2022	2023	2024
Components	4.527.563	4.587.247	3.172.758	1.518.217	2.140.839	2.609.731
Consumption Devices	1.206.016	1.116.901	1.190.977	1.115.299	1.133.670	947.133
Telecommunication Devices	4.589.942	5.608.263	6.132.514	2.056.157	2.238.707	2.324.034
Other Prod. End. Devices	4.570.574	5.498.972	5.987.852	860.860	1.097.655	1.135.811
Computer Devices	3.685.213	4.283.349	3.564.907	246.285	254.391	230.558
TOTAL	18.579.308	21.094.732	20.049.008	5.796.818	6.865.262	7.247.267

Export and Import Figures have been obtained from TURKSTAT.
Average of 2024 year was 1 \$ = 32.51 TL.

DISTRIBUTION OF EXPORT AND IMPORT OF THE ELECTRONICS INDUSTRY BY COUNTRIES 2024

Group Name	Country Name	Ratio (%)	Import (Thousand \$)	Ratio (%)	Export (Thousand \$)
North America	ABD		1.509.344		201.190
	Kanada		174.412		554.056
	Sub Total	4,65	1.683.756	0,96	755.246
European Union	GERMANY		1.466.334		578.467
	ENGLAND		323.497		505.337
	FRANCE		455.285		440.015
	ITALY		574.223		180.612
	CZECH REPUBLIC		451.700		39.189
	POLAND		284.334		99.688
	BULGARIA		295.175		266.538
	SPAIN		299.524		149.129
	HUNGARY		289.943		96.796
	NETHERLANDS		182.807		140.971
	SWEDEN		46.996		62.204
	IRELAND		165.716		39.023
	ROMANIA		101.566		97.934
	AUSTRIA		112.745		43.257
	BELGIUM		1.603.438		10.207
	SLOVAKIA		53.498		5.035
FINLAND		76.597		33.437	

DISTRIBUTION OF EXPORT AND IMPORT OF THE ELECTRONIC INDUSTRY BY COUNTRIES 2024

Group Name	Country Name	Ratio (%)	Import (Thousand \$)	Ratio (%)	Export (Thousand \$)
	ESTONIA		49.321		1.410
	POTUGAL		11.800		200
	GREECE		235		39.319
	DENMARK		36.579		6.984
	CROTIA		8.640		11.593
	OTHER COUNTRIES		301.619		64.782
	Sub Total	25,02	7.191.572	53,01	2.912.127
Non-EU Europe	SWITZERLAND		312.141		598.548
	T.N. CYPRUS		3.301		78.901
	NORWAY		93.624		20.650
	RUSSIAN FEDERATION		6.140		31.717
	MACEDONIA		10.537		34.878
	UKRANIE		3.458		13.960
	SERBIA		1.715		37.441
	OTHER COUNTRIES		8.865		82.430
	Sub Total	1,50	439.781	4,84	898.525
North Africa & Middle East	SAUDI ARABIA		1.360		183.949
	ISRAEL		96.028		18.838
	IRAQ		3.233		320.845
	U.A.E		20.520		515.681
	IRAN		760		65.661
	ALGERIA		505		61.580
	EGYPT		18.972		0
	TUNUSIA		22.380		57.196
	MOROCCO		9.000		37.158
	QATAR		400		41.630
	SYRIA		0		28.274
	LIBYA		0		1.654
	OTHER COUNTRIES		16.800		131.982
	Sub Total	0,54	189.958	24,50	1.464.448
Caucasus & Middle East	TURKMENISTAN		155		134.000
	AZERBAIJAN		105		198.065
	GEORGIA		8.000		50.505
	KAZAKHSTAN		0		9.520

DISTRIBUTION OF EXPORT AND IMPORT OF THE ELECTRONIC INDUSTRY BY COUNTRIES 2024

Group Name	Country Name	Ratio (%)	Import (Thousand \$)	Ratio (%)	Export (Thousand \$)
	OTHER COUNTRIES		621		73.254
	Sub Total	0,04	8.881	8,43	465.344
Middle and South America	MEXICO		214.542		9.381
	COSTA RICA		15.746		10
	BRAZIL		3.600		1.700
	OTHER COUNTRIES		13.375		32.069
	Sub Total	0,93	247.263	0,64	43.160
Uzak Doğu	CHINA		5.718.260		72.870
	SOUTH KOREA		1.417.208		7.888
	VIETNAM		928.896		13.248
	TAIWAN		407.117		18.619
	JAPAN		458.194		3.292
	MALAYSIA		218.118		12.325
	THAILAND		579.560		8.329
	SINGAPORE		54.854		8.804
	INDONESIA		79.747		33.458
	PHILIPPINES		63.085		4.224
	HONG KONG		19.162		15.109
	OTHER COUNTRIES		56.380		7.693
	Sub Total	66,15	10.000.581	2,18	205.859
Free Trade Zones	ISTANBUL I. AND T. FREE ZONE		1.070		79.460
	AEGEAN FREE ZONE		19.535		36.075
	BURSA FREE ZONE		59.860		4.000
	OTHER FREE ZONE		22.182		147.749
	Sub Total	0,43	102.647	1,59	267.284
Other Countries	INDIA		155.056		28.375
	AUSTRALIA		4.600		14.785
	GANA		15		17.800
	PAKISTAN		204		13.150
	OTHER COUNTRIES		24.694		161.164
Subtotal		0,74	184.569	3,84	235.274
COMPONENTS TOTAL		100,00	20.049.008	100,00	7.247.267



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SECTORAL OVERVIEW

AN OVERVIEW OF THE ELECTRONICS INDUSTRY AND GLOBAL DEVELOPMENTS

GLOBAL COMPETITIVENESS OF THE TURKISH ELECTRONICS INDUSTRY

COMPETITIVENESS OF THE TURKISH ELECTRONICS
INDUSTRY AND THE ROLE OF SMES

EXPORT POTENTIAL FOR OUR ELECTRONICS INDUSTRY -I

EXPORT POTENTIAL FOR OUR ELECTRONICS INDUSTRY -II

R&D AND INNOVATION IN THE TURKISH ELECTRONICS INDUSTRY

TÜRKİYE IN 2050: HIGH-TECH MANUFACTURING AND LEADERSHIP IN
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HUMAN RESOURCES PROBLEM IN TURKISH ELECTRONICS SECTOR

DIGITAL AND GREEN TRANSFORMATION IN THE TURKISH
ELECTRONICS INDUSTRY

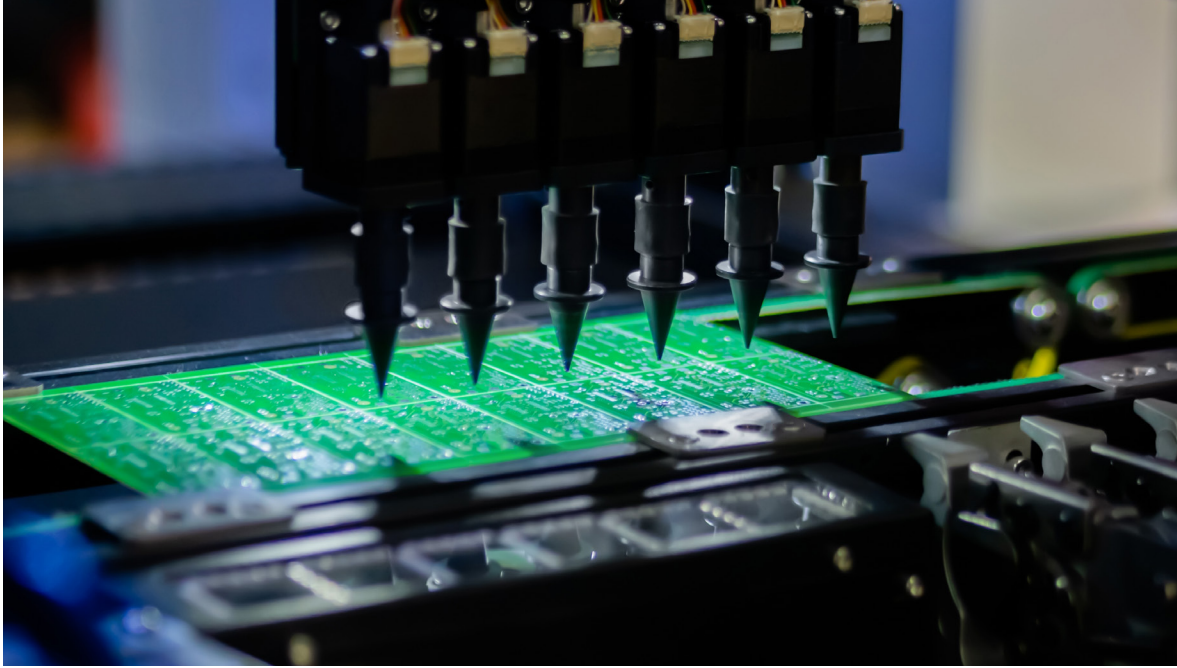
CYBER SECURITY IN THE TURKISH ELECTRONICS INDUSTRY

USE OF ARTIFICIAL INTELLIGENCE IN THE TURKISH ELECTRONICS INDUSTRY

THE USE OF ARTIFICIAL INTELLIGENCE IN THE TURKISH
ELECTRONICS INDUSTRY: ON THE VERGE OF TRANSFORMATION

THE FUTURE OF THE TURKISH ELECTRONICS INDUSTRY

We would like to thank İbrahim Uğurlu, Chairman of the Board of Directors of UDEA, a member of TESİD, for this article.



Türkiye has a significant growth potential in the electronics industry, and its geographical location, young population, and increasing technology investments support this potential. The country is taking important steps in the fields of production and R&D and has a strong production capacity, especially in areas such as defense, consumer electronics, white goods, and automotive electronics.

The electronics industry has gained great momentum with the widespread use of microchips and computers since the 1970s and has become one of the cornerstones of the modern world in the 21st century with mobile devices, cloud computing and autonomous systems. Today, the electronics industry offers innovations that lead to the transformation of almost all other industries. The subgroups of the industry include a wide range from electronic components to consumer electronics.

Outlook of the Global Electronics Industry

The electronics industry has a dynamic structure that is constantly growing on a global scale and renewing itself in parallel with technology. In 2023, the foreign trade volume of the sector amounted to approximately 3.6 trillion dollars, and this figure accounted for approximately 15% of global foreign trade, making the electronics industry the largest sector in the world has moved to the position. Behind this greatness are new markets and opportunities created by technology. However, the uneven distribution of the global manufacturing ecosystem is one of the key challenges facing the industry. 87% of the world's chip production and 70% of electronic card production are carried out in the Far East; Asian countries such as China, Taiwan, South Korea, and Japan lead the way in the industry. China, in particular, is the leader in the sector with its production capacity and cost advantages.

Global Transformation and New Production Map

Factors such as epidemics, natural disasters, supply bottlenecks, Brexit, the Ukraine War, and trade wars cause the global production map to be reshaped. This situation pushes many companies to diversify their production and supply points. However, this transformation is expected to be challenging, especially in the electronics sector, due to reasons such as high investment costs, lack of know-how and the need for qualified workforce. According to research by the Boston Consulting Group, many North American companies have moved some of their production or supply centers outside of China, and this trend is expected to continue in the coming period. Mexico, Southeast Asia, India, Türkiye and Morocco are seen as competitive destinations that stand out in this restructuring.

U.S. imports from China are declining, while Mexico, India and the Southeast Its imports from Asian countries have increased significantly. In order to be successful in this new era, countries and companies must develop strategies that are suitable for their priorities and sector dynamics. While geopolitical uncertainties and trade wars reduce China's export power in some sectors, countries such as Mexico, Southeast Asia and India are becoming more important in export production. Türkiye, with its competitive costs, workforce potential and proximity to European markets, offers important opportunities, especially for companies that make early investments.

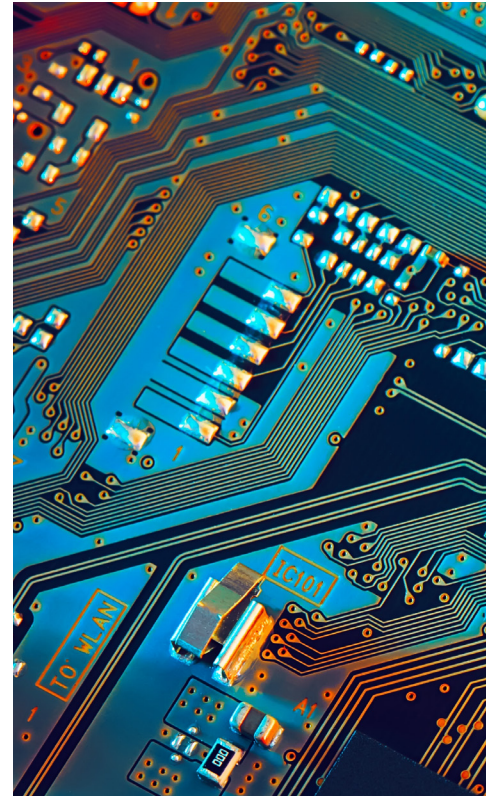
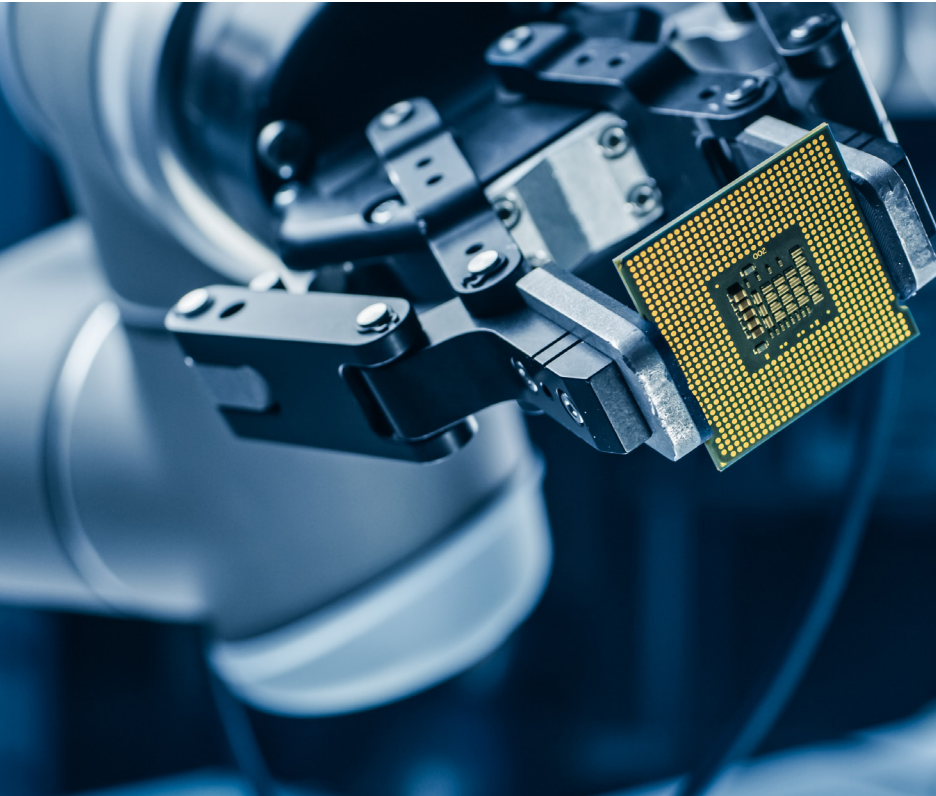
Türkiye's Potential in the Electronics Sector and What Needs to Be Done

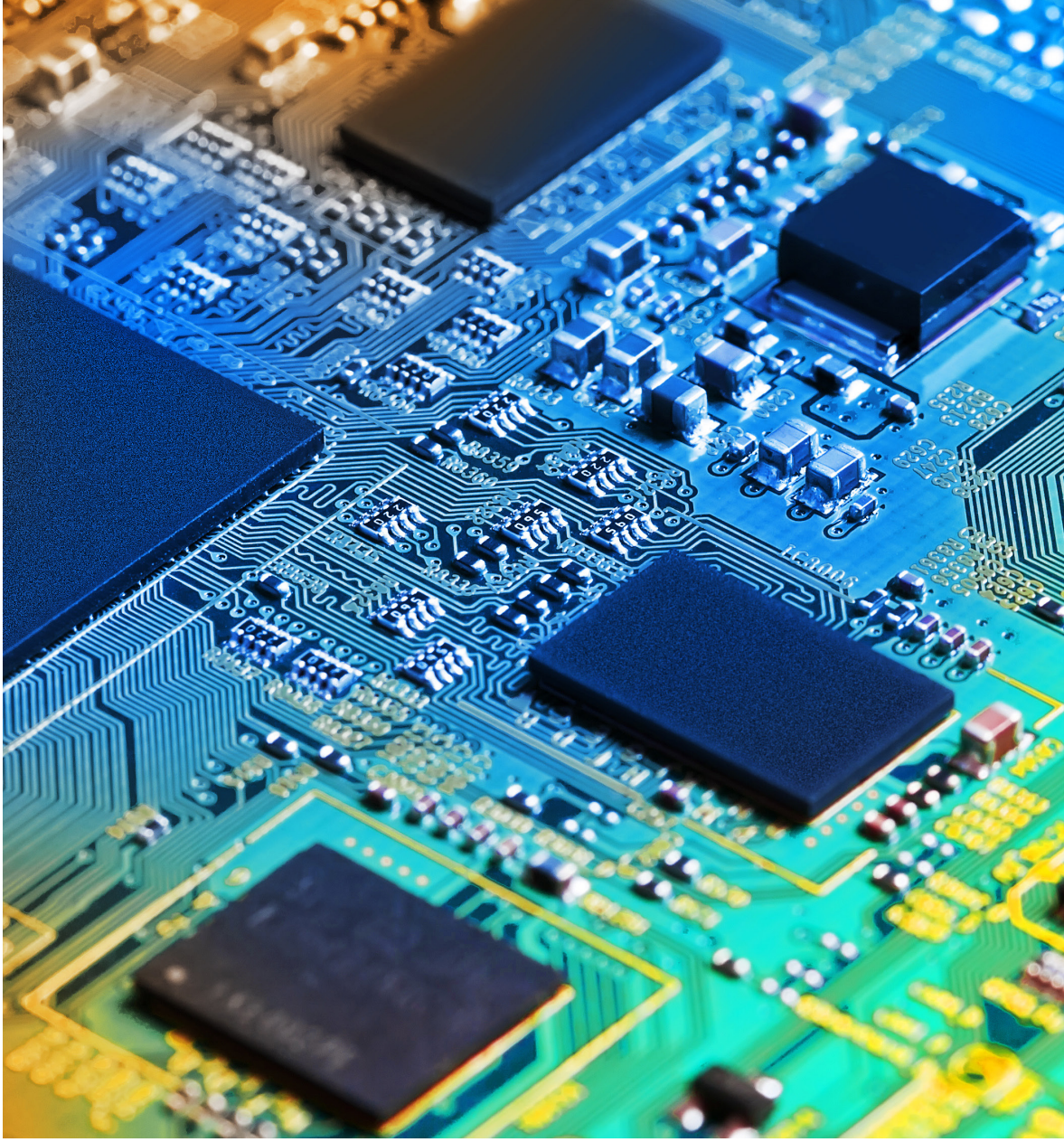
Türkiye has a significant growth potential in the electronics industry, and its geographical location, young population, and increasing technology investments support this potential. The country is taking important steps in the fields of production and R&D and has a strong production capacity, especially in areas such as defense, consumer electronics, white goods, and automotive electronics. However, there are also challenges such as high tax rates, import dependency, and fluctuations in exchange rates. Türkiye needs to take strategic steps, especially investment incentives, in order to seize the opportunity to shift some of its electronics production from China. In addition, support such as special economic zones, R&D supports, technology parks, localization of the supply chain, employment incentives and development of trade relations should be provided. In this way, Türkiye can become a regional center in electronics manufacturing and strengthen its technological independence as well as its economic growth.

Result

The electronics industry continues to grow both globally and in Türkiye, and factors such as the digital revolution, IoT, artificial intelligence and environmental sustainability are shaping the future of the industry. Maximizing Türkiye's potential in this sector will make a significant contribution to reducing the current account deficit and economic growth.

Source: Electronics Industry Overview and Developments, İbrahim Uğurlu, UDEA





The Turkish electronics industry is taking important steps to increase its global competitiveness by 2025. In particular, the strategies determined within the framework of the Twelfth Development Plan and the investments of the sector-leading companies aim to bring Türkiye to a stronger position in the field of electronics worldwide.

The Turkish electronics industry is taking important steps to increase its global competitiveness by 2025. In particular, the strategies determined within the framework of the Twelfth Development Plan and the investments of the sector-leading companies aim to bring Türkiye to a stronger position in the field of electronics worldwide.

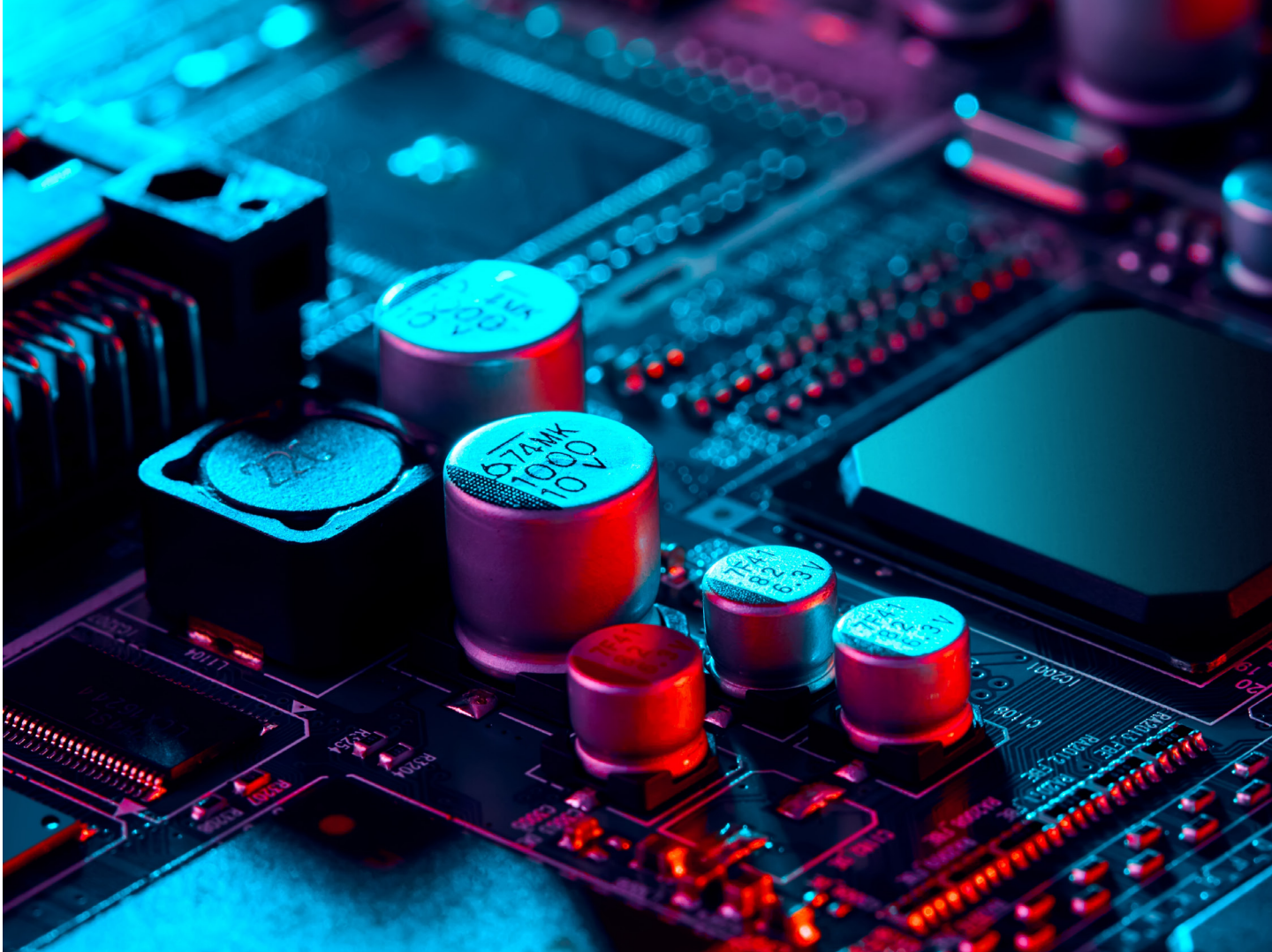
Twelfth Development Plan and Sectoral Strategies

The Twelfth Development Plan (2024-2028) aims to increase the production and export of high value-added products in Türkiye's electronics sector. The main objectives of the plan include developing domestic production and technology, reducing import dependency, investing in high-tech fields, and supporting SMEs. In particular, it is planned to encourage R&D studies in areas such as sensor technologies, energy storage and power electronics. These strategies aim to increase Türkiye's global competitiveness in the electronics industry.

Investments of Leading Companies and Global Competitiveness

Elektra Elektronik, one of the leading companies in the sector, has strengthened its global competitiveness by increasing its production capacity by 25% in 2024. The company aims to increase its export rate to 55% by 2025 and increase production efficiency with technological infrastructure investments. Such investments contribute to Türkiye's more competitive position in the international arena in the electronics sector.

The Turkish electronics industry is in a significant transformation process with strategic plans and investments to increase its global competitiveness by 2025. Policies focused on domestic production and technology development, investments in high-tech fields, and steps taken by industry-leading companies serve Türkiye's goal of becoming a stronger player in the electronics industry worldwide.



We would like to thank Levent Fadilođlu, General Manager of TESİD, ENTES for this article.



The future of the Turkish electronics industry depends on the empowerment of SMEs through international collaborations and government support. Germany's "Mittelstand" model shows how SMEs become global leaders through specialization and innovation.

Türkiye's electronics industry draws attention with its high value-added production and innovation-oriented growth. According to 2024 data, the total exports of the electrical and electronics sector reached USD 16.9 billion. However, a significant part of this figure consists of low value-added products such as cables and white goods. For example, while the value per kilogram of white goods exports remains at the level of 3.87 dollars, this figure reaches 15.52 dollars in electronic products; On the other hand, much higher added values are obtained in energy management systems and industrial electronic solutions with advanced technology (Source: TET-December 2024 Export Report).

Strategic Importance of SMEs

The main competitiveness of the electronics industry in Türkiye comes from specialized SMEs such as ENTES. These companies make significant contributions to the country's economy by producing export values of up to 80 dollars per kilogram with their high-tech products. The success of industrial giants such as Germany is based on a similar model: SMEs play critical roles in the global supply chain, with R&D-driven production and specialization in niche markets. Supporting SMEs in Türkiye is vital for increasing value-added exports as well as employment.

As one of the leading companies in the Turkish electronics industry, ENTES has demonstrated its commitment to innovation by establishing its R&D center. It is an innovation brand that has developed the world's first 3-Phase Reactive Power Control Relay



and the world's smallest ethernet energy meter by allocating more than 7% of its sales revenues to R&D projects. By exporting to more than 70 countries from Canada to Australia, it has proven the international reliability and competitiveness of Turkish engineering.

Opportunities in High Value-Added Areas

Among the fastest growing sub-branches in the electronics industry are energy management, industrial IoT and defense electronics. Especially in smart grid solutions and power quality technologies, Turkish companies stand out in the European and Middle Eastern markets. In 2024, exports of electricity generation and distribution equipment increased by 3% to 6.06 billion dollars; Significant gains have been made in markets such as Iraq and the USA. This success proves the role of SMEs in technology exports. (Source: TET-December 2024 Export Report).

Steps for Sustainable Growth

The future of the Turkish electronics industry depends on the empowerment of SMEs through international collaborations and government support. Germany's "Mittelstand" model shows how SMEs become global leaders through specialization and innovation.

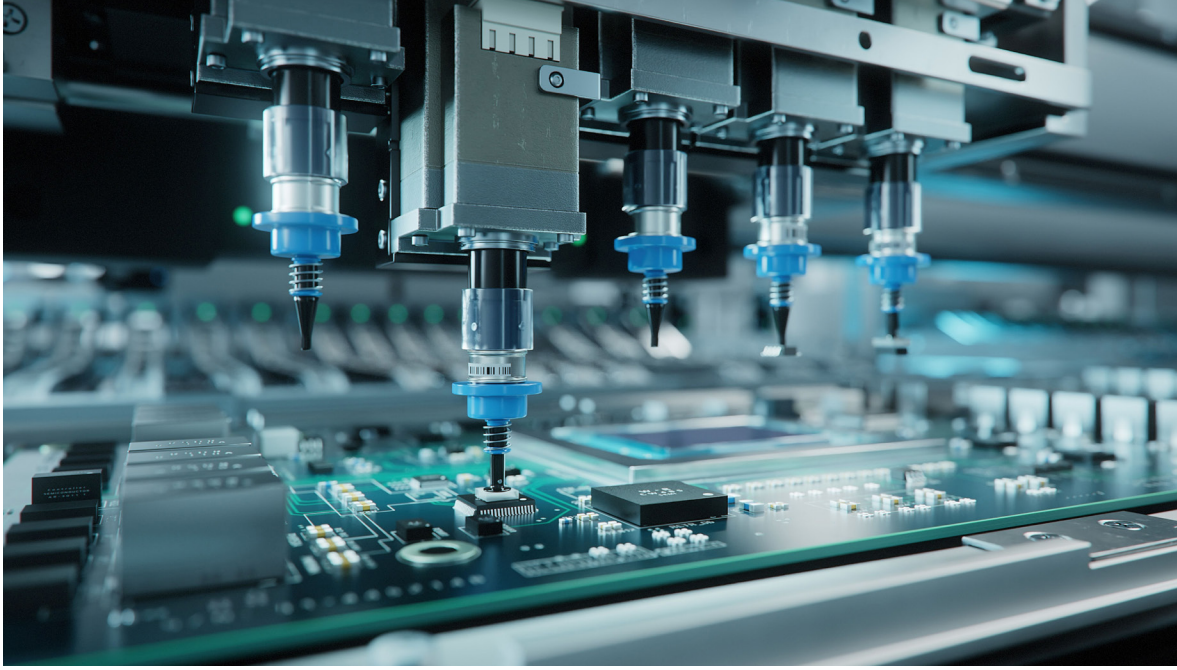
With similar strategies in Türkiye:

- Increasing R&D incentives,
- Development of qualified human resources,
- There is a need to focus on energy efficiency and digital transformation projects.

Result

Türkiye's electronics industry makes a difference in global competition thanks to the high-tech production of SMEs. The firms' expertise in energy management reflects the potential of the sector. Strengthening policies for SMEs for sustainable growth and prioritizing value-added exports can transform Türkiye into a production base in electronics

We would like to thank Faik Erem, Chairman of the Board of Directors of TESİD member ENTES, and Vural Akman, Chairman of the Board of Directors of TESİD Member EMPA, for this article.



For SMEs in the electronics sector, there are great export opportunities in the future in areas such as e-mobility, smart cities, agriculture, autonomous robots. In order to be successful in these areas, there will be a need for talented engineers in the fields of AIoT and Sensor. Eliminating the deficiencies in universities is critical for Türkiye to take advantage of these opportunities.

When the export potential of the Turkish Electronics Industry is examined, the diversity in the field of SMEs and Industrial Electronics draws attention. In the last 30 years, electronic industry companies have achieved significant success in exporting despite limited opportunities and have turned to promising markets.

Current Export Diversity

The Turkish electronics industry manufactures a wide range of products from metal detectors to electricity meters, from uninterruptible power supplies to elevator systems, from incubators to IoT solutions and sensors, from energy efficiency to smart home automation. This diversity increases the export potential of the sector. Examples of exporting SMEs and their share in exports;

- **Tualcom %75** GPS,GNSS Anti Jam Systems, Telemetry
- **Isipark %15** Smart Thermostats
- **Dijital Tanımlama Sistemleri %20** Card access systems, payment systems, validator systems
- **Udea %5** Electronic profit generation for the white goods and defense industry
- **Arvento %5** Vehicle Tracking Systems
- **Nokta %90** Metal Detecor
- **Entes %30** Energy Analyzer, Compensation and Control Relay
- **Çimuka %30** Incubation Machines
- **Luna %30** Electricity Meter
- **Inform %40** Uninterruptible Power Supplies
- **Arkel %60** Elevator Systems

- Erna Maş %20 Small Household Appliances
- Deka %20 Electronic card
- EAE %40 Busbar, Control Panel, Lighting systems
- Murat Aydınlatma %70 LED Lighting Fixture
- Enpi %10 Combi control cards
- Linkas %3 Power electronics
- Yönnnet %30 Smart home automation systems
- Gentek %30 Datalogger Systems
- Kolarc %60 Welding Machines
- Tende %50 Medical (Baby Incubator)
- Baylan %70 Water-Electricity-Calorimeter Meters
- Litum %90 IoT solutions
- Desire %90 Sensor systems, Data Logger

In addition, a very important part of the mechanical elements of the ever-developing machinery sector, which should not be overlooked, has been replaced by electronic control and control cards and is reflected in the statistics in "machinery exports".

Today, Defense Industry SME companies have started to join this group. This also offers a separate growth potential for the future.

Future Potential

For SMEs in the electronics sector, there are great export opportunities in the future in areas such as e-mobility, smart cities, agriculture, autonomous robots. In order to be successful in these areas, there will be a need for talented engineers in the fields of AIoT and Sensor. Eliminating the deficiencies in universities is critical for Türkiye to take advantage of these opportunities.

By supporting Industrial Electronics SMEs with an average value of 40 USD per kilogram in exports, Türkiye can gain an important position in the industries of the future. Countries such as Germany and the USA have been moved by SMEs to the point they have reached today. At this point, the importance of support for SMEs emerges. The export potential of the Turkish electronics industry draws a very promising picture with its growth in recent years and its position in global markets. Türkiye draws attention by increasing its exports, especially in the electrical and electronics sector. The sector's exports, which are approaching the level of 17 billion

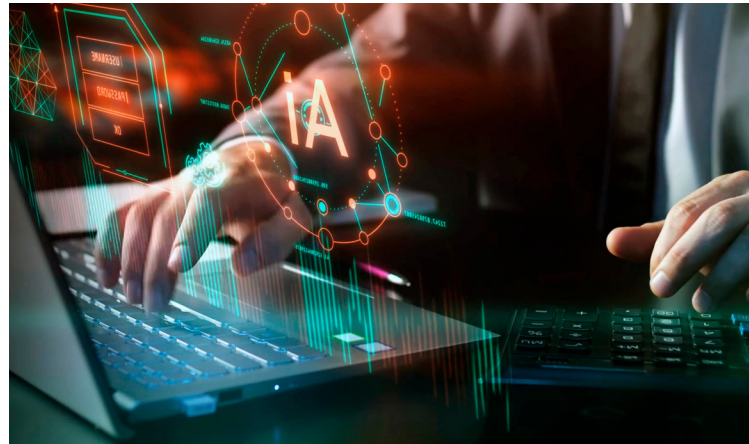
dollars in 2024, indicate more than 5 times the level of 3.4 billion dollars in 2002.

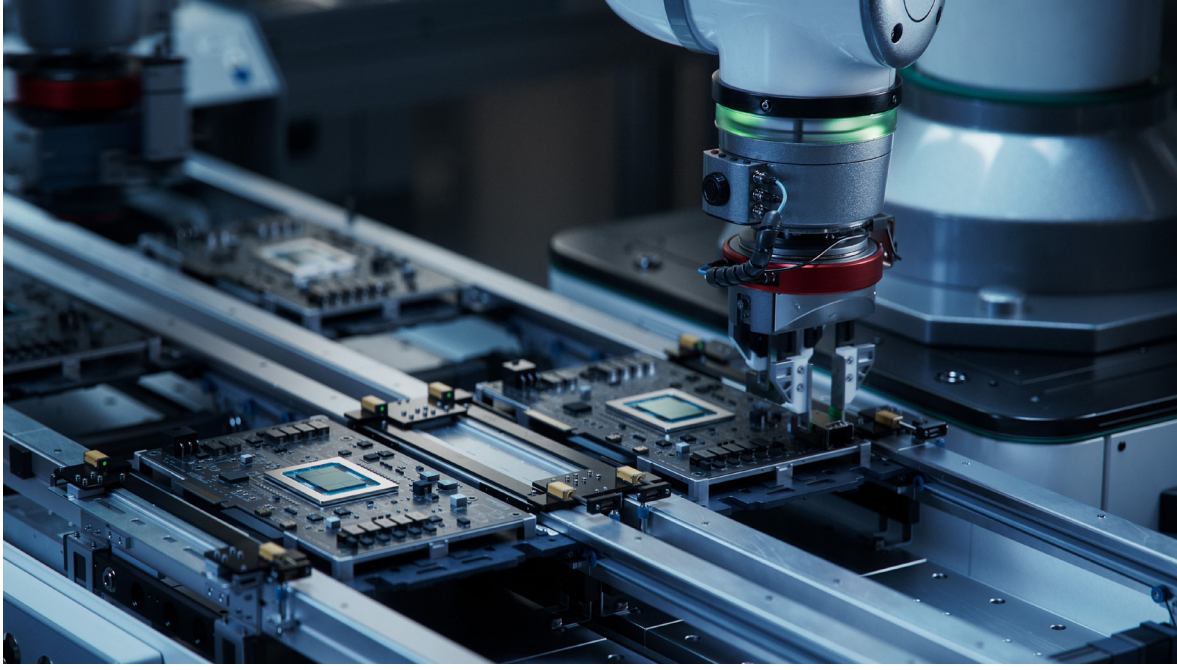
By 2025, it is estimated that this figure will increase even more and approach the 19 billion dollar band. In the production of high-tech consumer electronics (for example, products such as the iPhone), Türkiye does not yet have the capacity to compete with giants such as China. However, there is considerable potential in areas such as automotive electronics, the defense industry and industrial robots. The export of high-tech products, especially in the defense industry, has gained serious momentum in recent years, and this is seen as a factor that increases the added value of the electronics industry..

Result

The Turkish electronics industry has a bright future in terms of exports with its existing infrastructure, strong position in the European market and development potential in high-tech fields. However, the full realization of this potential seems to depend on increasing R&D investments, adopting green transformation and focusing on niche areas in global competition.

Source: Turkish Exporters Assembly December 2024 Report





Global Supply Chain Restructuring: The new tariffs announced by the US in April 2025 increase the potential for global electronics production to shift to Türkiye due to high tariffs on China and other Far Eastern countries. The fact that Türkiye is in the 10% minimum tax bracket provides a competitive advantage over other competitors. This may create new investment opportunities, especially in the defense, automotive electronics and white goods sectors.

As of 2025, the Turkish electronics industry has continued to increase its competitiveness in global markets and has greatly increased its export potential. With technological innovations, increase in production capacity and strategic market targeting, Türkiye aims to be a strong player in electronic product exports. One of the most important factors that increase the export potential of the Turkish electronics industry is the growth in production capacity. Elektra Elektronik, one of the leading companies in the sector, increased its production capacity by 25% in 2024 and increased its export rate to 50% and aims to increase this rate to 55% in 2025. At the same time, the company plans to increase production efficiency with technological infrastructure investments.

Such investments increase Türkiye's international competitiveness in the electronics sector, while at the same time encouraging the export of high-tech products. In particular, significant increases are expected in exports of high value-added products such as energy management, power electronics and automation solutions. By 2025, the Turkish electronics industry targets Europe, the Middle East and North Africa (MENA) as its strategic export markets. In particular, it is planned to increase the market share in electronics exports to European Union countries with high quality standards and competitive price policies.

At the same time, Türkiye's geographical advantages in the electronics sector positively affect exports to the MENA region. Fast delivery times and logistical advantages allow Türkiye to increase its market share in this region. Within the scope of the 2024-2028

Strategic Plan, it is aimed to increase investments in R&D and innovation in the Turkish electronics industry. In particular, increasing the competitiveness and efficiency of clusters, R&D and design centers.

Expanding activities and supporting R&D studies in Technology Development Zones (TDZ) are the basis of this growth. This innovation-oriented approach of Türkiye enables the development of high-tech products in the electronics sector and makes these products more competitive in international markets. In particular, smart devices, sensor technologies and energy-efficient electronic solutions are among the prominent products in Türkiye's electronics exports. In order to increase the export potential of the electronics industry in Türkiye, various government supports and incentives are implemented. In particular, tax exemptions provided to companies in Technology Development Zones increase R&D investments and encourage the export of innovative products.

In addition, Türkiye's free trade agreements and customs advantages are among the other important factors that increase the export potential in the electronics sector. In particular, customs advantages in exports to the European Union and Middle East markets increase Türkiye's competitiveness in these markets. As of 2025, the Turkish electronics industry has significantly increased its export potential with production capacity increase, investments in R&D and innovation, strategic market targeting, and government supports. In particular, the increase in the export

of high-tech products strengthens the competitiveness of the sector in global markets.

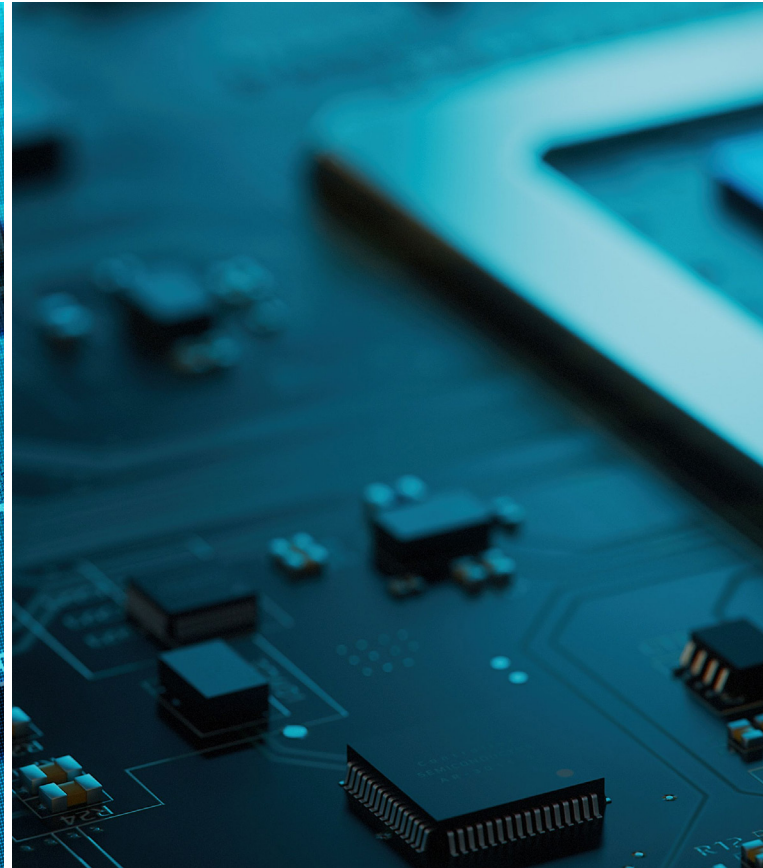
Investment Environment in the Turkish Electronics Sector

The Turkish electronics industry is going through a significant transformation process in 2025 with the effect of global trade dynamics and local policies. Its geographical location, increasing technology investments, and strong production capacity make Türkiye advantageous on its way to becoming a regional electronics production center. However, challenges such as the global chip crisis, high interest rates and inflationary pressures are among the key factors shaping the investment climate.

Opportunities

Global Supply Chain Restructuring: The new tariffs announced by the US in April 2025 increase the potential for global electronics production to shift to Türkiye due to high tariffs on China and other Far Eastern countries. The fact that Türkiye is in the 10% minimum tax bracket provides a competitive advantage over other competitors. This may create new investment opportunities, especially in the defense, automotive electronics and white goods sectors.

Local Investment Incentives: The Ministry of Industry and Technology has announced that it has allocated a resource of 5 billion dollars for chip production for 2025. This investment aims to strengthen domestic production in strategic sectors



such as defense and automotive by supporting sensor design and manufacturing. In addition, the allocation of 10.8 billion TL to organized industrial zones with an increase of 101.5% makes infrastructure investments attractive. Potential for Cooperation with the EU: The European Union's Green Deal policies and investments in the fields of defense and green energy encourage rapprochement with Türkiye. Turkish electronics The participation of companies in joint investments and R&D projects with companies in EU countries can support sectoral growth.

Challenges

Chip Crisis and Supply Chain Issues: The global chip crisis continues to be one of the biggest hurdles for the electronics industry. Setting up chip production facilities requires time and high capital. Small and medium-sized companies are more affected by this crisis.

Economic Uncertainties: High interest rates and inflation in Türkiye make it difficult for the real sector to access credit. 2025 The expected weakness in domestic demand in the first half may lead to a contraction, especially in the consumer electronics and white goods sectors. Lack of Competition and Innovation: The Turkish electronics industry has an export structure dependent on medium-tech products. More R&D investment is required in the transition to innovation and high technology. In order to stand out in global competition, it is

critical for companies to increase their product development capacity.

Suggestions

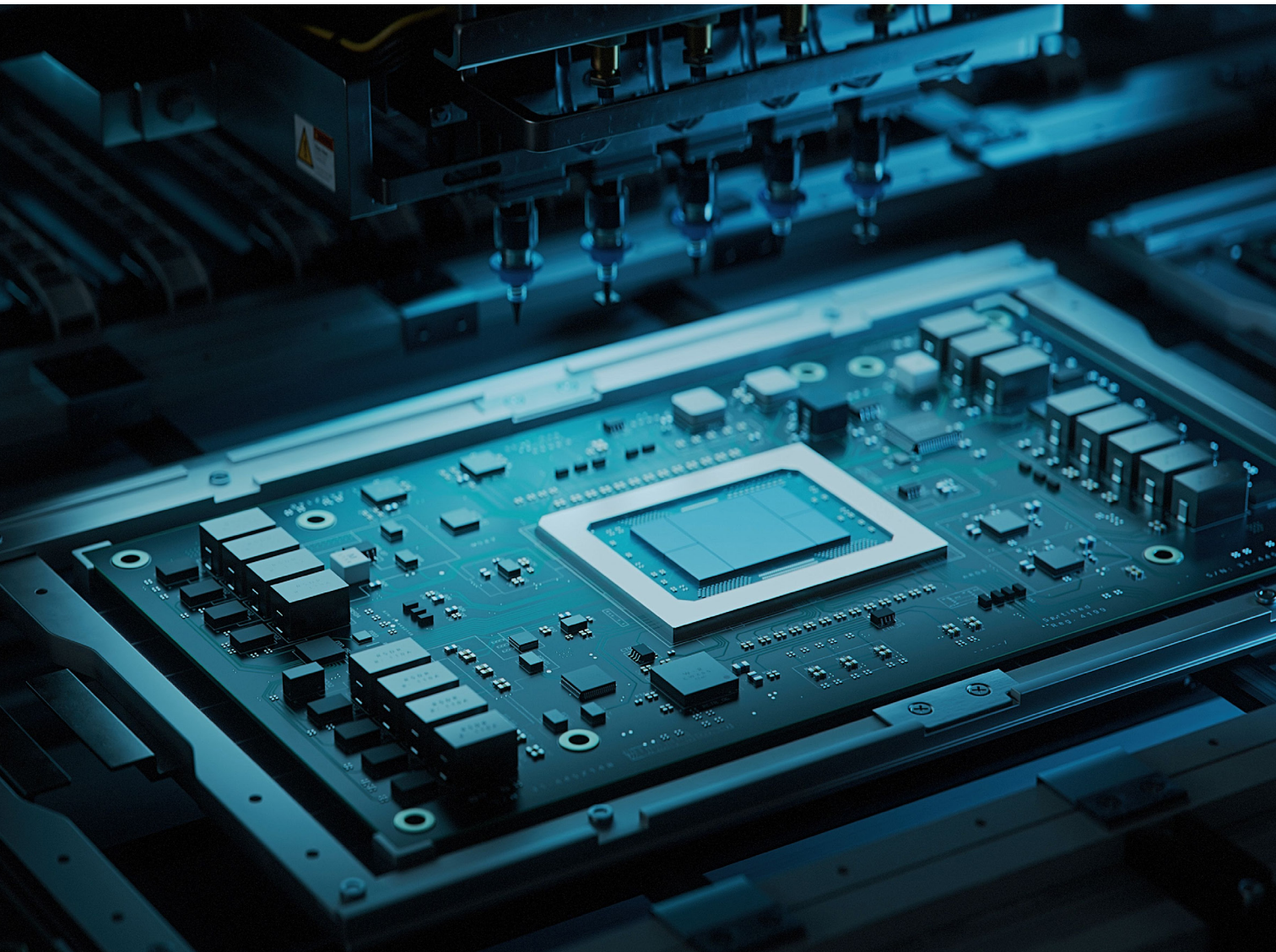
Attracting Investment from China: Trading with Chinese tech firms Shifting production facilities to Türkiye by making agreements should be encouraged.

Legal and Financial Stability: Legal regulations and ease of doing business should be strengthened in order to gain the trust of international investors.

R&D and Innovation Support: TÜBİTAK and university support R&D investments should be increased with its programs, high-tech Product development should be encouraged.

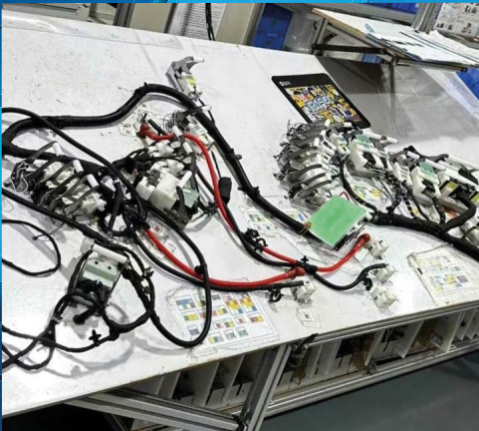
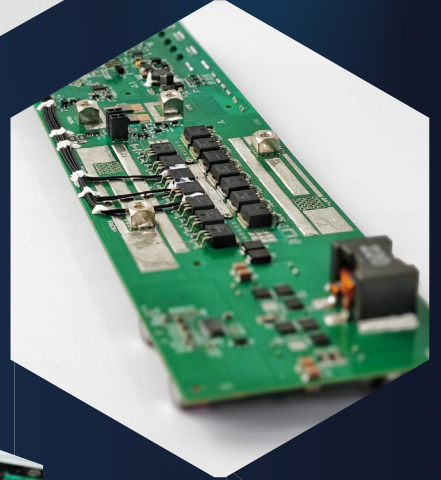
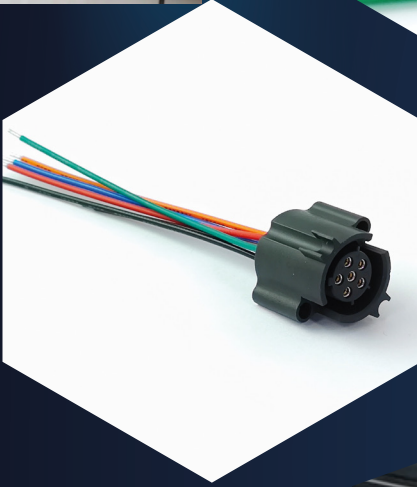
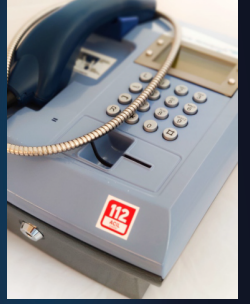
Result

The Turkish electronics industry has the potential to grow in 2025 with the opportunities offered by global trade wars and local incentives. However, the chip crisis and economic uncertainties have led to a strategic It requires planning. With the right steps, Türkiye can become a regional center in electronics production. Public, private sector and academia cooperation is critical for the sector to increase its technological independence and global competitiveness.



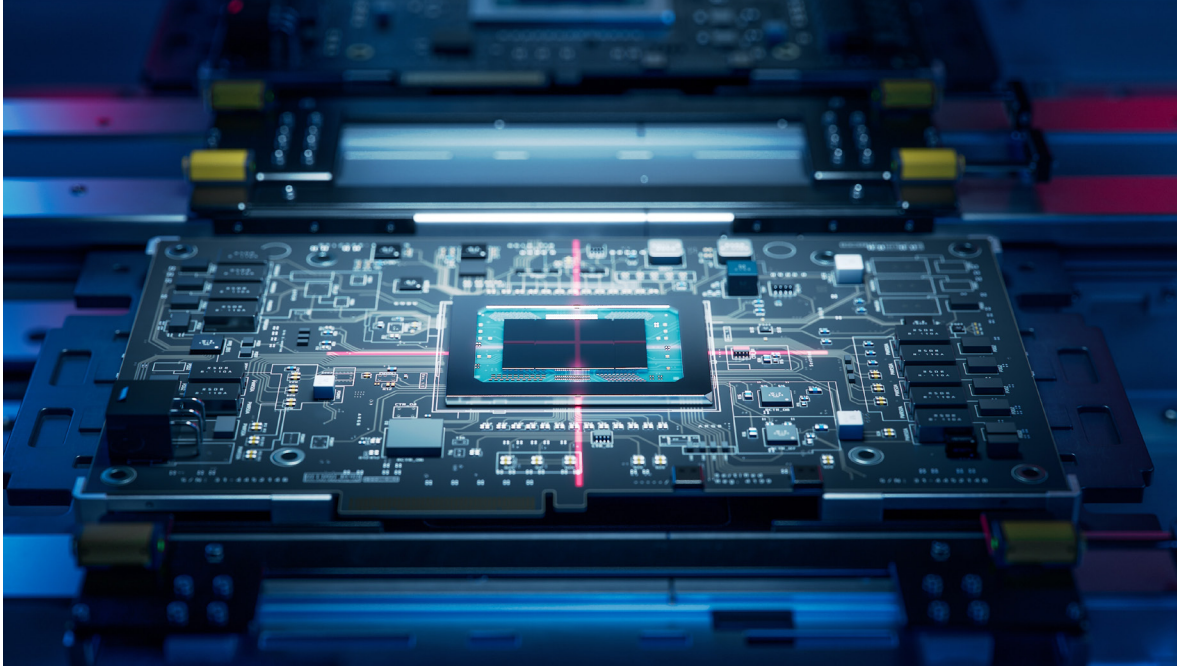
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We would like to thank ALPER Sarıkan, Deputy General Manager of KAREL Industrial Operations, a member of TESİD, for this article.



The Turkish electronics industry faces significant opportunities in the future. Investments to be made especially in areas such as artificial intelligence, internet of things (IoT) and 5G technologies will increase the competitiveness of the sector. For example, significant developments are expected in the fields of artificial intelligence and cyber security, which are in the exponential development phase after starting in 2023, and these developments will have significant repercussions in the defense industry.

The Turkish electronics industry has increased its global competitiveness by making significant progress in the fields of R&D and innovation in recent years. This article will explore the current state of the industry, the challenges it faces, and the opportunities ahead.

The Current Situation of the Turkish Electronics Industry

The electronics industry is one of the important components of the Turkish economy and has attracted attention with its R&D and innovation activities, especially in recent years. In 2022, Türkiye's total R&D expenditure reached TL 198.67 billion, and 61.4% of this expenditure was realized by the private sector. This shows the active role of the private sector in R&D activities.

In addition to the private sector, higher education institutions also have a significant share in R&D expenditures. In 2022, higher education institutions accounted for 33.2% of total R&D expenditures. This emphasizes the contribution of academic research to the electronics industry and the importance of university-industry cooperation.

Developments in R&D and Innovation Activities

The R&D and innovation ecosystem in Türkiye has shown significant developments in recent years. The number of technoparks has reached 89 and the number of companies operating in them has

exceeded 10 thousand. The number of employees in these companies has exceeded 100 thousand. These data reveal the size and effectiveness of Türkiye's technology development zones.

In addition, an increase in the number of R&D centers has been observed. These centers contribute to the development of innovative products and services in the electronics industry. For example, TRON Elektronik, operating in Istanbul, has carried out important projects by benefiting from KOSGEB's R&D and Innovation Program.

Challenges and Obstacles Faced

R&D and innovation activities in the electronics industry face some challenges. The most important of these are the lack of qualified human resources and financing problems. Although R&D expenditures are increasing, the share of these expenditures in GDP is 1.32%. This rate is lower compared to developed countries.

In addition, the lack of university-industry cooperation at the desired level and the lack of incentives and accelerating elements in this direction slow down the innovation processes.

Future Perspective and Opportunities

The Turkish electronics industry faces significant opportunities in the future. Investments to be made especially in areas such as artificial intelligence, internet of things (IoT) and 5G technologies will increase the competitiveness of the sector. For example, significant developments are expected in the fields of artificial intelligence and cyber security, which are in the exponential development phase after starting in 2023, and these developments will have significant repercussions in the defense industry.

In addition, the growing demand for green energy and sustainable technologies presents an opportunity to create new markets and business models for the electronics industry. In this context, Türkiye needs to focus on R&D studies for energy efficiency and environmentally friendly production processes.



Result

The Turkish electronics industry has made significant progress in the fields of R&D and innovation, and it should take strategic steps to maintain this momentum in the future. In this context, the following recommendations can be considered:

Investment in Sustainable and Green Technologies: R&D activities for environmentally friendly production processes and energy-efficient technologies should be encouraged.

Opening to International Markets: In order to increase the competitiveness of the electronics industry products in international markets, importance should be given to compliance with quality standards and creating brand value.

Strengthening University-Industry Cooperation: Cooperation between universities and industrial organizations should be increased through joint projects and research centers. In relation to this context;

Qualified Human Resource Development: The education system should be revised in accordance with the needs of the electronics industry and qualified engineers and technicians should be trained.

Increasing Financing Opportunities: Incentive and support mechanisms for R&D and innovation projects should be strengthened, and SMEs' access to finance should be facilitated.

The implementation of these strategic steps will increase the global competitiveness of the Turkish electronics industry and ensure sustainable growth.





With education reforms, public-private cooperation and competitive working conditions, the sector has overcome the human resources crisis.

It can surpass and reach its rightful place in global competition.

Despite its growth potential in global trade in 2025, the Turkish electronics industry continues to face human resource problems. Although the sector has a strong production and R&D capacity in areas such as defense, consumer electronics, white goods and automotive electronics, the lack of qualified workforce, education-workforce mismatch, and competency development challenges limit growth. In this article, the current situation of the human resources problem in the sector is evaluated.

Lack of Skilled Workforce

The electronics industry is a field that requires high technology and expertise. By 2025, the industry is in demand for roles such as software developers, embedded systems engineers, chip design specialists, and data analysts, while the number of qualified candidates to fill these positions remains insufficient. The sector's exports, which exceed \$15 billion in 2024, put sustainable growth at risk if it is not supported by a qualified workforce. In particular, it is becoming difficult to find employees who specialize in innovative areas such as artificial intelligence, IoT and quantum technologies.

Education and Workforce Mismatch

The education system in Türkiye is insufficient to meet the skills needed by the sector. While the engineering programs of universities focus on theoretical knowledge, they do not give enough space to practical application and current technologies. For example, the number of graduates studying in niche fields such as

chip design is limited. In addition, the integration of vocational high schools and technical education institutions with the sector is weak; This deepens the gap of intermediate staff. In 2025, this incompatibility Due to this, companies are forced to make additional training investments when recruiting new graduates.

Brain Drain and Competitive Wage Issues

High inflation and economic uncertainties are negatively impacting the purchasing power of those working in the tech sector in 2025. According to Reed's 2025 salary guide, employers are struggling to offer competitive wages while employee expectations are increasing. In addition, more attractive job opportunities abroad lead to a brain drain, especially of young and competent engineers. According to Endeavor Türkiye's report, Türkiye's image as a "young and digital market" is weakening due to competition from other countries with young populations. This situation causes the loss of experienced employees in the industry.

Solution Suggestions

Multifaceted steps need to be taken to solve the human resources problem:

Education Reform: Universities and vocational high schools should develop curricula that meet the needs of the sector. Hands-on training programs in areas such as chip design, artificial intelligence and embedded systems should be increased.

Public-Private Sector Cooperation: Internship and mentoring programs should be expanded in cooperation with NGOs such as TESID. Government-funded R&D projects can attract young engineers to the sector.

Competitive Wages and Benefits: Companies should retain competent employees with inflation-compatible wage policies and flexible working models.

Reversing the Brain Drain: Tax benefits and career opportunities should be offered to encourage the return of Turkish professionals working abroad.

Result

Although the Turkish electronics industry has the potential to seize global opportunities in 2025, human resource issues threaten this growth. Lack of skilled workforce, education-workforce mismatch and brain drain are the main challenges that require urgent solutions. With education reforms, public-private cooperation and competitive working conditions, the sector has overcome the human resources crisis.

It can surpass and reach its rightful place in global competition.





Although SMEs are lagging behind their European competitors in digital transformation, institutions such as Mevlana Development Agency have tried to close this gap by providing digital transformation support to 36 companies in 2024. Cloud computing and data analytics have become widespread, especially in electronic circuit design and testing processes. However, cybersecurity risks and lack of data transparency are among the barriers to digitization.

The Turkish electronics industry has taken significant steps in its green and digital transformation processes in 2025, but has faced some challenges. Global competition, the European Union's (EU) Green Deal and Türkiye's 2053 Net Zero Emission target, the sector environmental sustainability and technological innovations. This The article evaluates the state of the sector in 2025.

Green Transformation: Environmental Sustainability-Oriented Advances

The green transformation is focused on energy efficiency, renewable energy use and carbon footprint reduction in the electronics industry. Türkiye is the fifth-largest country in Europe in terms of renewable energy capacity, accounting for 54% of the installed capacity by 2025. It is provided from renewable sources. In the electronics industry, especially the defense industry (ASELSAN, TAI) and automotive electronics. In areas such as TOGG, low-carbon production processes have been adopted. TOGG's target of 1 million units in electric vehicle production by 2030, It has accelerated the sector.

However, more investment is required to achieve carbon neutrality targets in the sector. The EU's Carbon Border Adjustment Mechanism (CBAM), which will come into effect in 2026, forces export-based electronics companies to report and reduce their carbon emissions. Although the transition to renewable energy reduces energy costs, skills development programs are needed for the "just transition" processes of those working in the transition from the fossil fuel sector to renewable energy.

Digital Transformation: The Rise of Artificial Intelligence and Automation

Digital transformation has accelerated with artificial intelligence (AI), Internet of Things (IoT) and digital twin technologies in the electronics industry. By 2025, Dell Technologies Türkiye General Manager As Işıl Hasdemir points out, artificial intelligence has moved from the discovery stage to the implementation stage and has revolutionized business processes. In electronics manufacturing, AI-powered devices have increased the speed of data processing, providing cost efficiencies. For example, in the defense industry, BAYKAR and ROKETSAN have integrated additive manufacturing and virtual reality technologies.

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Challenges and Opportunities

While green and digital transformation offers a competitive advantage to the Turkish electronics industry, challenges such as lack of financing, the need for a qualified workforce, and compliance with legal regulations remain. Thanks to the

Customs Union with the EU, the trade volume exceeding 206 billion euros in 2023 has strengthened the integration of Turkish companies into the EU market. Investment in renewable energy by 2030 has the potential to create 300,000 new jobs.

Result

By 2025, the Turkish electronics industry has made significant progress in green and digital transformation, but more efforts are required for full integration. Although the transition to renewable energy and the proliferation of AI and IoT strengthen the industry in the global arena, it is critical for SMEs to increase digital maturity and accelerate investments towards carbon neutral goals. If Türkiye successfully manages these transformations in line with the EU Green Deal and 2053 targets, it can rise to a leading position in the electronics industry.



Num.	Qty.	Units	Article No.	Goods, Service	Unit Price	Price
1	1	pos.		Food photography for summer menu. Menu design and printing on glossy cardstock 200 g/s double sided 20 pages.	273,11 €	273,11 €
1	33	pos.		Single product photo on white background	2,52 €	83,16 €
1	1	pos.		Photo licenses for Certificates	16,80 €	16,80 €
Total						373,07 €
VAT 19%						70,88 €
Total Amount Payable						443,95 €

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While companies such as Kron and Picus Security prove the potential of the sector by standing out in Gartner reports, the Turkish Cyber Security Cluster strengthens the ecosystem. Investments in areas such as AI, CPS, and regulatory compliance are driving the industry forward, while challenges such as the competency gap and global brand awareness need to be overcome. Türkiye is on its way to becoming a regional leader in cyber security with strategic moves in this dynamic sector.

The Turkish electronics industry is taking important steps in the field of cyber security in 2025 with the impact of digital transformation and Industry 4.0. Increasing connectivity, the proliferation of IoT devices, and the adoption of 5G technologies have complicated cyber threats in the industry, which has led domestic firms to develop innovative solutions. Gartner's reports and general sector analyses show that Turkish companies attract attention in the global arena.

Gartner's Evaluation of Turkish Companies

Gartner has evaluated the performance of Turkish companies in the field of cyber security, especially in niche areas such as Privileged Access Management (PAM). In 2020 and 2021, Kron was included in Gartner's Magic Quadrant for Privileged Access Management reports, earning the title of being the first and only Turkish company in this field. Kron's success reveals that its high-tech software products are globally competitive and support compliance with regulations such as KVKK and GDPR. Gartner's 2025 trend reports indicate that Turkish companies show potential in areas such as artificial intelligence (AI)-powered security solutions and machine identity management. However, the limited visibility of Turkish companies other than Kron in Gartner reports indicates the need for more promotion and R&D investments on a global scale.

General Situation in the Sector

The Turkish electronics industry focuses on domestic and national



solutions in cyber security. Since 2017, the Turkish Cyber Security Cluster has been bringing together the public, private sector and academia strengthens the ecosystem by bending. Picus Security has been ranked among the top five companies globally by Gartner in the field of threat simulation and continues its R&D activities in Türkiye. Such as Keepnet Labs, Binalyze, and Netsparker Companies are also growing in international markets and increasing their share in the cyber security market. In 2025, the main areas of focus for the industry are:

AI and Automation: According to Gartner's 2025 predictions, AI-powered security solutions improve threat detection and response times. Turkish companies have started to develop solutions in accordance with the AI TRISM (trust, responsibility and security model) framework.

Cyber-Physical Systems (CPS): The proliferation of IoT and autonomous systems in the electronics industry has increased the need for CPS security. Gartner reports that the cost of CPS attacks exceeded \$50 billion in 2023, and this trend continues. Turkish companies aim to protect critical infrastructures by offering domestic solutions in this field.

Regulation and Compliance: Compliance with data protection laws such as KVKK and GDPR is a priority for the industry. Turkish companies offer regulatory-compliant security solutions, especially in the financial and healthcare sectors.

Challenges and Opportunities

The shortage of competent personnel in cybersecurity remains

one of the industry's biggest challenges in 2025. Gartner emphasizes that this gap persists globally and that Turkish companies should invest in talent development programs. In addition, companies need to increase brand awareness and turn to consolidation strategies to compete in the global market. On the other hand, Türkiye's geographical location and strategic importance increase its potential for exporting cybersecurity products. The global cybersecurity market, which exceeded \$248 billion in 2023, presents a great opportunity for Turkish companies.

Result

The Turkish electronics industry is making a name for itself in the global arena with domestic and national solutions in cyber security in 2025. While companies such as Kron and Picus Security prove the potential of the sector by standing out in Gartner reports, the Turkish Cyber Security Cluster strengthens the ecosystem. Investments in areas such as AI, CPS, and regulatory compliance are driving the industry forward, while challenges such as the competency gap and global brand awareness need to be overcome. Türkiye is on its way to becoming a regional leader in cyber security with strategic moves in this dynamic sector.



The Turkish electronics industry continues its transformation with AI technologies in 2025. AI, which is used in a wide range from manufacturing to customer service, offers significant opportunities in terms of efficiency and innovation. However, steps to be taken in areas such as ethics, security and education will fully unlock the potential of this technology.

Türkiye's electronics industry is undergoing a significant transformation process with the impact of artificial intelligence (AI) technologies by 2025. In line with the National Artificial Intelligence Strategy 2021-2025, the sectoral integration of AI has accelerated, and innovative applications have become widespread in areas such as production, R&D, automation and customer service. In this article, the current situation, usage areas and future expectations of AI in the Turkish electronics industry are evaluated.

Uses of AI in the Electronics Industry

Manufacturing and Automation: In the electronics industry, AI is used extensively to increase efficiency in production lines. Intelligent algorithms detect errors in quality control processes, reducing production costs and reducing waste. For example, companies operating in the field of defense electronics, such as ASELSAN and TAI, optimize their production processes with AI-supported image processing systems.

R&D and Innovation: AI plays an important role in the design and development processes of electronic products. Machine learning algorithms accelerate the simulation and testing processes in new chip designs and enable the development of energy-efficient devices. Under the leadership of TÜBİTAK BİLGEM Artificial Intelligence Institute, the establishment of domestic large language models and AI-based laboratories increases the innovation capacity in the sector.

Customer Service and Marketing: Electronics retailers and

manufacturers are improving the customer experience through AI-powered chatbots and virtual assistants. For example, algorithms that provide personalized product recommendations increase sales and increase customer satisfaction by analyzing consumer habits. According to Forbes Türkiye's report, 53% of businesses use AI in marketing and customer relations.

Cyber Security and Data Analytics: The increasing connectivity of electronic devices has brought cyber threats with it. AI-based security systems are used for anomaly detection and threat prevention, especially in IoT devices. Within the scope of the National Artificial Intelligence Strategy, cyber threat detection mechanisms powered by AI are being developed.

The Situation and Challenges in 2025

By 2025, the use of AI in Türkiye's electronics industry has reached a prevalence rate of 17.5%. However, some challenges need to be overcome in order for the sector to reach a stronger position in global competition. Data security, ethical use, and lack of competent human resources are the main obstacles to AI integration. Low awareness of AI in small-scale businesses and investment costs also slow down the proliferation. On the other hand, state-sponsored initiatives are promising. TÜBİTAK's "Public Artificial Intelligence Ecosystem - 2024" call supports the development of AI solutions by encouraging public and private sector cooperation. In addition, organizations such as the Turkish Artificial Intelligence Initiative (TRAI) increase awareness by strengthening cross-sectoral cooperation.

Future Prospects

In 2025, the impact of AI in the electronics industry is expected to increase even more. In line with the objectives of the National Artificial Intelligence Strategy, it is envisaged that the contribution of AI to GDP will reach 5% and 50,000 jobs will be created in the sector. Prioritizing indigenous AI applications in public procurement will accelerate the growth of the local ecosystem. In addition, with the widespread use of 5G technology and IoT devices, it is estimated that AI-based smart systems will find more place in the electronics industry.

Result

The Turkish electronics industry continues its transformation with AI technologies in 2025. AI, which is used in a wide range from manufacturing to customer service, offers significant opportunities in terms of efficiency and innovation. However, steps to be taken in areas such as ethics, security and education will fully unlock the potential of this technology. With strategic investments and collaborations, Türkiye is taking firm steps towards becoming a regional leader in the field of AI.



The Use of Artificial Intelligence in the Turkish Electronics Industry: On the Verge of Transformation

We would like to thank Kayra Uzun, Member of the Board of Directors of NETELSAN, Member of TESİD, for this article.



As a result of the developments in the electronics industry, the integration of artificial intelligence-supported technologies into production processes is becoming increasingly important. In this context, many companies in the sector are working to incorporate artificial intelligence-based image processing solutions into their processes in order to further improve their existing quality control systems and achieve excellence in production.

For many years, the Turkish electronics industry has created significant accumulation in a wide range from defense to consumer electronics, from communication to automation. Today, we are in a new transformation in the sector. Not only robustness and performance are expected from electronic products anymore; Devices need to be smart, understand the user and constantly improve themselves. At the heart of this transformation are artificial intelligence technologies.

Electronics companies in our country have been carrying out serious studies to include artificial intelligence-based solutions in their production processes in recent years. Image processing technologies come into play, especially in order to detect errors that may occur in circuit board production at an early stage. For example, systems that perform automatic fault detection by taking pictures of circuit boards are starting to find an increasing place in the industry. In addition, studies continue on the development of systems that can predict problems before they arise by using historical production data.

These developments are not limited to production processes; The capabilities of electronic devices are also increasing day by day. Advanced security solutions such as smart products that analyze and adapt to user behavior, voice-based systems, and facial recognition are now a regular part of daily life.

As a result of the developments in the electronics industry, the integration of artificial intelligence-supported technologies into production processes is becoming increasingly important. In this



context, many companies in the sector are working to incorporate artificial intelligence-based image processing solutions into their processes in order to further improve their existing quality control systems and achieve excellence in production. For this purpose, research and development activities are emphasized and engineering knowledge is constantly increased.

In addition to these studies in production processes, companies are trying to make the products they offer to the user smarter and more user-friendly with artificial intelligence. For example, in the future, video intercom and security systems are aimed to be transformed into systems that can not only transmit images, but also understand, analyze and act accordingly. In this direction, the focus is on technologies that will enable devices to work with voice commands and better respond to the needs of users.

As a result, artificial intelligence has become an indispensable element in the electronics industry. Many organizations in the sector are actively participating in this transformation in order to increase the country's competitiveness in the field of electronics and to prepare for the future. All kinds of work done and every step taken are carried out in order to improve the competencies in this field and contribute to the digital future of the country.





By 2050, the Turkish electronics industry could become a global leader in the fields of defense, aerospace and energy. ASELSAN, HAVELSAN, TUSAŞ, ROKETSAN and ASPİLSAN can carry exports to over 50 billion dollars with their high-tech products.

The Turkish electronics industry draws attention on a global scale with the progress it has made in the fields of defense, aviation, energy and consumer electronics in recent years. The contributions of companies affiliated to the Turkish Armed Forces Foundation such as ASELSAN, HAVELSAN, TUSAŞ, ROKETSAN, ASPİLSAN, and BAYKAR and SMEs in the private sector show that the sector has a strong growth potential until 2050. In this article, we assess the possible future of the industry in 25 years' time.

Current Status and Strengths

Türkiye has a significant production and R&D capacity in defense electronics, unmanned systems and energy technologies. ASELSAN is a global player in radar, electronic warfare and communication systems. HAVELSAN offers innovative solutions in the fields of software, simulation and cyber security. TAI aims to be the leader in aviation electronics with projects such as HÜRKUŞ, HÜRJET and National Combat Aircraft (MMU). While ROKETSAN specializes in missile and rocket systems, ASPİLSAN is on its way to becoming a regional center in lithium-ion battery production. In the private sector, BAYKAR has achieved international success with unmanned aerial vehicles such as Bayraktar TB2 and AKINCI. SMEs, on the other hand, strengthen the ecosystem by providing subsystems to these large companies. As of 2024, the sector's exports have exceeded 15 billion dollars, demonstrating its global competitiveness.

Trends and Predictions Towards 2050

Technological Transformation: By 2050, the Turkish electronics industry can make a leap in areas such as artificial intelligence (AI), quantum technologies, 6G communication networks, and autonomous systems. AI will be used more effectively in ASELSAN's electronic warfare systems and HAVELSAN's cyber security solutions. TAI can develop the electronic systems of 6th generation warplanes with the MMU project. ROKETSAN can aim for leadership in smart munitions and hypersonic missiles. ASPİLSAN can become a global brand in renewable energy storage systems (e.g., solid-state batteries). BAYKAR can maintain its position as the pioneer of the private sector with autonomous drone fleets and projects for space technologies. SMEs will play critical roles in the supply chain by specializing in niche areas (sensors, microelectronics).

Global Competition and Localization: The dominance of global electronics manufacturing in the Far East may be weakened by trade wars and supply chain crises. Türkiye can become an alternative center with its geographical location and production capacity. However, investments in high-tech areas such as chip manufacturing will need to be increased. ASELSAN and HAVELSAN can accelerate their attempts to establish a factory for chip design and production. While SMEs scale up with government support, companies such as BAYKAR can maintain global branding.

Sustainability and Energy: Carbon neutral targets by 2050 will transform the electronics industry. ASPİLSAN's battery

technologies will play a key role in renewable energy systems. ASELSAN and TAI can contribute to decarbonization by developing energy-efficient systems. SMEs can take part in environmentally friendly production by investing in recycling technologies.

Challenges

Qualified workforce, R&D financing and access to global markets are critical for the growth of the sector. Brain drain and constraints on technology transfer are hurdles to overcome by 2050. In addition, it is important for large companies to increase their cooperation with SMEs for the integrity of the ecosystem.

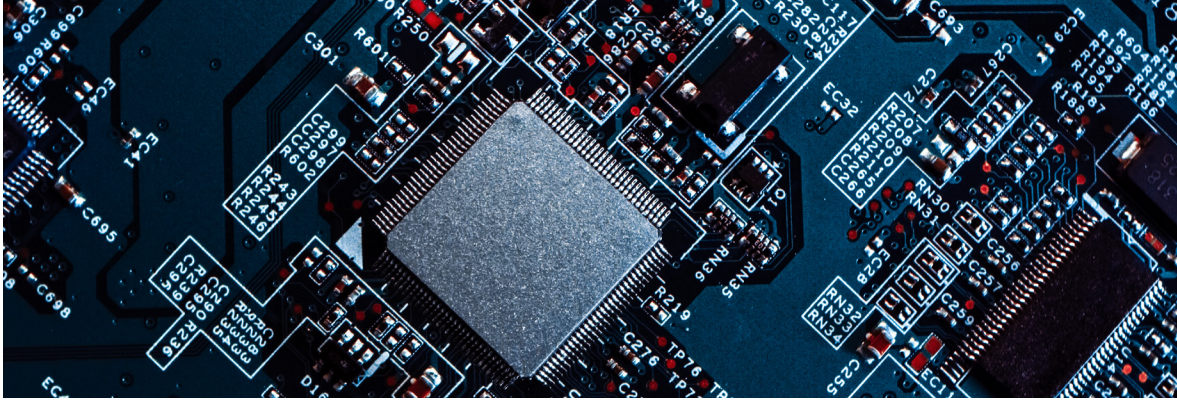
Result

By 2050, the Turkish electronics industry could become a global leader in the fields of defense, aerospace and energy. ASELSAN, HAVELSAN, TUSAŞ, ROKETSAN and ASPİLSAN can carry exports to over 50 billion dollars with their high-tech products. While BAYKAR is a pioneer in autonomous systems and space technologies, SMEs can increase their competitiveness in niche areas. Türkiye can realize this potential through public-private sector cooperation, R&D investments, and education reforms. By strengthening its technological independence, the sector can reach a position that has a say on a global scale.



Türkiye in 2050: High-Tech Manufacturing and Leadership in Global Competition

We would like to thank İbrahim Uğurlu, Chairman of the Board of Directors of UDEA, a member of TESİD, for this article.



In order to increase the competitiveness of priority sectors, to improve domestic production capacity and to strengthen technological capabilities, public procurement mechanisms that have been successful in the defense industry have been moved to these areas. The state has assumed not only a regulatory, but also a guiding and supportive role in strategic areas.

In 2050, Türkiye draws attention with its breakthroughs in industry. Digital factories and smart production facilities have become widespread throughout the country, and a large part of the industry has adapted to Industry 5.0 norms. While production processes are supported by human-machine cooperation and industrial automation, artificial intelligence-oriented decision systems and domestic robotic technologies work in an integrated manner. Quantum computing-supported R&D laboratories are at the center of industrial production, leading technological progress.

Türkiye's energy needs are largely met from renewable sources such as solar, wind and hydrogen, and organized industrial zones operate with carbon neutral production models. Thanks to circular economy approaches, the amount of waste has been minimized and resource efficiency has been maximized. Climate-friendly city industries, eco-industrial parks and zero waste policies support this transformation.

Globally competing brands have emerged in strategic sectors such as defense industry, health and biotechnology, semiconductor technologies, space and aviation, cyber security, nanotechnology and green hydrogen. Türkiye ranks high in the world rankings in high value-added product exports and has become an indispensable link in the supply chains between Europe, Asia and Africa. Technical high schools and universities work in an integrated manner with industry, students actively participate in production processes during the educational process. Thanks to lifelong learning systems, digital literacy programs and professional transformation policies, human resources are constantly up-to-date, flexible and highly competent. Academy-industry cooperation has become standard, and patents from universities are combined with start-ups and turn into economic value.

Incentive-oriented technology valleys, accelerators, and incubators for entrepreneurs have spread across the country, and the number of Türkiye-based unicorns has exceeded double digits. Startups that shape the world in areas such as fintech, artificial intelligence, game technologies and space systems come out of Türkiye. Industrial clusters

have been formed in various regions of Anatolia, moving away from metropolitan-centered industry and switching to localized and distributed production models.

Türkiye has become a strategic distribution center with its high-speed transportation lines, autonomous logistics systems and smart ports on the Europe-Asia-Africa axis. Thanks to digital customs and blockchain-based tracking systems, bureaucracy is minimized in export transactions. The country is known as a model country with its strong economic diplomacy, high R&D investments, social policies prioritizing human development, and sustainability-oriented strategies. Türkiye has become a global actor that not only produces and exports technology, but also teaches, directs and disseminates these technologies.

How was this success achieved?

With the strategic steps it has taken in the last 25 years, Türkiye has surpassed many European countries. By leaving it behind, it has created a highly developed and high value-added industrial infrastructure. The roadmap of this transformation has been determined by the Five-Year Development Plans and the Turkish Industrial Strategy Document published in 2024. The Twelfth Development Plan has been prepared with the vision of "A stable, strong and prosperous Türkiye that is environmentally friendly, resistant to disasters, based on advanced technology, produces high added value, shares income fairly" in the Turkish Century, and industry has been defined as the main backbone of development.

Six strategic sectors, which were prioritized in the previous plans, were also identified as priority industrial sectors in the Twelfth Plan, and target-oriented support mechanisms for these sectors were implemented. These sectors are: Automotive, Machinery-Electrical Equipment, Electronics, Rail Systems, Chemistry, Pharmaceutical-Medical Device. It has prepared "Sectoral Strategy and Action Plans" with the participation of all priority sectors, relevant ministries, public institutions, non-governmental organizations and sector representatives.

The biggest reason why similar plans have failed in the past has been the compromise of strategies and the surrender of the implementation process to political debates. Therefore, it is of great importance to give confidence to all segments of society for the effectiveness of development plans. Not only the content but also the structural functioning plays a critical role for the success of plans and programs. It is imperative to transform static structures into a dynamic and adaptable structure and to act independently of political preferences in implementation processes.

Establishing the relationship between the public and private sectors in a functional way is also important for success. For this purpose, the Industrialization Executive Committee (SAİK), which was proposed in the Eleventh Development Plan and established in 2020, started to work actively in 2025. SAİK ensured that the plans were placed on a dynamic basis and that an institutional structure was formed in public-private sector cooperation. Inspired by the Defense Industry Executive Committee, SAİK, in addition to strategic guidance, has the ability to intervene in the partnership structures of critical companies, to ensure inter-sectoral coordination and it has undertaken roles such as transferring

technological gains in the defense industry to other sectors.

Through SAİK, special national monitoring commissions have been established for priority sectors, and these commissions have played an active role, especially in projects that require large public investment and procurement. Thanks to these structures, where long-term strategic goals are considered rather than short-term gains, it is possible to make the right decisions in a timely manner and to make critical decisions with courage. The active intervention of the Commissions has increased sectoral coordination and supervision and ensured the continuity of policy implementation. Thus, a stable and long-term development axis has been established in investment priorities.

In order to increase the competitiveness of priority sectors, to improve domestic production capacity and to strengthen technological capabilities, public procurement mechanisms that have been successful in the defense industry have been moved to these areas. The state has assumed not only a regulatory, but also a guiding and supportive role in strategic areas.

Sectoral Success Examples

Automotive: Türkiye has put forward an important cooperation model with TOGG. TOGG, a publicly supported, multi-partner technology initiative, has contributed to the transformation of the automotive ecosystem.

Telecommunication & 5G/6G: ULAK has achieved a significant success as a domestic and national 4G/5G communication infrastructure development project. The use of ULAK products in Türkiye's transition to 5G has allowed the company to grow and become a global player.

Nuclear Power Plant: Türkiye has taken important steps in the field of nuclear energy and has developed the domestic and national Thorium Molten Salt Nuclear Reactor ThorAtom. This success has made Türkiye a country that exports technology in nuclear energy.

Pharmaceutical-Medical Device: Türkiye has made a major breakthrough in the field of health technologies and has produced globally competitive solutions in strategic products such as biological drugs, vaccines, genetic diagnosis devices and medical imaging systems.

Electronics Industry and Strategic Independence: The electronics industry has been the key to Türkiye's development. Türkiye has become competent in all stages from electronic product production to chip design, has established semiconductor production centers and has become one of the rare countries that can produce nano-scale sensors, photovoltaic cells, quantum components.

Although this development story of Türkiye is closely related to industrial strategies, legal arrangements and structural reforms have also played an important role in the functioning of the legal system and the maintenance of a healthy democratic climate.

Source: Year: 2050-Türkiye, İbrahim Uğurlu, UDEA

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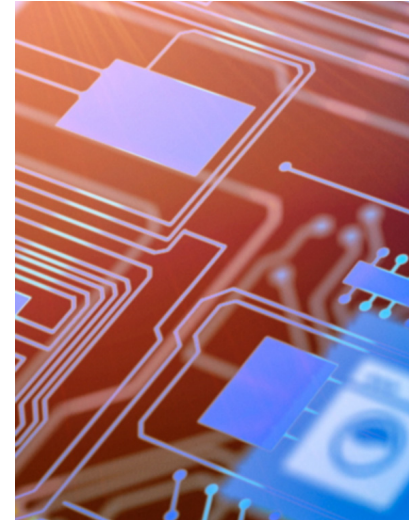
www.tesid.org.tr



MAJOR EVENTS IN 2024

Major Achievements of Domestic Electronics Companies in Türkiye in 2024

Major Achievements of Domestic Electronics Companies in Türkiye in 2024



In 2024, the greatest achievements of domestic companies in Türkiye's electronics sector focused on technology-driven rapid growth, innovative product development, and gaining a competitive edge in global markets. These successes were documented with concrete data on various platforms, notably in the Deloitte Technology Fast 50 Türkiye 2024 program.

Record Growth of Novi Robot

As Türkiye's fastest-growing technology company, Novi Robot achieved an extraordinary 10,454% growth over the past three years. Specializing in robotics and automation solutions, Novi Robot has become one of the country's leading electronics and technology firms. This growth highlights Türkiye's domestic production and R&D capabilities in robotic technologies[1].

Rapid Development in Fintech and Software

Fintech and IT companies such as Figopara (5,133% growth) and Çekino (4,847% growth) played important roles in the digital transformation of the electronics sector. Their success demonstrates that the sector's expansion is not limited to hardware but also integrates software and financial technologies[1].

DOF Robotics' Success in Technology Exports

DOF Robotics was awarded the Trendyol Technology Export Award for achieving the highest growth rate among companies whose export share in net sales exceeded 50% in 2023. This achievement is evidence that Türkiye is producing competitive electronics and robotic products for both domestic and international markets[1].

CONTRIBUTIONS OF ASELSAN AND OTHER MAJOR DOMESTIC FIRMS

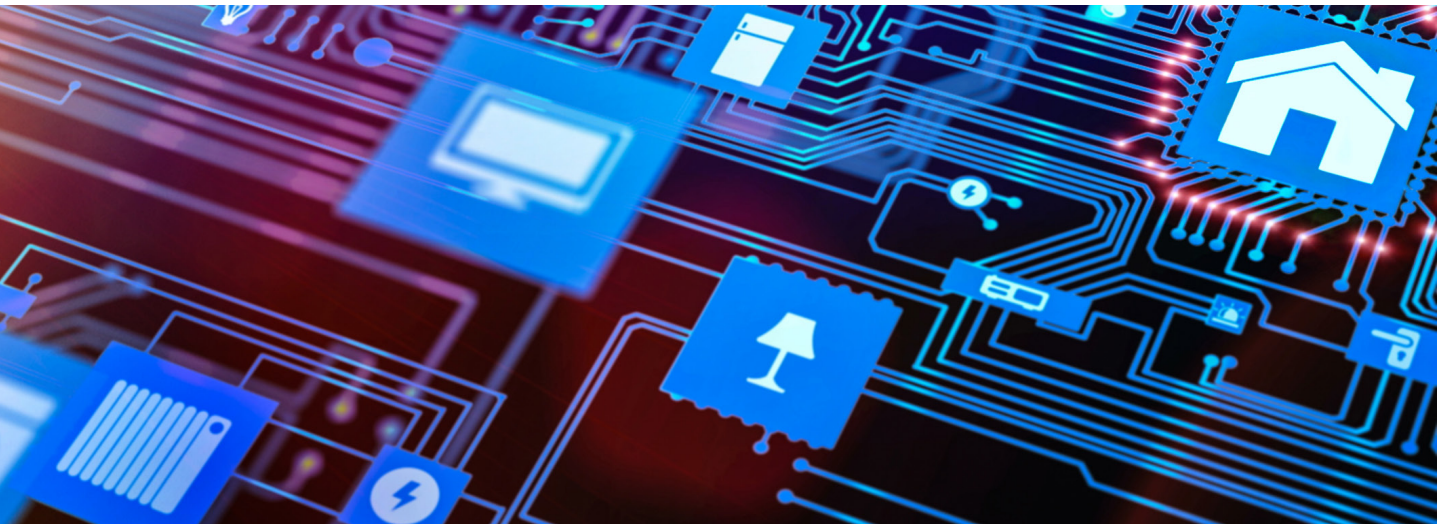
ASELSAN, as one of Türkiye's leading companies in the defense and electronics sector, continued to reinforce its strength in domestic technology production in 2024 by winning prestigious awards such as the Big Stars Award. Large-scale firms like ASELSAN support sustainable growth in Türkiye's electronics industry through high value-added products and R&D investments[1].

Sectoral Growth and Digital Transformation

According to Hulusi Acar, CEO of MediaMarkt Türkiye, the consumer electronics market in Türkiye grew by approximately 50% in 2024. While the share of domestic production in consumer electronics remains around 15–20%, significant progress has been made in second-hand and refurbishment services, strengthening the infrastructure for local production and servicing. These developments indicate that the electronics sector is advancing not only in manufacturing but also in services and sustainability[2].

Initiatives under the National Technology Move

According to the 2024 activity report of the Ministry of Industry and Technology, Türkiye launched major R&D and innovation projects in fields such as artificial intelligence, chip production, autonomous technologies, biotechnology, and renewable energy. These initiatives enhance the sector's capacity to develop domestic and national technologies in strategic areas, while increasing Türkiye's competitiveness in international markets[3].



Summary Table: Key Achievements of Domestic Companies in Türkiye's Electronics Sector in 2024

Success Area	Company/Project	Notable Features
Fastest-Growing Technology Company	Novi Robot	10,454% growth; robotics and automation solutions
Fintech and Software Growth	Figopara, Çekino	5,000%+ growth; financial technology and software solutions
Technology Export	DOF Robotics	High growth with 50%+ export share
Defense and High-Tech	ASELSAN	Big Stars Award; national technology production
Consumer Electronics Growth	MediaMarkt Türkiye	~50% market growth; second-hand and refurbishment services
Strategic R&D and Innovation	Ministry of Industry Projects	Artificial intelligence, chip production, autonomous systems, biotechnology

CONCLUSION

In 2024, domestic companies in Türkiye's electronics sector achieved remarkable successes through record growth in robotics and automation technologies, rapid advancements in fintech and software, increased export performance, and strategic R&D projects. Alongside established firms such as ASELSAN, next-generation technology companies have strengthened Türkiye's global competitiveness in the electronics industry. Growth in the consumer electronics market and developments in refurbishment services also indicate sustainable sectoral growth. Under the framework of the National Technology Move, Türkiye continues to enhance domestic production and innovation capacity in the electronics sector[1][2][3].

[1] [FintechTime – Deloitte Technology Fast 50 Türkiye 2024 Award Winners](#)

[2] [Fast Company Türkiye – Electronics Sector Growth Overview](#)

[3] [Ministry of Industry and Technology – 2024 Annual Activity Report \(PDF\)](#)

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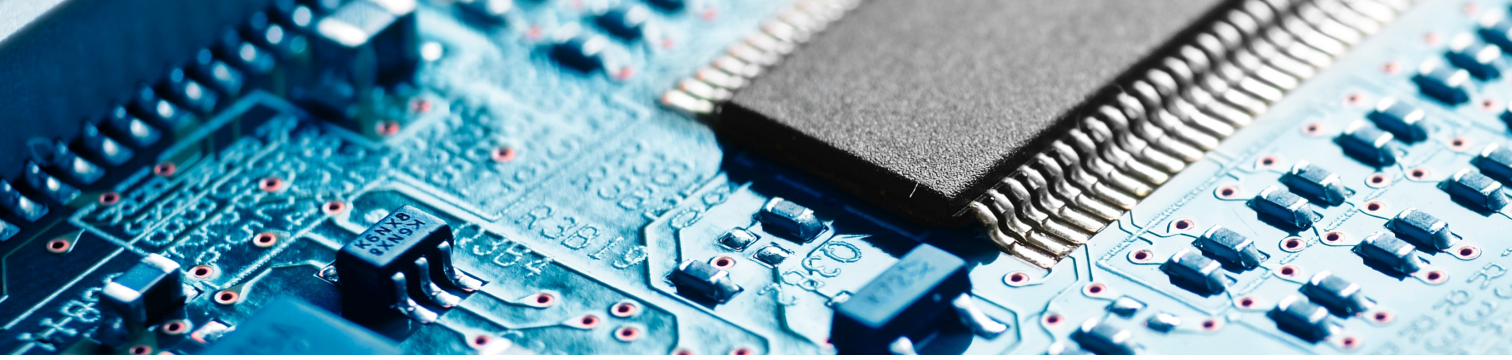
Türk Elektronik
Sanayicileri Derneđi
*Turkish Electronics
Manufacturers Association*

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2024 in Numbers



TURKISH ELECTRONICS INDUSTRY COMPONENTS SUB-SECTOR

In 2024, Turkish companies in the components subsector stood out with their export performance. The electrical and electronics sector under the Istanbul Minerals and Metals Exporters' Association (İMMİB) accounted for a significant share of Türkiye's total exports, reaching 16.7 billion USD. This success was driven by domestic manufacturers increasing their production capacity for high-tech components and improving their quality standards. Companies operating in industrial hubs such as Istanbul, Kocaeli, and Bursa expanded their production and exports for both domestic and international markets. In addition, integration with the automotive industry led to a substantial growth

in electronic component exports. The increase in R&D investments by local firms and the development of innovative, high value-added products have been among the key dynamics behind the export success of the components subsector. Türkiye continues to enhance its global competitiveness in this field.

Source: [İMMİB – 2024 Export Success and 2025 Targets](#)

PRODUCT TYPE	IMPORT (\$ Thousand)			EXPORT (\$ Thousand)		
	2022	2023	2024	2022	2023	2024
1. Circuit Elements	3.627.462	3.948.843	2.165.154	103.702	211.190	224.887
Capacitors	131.561	142.127	143.541	6.405	9.715	10.829
Electrical Resistances	71.653	83.726	73.917	14.272	12.050	13.917
Solar Cells, Diode, Transistor (etc.)	3.044.586	2.876.946	1.648.518	31.194	150.355	157.672
Integrated Circuits	379.662	396.044	299.178	51.831	39.070	42.469
2. Picture Tube	111.394	95.220	86.788	1.617	5.078	3.190
3. Coils and Transformers	93.223	137.607	119.373	1.035.210	1.460.510	1.860.981
4. Acoustic Elements Microphone, Speaker	132.286	192.017	201.229	14.338	18.688	14.776
5. Fasteners and Electronic Relays	431.237	510.995	467.725	351.860	430.731	489.534
6. Printed Circuits	131.961	152.565	132.489	11.490	14.642	16.363
TOTAL	4.527.563	4.587.247	3.172.758	1.518.217	2.140.839	2.609.731



COMPONENTS

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8504	Electrical transformers, static converters (eg rectifiers) and inductors	137.607,00	119.373,00	1.460.510,00	1.860.981,00
850410201000	Inductors; Special for civil air transport	12	5	160	43
850410209000	Inductors; EXCEPT the special ones in charge of civil air transportation	500	405	182	194
850410801000	Other ballasts for discharge lamps or tubes; Special for civil air transport	322	669	117	156
850410809000	Other ballasts for discharge lamps or tubes; EXCEPT the special ones in charge of civil air transportation	2.312	1.786	1.120	430
850421000000	Liquid dielectric transformers; power <= 650 kVA	2.092	3.417	252.376	252.988
850422100000	Liquid dielectric transformers; 650 kVA < power <= 1 600 kVA	814	1.034	171.995	135.775
850422901000	Liquid dielectric transformers; Less than 1 600 kVA < power <= 2 000 kVA and 35 000 volts	68	667	23.260	36.006
850422902000	Liquid dielectric transformers; Less than 2 000 kVA < power <= 10 000 kVA and 35 000 volts	1.865	3.444	329.124	271.753
850422909000	Liquid dielectric transformers; More than 2 000 kVA < power <= 10 000 kVA and 35 000 volts	2.106	14.567	35.628	73.692
850423000011	Liquid dielectric transformers; 10 000 kVA < power <= 50 000 kVA	2.219	2.183	240.432	191.814
850423000019	Liquid dielectric transformers; power > 50 000 kVA	4.140	23.264	247.586	590.977
850431210000	Voltage transformers; power =< 1 kVA	4.944	5.557	21.704	25.255
850431290000	Other measurement transformers; power=<1 kVA,other	12.719	11.552	21.910	22.739
850431801000	Other transformers for toys; power=<1 kVA,other	23.846	50.576	6	681
850431809011	Ferrite core transformers; power=< 1 kVA	13.623	10.285	56	109,044
850431809019	Other transformers; power =< 1 kVA, other	18.905	15.755	34.141	40.876
850432001000	Other transformers for toys; 1 kVA < power <= 16 kVA	12.015	334	54	805
850432008000	Other transformers; 1 kVA < power <= 16 kVA	2.964	2.377	4.410	2.889
850433000000	Other transformers; 16 kVA<power=<500 kVA	5.073	5.418	32.696	21.619
850434000000	Other transformers power>500 kVA	27.068	16.602	43.604	192.182
8518	Microphones and their supports; loudspeakers (whether or not mounted in their cabinets); head-worn headphones, ear-plugs (whether or not combined with a microphone), kits containing a microphone and one or more loudspeakers; electric audio frequency amplifiers, kit audio amplifiers	192.017,00	201.229,00	18.688,00	14.776,00
851810000000	Microphones and their supports	19.310	17.646	786	647
851821000000	Single speakers mounted in the cabinet	36.419	33.360	1.287	1.292
851822000000	Multiple speakers mounted in the same cabinet	45.522	47.426	5.335	2.444
851829001000	Loudspeakers for use in civil aircraft (excluding those mounted in the cabin)	88	122	16	12,511

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
851829009000	Speakers; EXCEPT those for use in civil aircraft and mounted on the cabin	51.200	52.972	1.206	1.375
851830009000	Headphones and sets containing a microphone and one or more speakers; EXCEPT for civil aircraft	6.920	8.461	3.440	2838
851830001000	Headphones and sets containing a microphone and one or more speakers; for civil aircraft	8.419	13.351	6.017	5.602
851850000000	Set of audio amplifiers	1.141	1.133	139	150
851890003000	Parts of the microphone and its supports; parts	354	245	147	64
851890005000	Parts of loudspeakers	8.008	8.146	121	112
851890009000	Parts of heading 8518 for other headphones, electric audio frequency amplifiers and amplifiers	14.636	18.366	195	240
8532	Fixed, variable or adjustable (presettable) electrical capacitors	142.127,00	143.541,00	9.715,00	10.829,00
853210000000	Fixed capacitors (power capacitors); Manufactured for 50/60 Hz electrical circuits and 0.5 kvar or more	27.367	23.067	2.220	2.102
853221000000	Tantalum fixed electrical capacitors	10.238	12446,3	247	886
853222000000	Aluminum electrolytic fixed electrical capacitors	30.625	72108,1	705	239
853223000000	Fixed capacitors with ceramic dielectric (single layer)	3.394	6989,5	55	305
853224000000	Fixed capacitors with ceramic dielectric (multilayer)	35.522	10.838	1.535	3.004
853225000000	Fixed capacitors with paper or plastic dielectric	16.801	1336,48	3.147	1.364
853229000000	Other fixed capacitors	16.904	16.265	1.207	1.924
853230000000	Variable or adjustable (preset) capacitors	933	222	202	578
853290000000	Parts and parts of fixed, variable or adjustable (pre-adjustable) electrical capacitors	344	269	397	427
8533	Electrical resistors (including rheostats and potentiometers) (excluding heating resistors)	83.726	73.917	12.050	13.917
853310000000	Carbon fixed resistors (composition or film types)	1.869	1.306	465	481
853321000000	Other fixed electrical resistances; power capacity <= 20W	41.870	34.888	509	462
853329000000	Other fixed resistors power capacity>20 w.	8.960	8.973	6.344	6.452
853331000000	Wire-wound variable electrical resistors (including rheostats and potentiometers); power capacity <= 20W	8.126	6.490	1.088	1.994
853339000000	Wire-wound variable electrical resistors (including rheostats and potentiometers); power capacity > 20 W	425	764	1.788	2.038
853340100000	Other variable electrical resistors (including rheostats and potentiometers); power capacity <= 20W	12.669	12.161	972	1.015
853340900000	Other variable electrical resistors (including rheostats and potentiometers); power capacity > 20 W	9.580	9.190	730	757
853390000000	Parts and parts of electrical resistances (including rheostats and potentiometers) (excluding heating resistances)	228	140	154	719
8534	Printed Circuits	152.565	132.489	14.642	16.363
853400110000	EXCEPT other elastic circuits containing only conductor and contact elements	55.012	55.275	4.426	4.121
853400190000	EXCEPT other elastic circuits containing only conductor and contact elements	65.914	52.573	2.405	2.452
853400900000	Thick film circuits with other passive elements	31.639	24.641	7.841	9.790
8536	Electrical equipment for switching or protecting electrical circuits with a voltage not exceeding 1000 volts or for making connections to or from an electrical circuit (for example, switches, relays, fuses, surge suppressors, plugs, sockets and sockets, bulb holders and other connectors, junction boxes); connectors for optical fibers, optical fiber bundles or cables)	510.995	467.725	430.731	489.534

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
853641100000	Relays (rated voltage =< 60 v, rated current =< 2 amp.)	8.195	5.322	1.216	1.044
853641900000	Relays (rated voltage =< 60 v, rated current >2 amp.)	71.446	62.698	4.519	4.083
853649000013	Overcurrent thermal relays; 60 V < rated voltage <= 1000 V	10.277	7.826	2.732	1.397
853649000014	Synchronous motor time relays; 60 V < rated voltage <= 1000 V	4.722	3600,6	5	30
853649000019	Other time relays; 60 V < rated voltage <= 1000 V	1.822	1.204	2.042	1.991
853649000029	Other relays; 60 V < rated voltage <= 1000 V	103.414	77.429	55.302	47.483
853650030000	"Other relays; 60 V < rated voltage <= 1000 V Electronic AC switches (Isolated thyristor AC switches) containing optical-ly binary input and output circuitry;"	517	723	139	146
853650050000	Electronic switches containing a transistor and a logic chip (chip-on chip technology)	2.958	3.155	142	67
853650800011	Complete starters for fluorescent lamps; 60 V < rated voltage <= 1000 V	73	224	2.787	642
853650800013	Commutators; For electrical circuits with 60 V < rated voltage <= 1000 V	2.367	5.181	9.015	7.522
853650800014	micro switches; For electrical circuits with 60 V < rated voltage <= 1000 V	9.241	8.689	1.012	695
853650800015	household keys; For electrical circuits with 60 V < rated voltage <= 1000 V	5.522	5.618	19.653	18.565
853669100000	Plugs and sockets (sockets) for coaxial cables; rated voltage <= 1000V	19.077	20.077	2.300	2.005
853669300000	Plugs and sockets (sockets) for printed circuits; rated voltage <= 1000V	80.388	77.628	1.160	1.864
853669900011	household plugs and sockets; rated voltage <= 1000V	9.152	13.216	68.500	63.317
853669900013	Screwless - solderless self-insulating strip connection modules; rated voltage <= 1000V	23.371	19.098	1.783	1.341
853669900018	Other plugs and other sockets (sockets); rated voltage <= 1000V	154.867	152.090	48.927	46.826
853690010000	Prefabricated elements for electrical circuits; voltage <= 1000V	3.585	3.947	209.238	290.517
8540	Electronic valves, tubes and lamps with hot cathode, cold cathode or photocathode (for example, vacuum or steam or gas filled lamps, tubes and valves, mercury vapor rectifier tubes, cathode ray tubes, valves and tubes for television cameras) (heading 85.39) (excluding those included)	95.220	86.788	5.078	3.190
854011000000	Cathode ray black and white or other monochrome image tubes for television receivers [cathode ray image (video	14	40	1.554	611
854020800000	Image converter, condenser and other photocathode tube	14.289	7.715	753	409
854040000000	Monochrome data-graphic indicator tubes and color data-graphic indicator tubes with phosphor display points < 0.4 mm	1	0	0	9
854060000000	Other cathode ray tubes	46	64	1.291	1.394
854071000000	magnetrons	3.235	2.794	215	102
854079000000	Other microwave tubes (e.g. klystrons, carcineutrons) (except grid-controllable tubes)	435	1.173	160	107
854081000000	Receiver/riser valves	21.830	19.650	88	91
854089000011	Vacuum gauge tubes	101	105	376	218
854089000019	Other gauge tubes	50.098	51.874	9	8
854089000000	Other valves and tubes	2.569	2.686	241	221
854091000000	Katod ışınılı tüpler için aksam ve parçalar; saptırma (defleksiyon) bobinleri HARIÇ	57	41	0	17
854099000000	Parts and accessories for cathode ray tubes; EXCEPT the deflection coils	406	647	125	3

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8541	Diodes, transistors and similar semiconductor assembly; photosensitive semiconductor assembly (including photovoltaic batteries, whether or not assembled into a module or arranged in panels); light emitting diodes; mounted piezoelectric crystals	2.876.946	1.648.518	150.355	157.672
854110000000	Diodes (except photosensitive or light-emitting diodes (LED))	40.759	31.592	2.679	3.330
854121000000	Transistors (except photosensitive); power < 1W	10.706	8.339	1.767	953,98
854129000000	Transistors (except photosensitive); power >= 1W	55.376	45.738	2.811	2.501
854142000000	Photovoltaic cells that are not combined into a module or arranged in panels	1.270.802	415.389	104.567	118.817
854143000000	Photovoltaic cells combined into a module or arranged in panels	1.211.792	934.160	14.325	5907
854130000000	Thyristors (except photosensitive)	11.996	88.771	8.524	7.023
854141000000	Light emitting diodes (led)	102.802	30.975	10.641	13.051
854159000000	Other semiconductor assembly	3.938	3.917	919	244
854160000000	Filters made of mounted crystal and ceramic	102.240	71.647	3.642	1.630
854190000019	Parts for diode, semiconductor assembly, light emitting diodes (LED) and assembled piezoelectric crystals	64.534	17.989	480	4.215
8542	Parts for diode, semiconductor assembly, light emitting diodes (LED) and assembled piezoelectric crystals	396.066	299.178	39.070	42.469
854231900000	Other electronic integrated circuits used as processors and controllers	315.398	243.384	9.078	9.883
854232310000	Dynamic random access main memories (D-RAMs); memory capacity <= 512 Mbit	674	308	352	459
854232390000	Dynamic random access main memories (D-RAMs); memory capacity > 512 Mbit	17.918	9.204	5.134	1240
854232450000	Static random access main memories (S-RAMs) (including random access caches (cache-RAMs)	10.702	6.771	575	706
854232550000	UV erasable, programmable, read-only memories (EPROMs)	237	348	2.379	6640
854232610000	Electrically erasable, programmable and read-only flash memories (E2PROMs); memory capacity: <= 512 Mb	3.172	2.514	2.796	5604
854232690000	Electrically erasable, programmable and read-only flash memories (E2PROMs); memory capacity: > 512 Mbi	2.796	1.272	9	292
854232750000	Other electrically erasable, programmable and read-only memories (E2PROMs)	6.474	3.808	441	698
854232900000	Other memories with electronic integrated circuits	2.681	3.417	202	147
854239900000	Other integrated circuits	4.131	25.472	15.637	13.079
854290000000	Parts and accessories for electronic integrated circuits	4.884	2.680	2.466	3722,15
Sum of components		4.587.269,00	3.172.758,00	2.140.839,00	2.609.731,00

DISTRIBUTION OF IMPORT AND EXPORT OF THE COMPONENTS IN 2024 BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
North America	USA		190.450		117.960
	Canada		43.751		520.247
	Sub Total	2,10	234.201	0,28	638.207
European Union	Germany		355.974		118.650

DISTRIBUTION OF IMPORT AND EXPORT OF THE COMPONENTS IN 2024 BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	France		68.690		190.478
	Italy		64.520		18.623
	England		56.450		99.520
	Spain		29.471		38.710
	Hungary		18.630		30.409
	Czech Republic		19.746		4.213
	Poland		13.520		18.520
	Bulgaria		17.460		89.745
	Austria		20.147		6.400
	Finland		23.698		8.410
	Romania		7.156		33.258
	Netherlands		2.789		13.600
	Sweden		2.610		10.478
	Croatia		8.630		400
	Greece		120		15
	Denmark		2.400		12
	Portugal		8.400		530
	Belgium		1.579.458		330
	Ireland		6.000		1.963
	Other Countries		11.000		16.300
	Sub Total	14,01	2.316.869	23,17	700.564
Non-EU Countries	Switzerland		20.471		119.963
	Ukraine		1.658		12.460
	Russian Federation		1.010		12.500
	Macedonia		6.800		1.300
	Other Countries		1.250		27.000
	Sub Total	0,41	31.189	5,46	173.223
North Africa & Middle East	UAE		5		120.840
	Iraq		2		186.520
	Iran		110		33.478
	Egypt		30		184.960
	Israel		1.400		7.000
	Other Countries		40		63.850
	Sub Total	0,14	1.587	48,42	596.648

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
Central Asia & Caucasus	Turkmenistan		0		85.460
	Azerbaijan		10		33.250
	Other Countries		1		52.147
	Sub Total	0,00	11	9,25	170.857
Central and South America	Mexico		24.051		3.691
	Other Countries		1.284		9.776
	Sub Total	0,46	25.335	1,34	13.467
Far East	China		252.150		270
	Malaysia		54.985		5.420
	Taiwan		65.423		5.900
	Thailand		44.720		81.540
	Japan		50.789		38
	South Korea		44.312		42
	Vietnam		24.411		7.000
	Singapore		5.204		1.000
	Philippines		6.076		1.380
	Indonesia		3.215		5.300
	Hong Kong		6.247		3.415
	Other Countries		230		400
		Sub Total	81,35	557.762	3,57
Serbest Bölgeler	Istanbul I. And Trade Free Zone		90		55.000
	Çorlu European Free Zone		34		860
	Aegean Free Zone		700		3.800
	Other Free Zones		1.980		60.400
	Sub Total	1,06	2.804	2,65	120.060
Other Countries	Other Countries		3.000		85.000
	Sub Total	0,47	3.000	5,86	85.000
Sum of Components		100,00	3.172.758	100,00	2.609.731

PRIMARY COMPANIES OPERATING IN THE COMPONENTS SUB-SECTOR (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
ACRON Elektronik Sanayi ve Ticaret A.Ş.	Yukarısoku Mah. Çele Cad. No: 74 14300 Merkez / BOLU	374 217 45 66	
ANSAL Endüstriyel Test San. Tic. A.Ş.- İSTANBUL	Akcaburgaz Mah. 592 Sok. No:10-12/2 Esenyurt - İSTANBUL	212 549 80 45	
AYDIN YAZILIM (AYESAŞ) ve Elektronik Sanayi A.Ş.	Oğuz Caddesi No:7 Organize Sanayi Bölgesi 06935 Sincan-ANKARA	312 267 27 27	312/ 267 01 16

COMPANY	ADDRESS	TELEPHONE	FAX
BARFAS Otomasyon Teknolojileri San. ve tic. Ltd Şti.	Yukarı Dudullu Mh. Tavukçu Yolu Cd., Anıl Sokak No:5 Ümraniye/İSTANBUL	216 466 46 36	
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti.	Güzeltape Mah. Pembegül Sok. No 7 D 8 34680 Üsküdar-Istanbul	216 4601720	
DAİİCHİ Elektronik San. Tic A.Ş.	Aşirefendi Cad. No:15 İmar Han Kat:4 Sırkeci / Fatih / İstanbul, 34112	216 4711442	
DEICO Mühendislik San. Tic A.Ş.	Serhat Mah. Ankara Teknopark Yerleşkesi 224. cad No:1 F blok, z-12, Yenimahalle, Ankara	312 395 68 44	312 395 68 45
ELEKTRA Elektronik Sanayi ve Ticaret Ltd. Şti.	Akçaburgaz Mah. 155. Sok. No:3 Esenyurt-İSTANBUL	212 886 20 80	212 886 97 85
ELİMKO Elektronik İmalat ve Kontrol Ticaret Ltd. Şti.	8. Cadde 21. Sokak No:16 06510 Emek-ANKARA	312 2126450	312 2124143
EMPA Elektronik Sanayi ve Ticaret A.Ş.	İstanbul Dünya Ticaret Merkezi A1 Blok Kat:4 No:200 34149 Yeşilköy-İST.	212 465 71 99	212 465 71 88
ENTES Elektronik Cihazlar İmalat ve Tic. A.Ş.	Dudullu Org.San.Böl. 1. Cadde No:23 34776 Ümraniye-İSTANBUL	216 313 01 10	216 314 16 15
EVREKA Yazılım Donanım Danışmanlık Eğitim Sanayi ve Tic. A.Ş.	Üniversiteler Mah. İhsan Doğramacı Bulvarı No:33 Odu Teknokent Ankara	312 988 03 06	
FEINMETALL Türkiye Bağlantı Teknolojileri Ltd. Şti.	Yenişehir Mah. Ankara Cad. No:405 360 Office Plaza Kat:5 Ofis:134 Pendik 34912 İstanbul		
FOCUS Elektronik Hong Kong Company Ltd. Şti.	Goodwill Ind Bldg No 36 - 44 Pak Tin Par Street Tsuen Wan Hong Kong		
İMCA Elektronik ve Bilişim San. Tic. A.Ş.	İşçi Blokları Mah. Muhsin Yazıcıoğlu Cad. No:57/115 Çankaya/Ankara, Türkiye	312 483 35 85	
İNTERDATA Veri Merkezi Ve Entegrasyon Hizmetleri A.Ş.	Üniversiteler Mah. Hacettepe Teknokent 6. ARGE F Blok No:1 Çankaya - Ankara	312 2992056	312 2992057
GESK Elektrik Elektronik Yazılım Sanayi ve Tcaret Ltd. Şti.	Yıldız Teknik Uni. Teknopark B1 No:405 Esenler İstanbul	+44 20 3923 7000	
LENİ'S Technologies Limited	Unit Da2 Sutherland House, 43 Sutherland Road, London, United Kingdom, E17 6BU	212 220 22 34	212 483 70 35
MYSIA Elektrik Elektronik Bilgisayar Yazılım San. Tic. A.Ş.	Alaaddin Bey Mah. Nilüfer Ticaret Merkezi 622 Sk. Sera Plaza 8/B Nilüfer - BURSA	224 443 24 65	
ORHUN Kimya Boya Sanayi Ticaret Ltd. Şti.	Merciler Sanayi Sitesi 13. Cadde No: 25 Beylikdüzü, 34524 Beylikdüzü/İstanbul	0532 358 15 64	
POLAR Araştırma Teknoloji İletişim Sanayi ve Ticaret A.Ş.	Oğuzlar mahallesi 1372 Cad. 3/4 Balgat Çankaya Ankara	312 999 06 06	
SAME Elektronik San. ve Tic. Anonim Şirket	Mutlukent Mah. 2010 Cad. Beysuillakent sitesi No:1 Beysukent Cankaya	312 212 22 11	
SDT Uzay ve Savunma Teknolojileri Bilişim Üretim Danışmanlık Ticaret A.Ş.	Üniversiteler Mahallesi İhsan Doğramacı Bulvarı No:37/1 Çankaya -ANKARA	312 210 10 151	
TELEGRAPHER LABS Ses Sistemleri San. Tic. A.Ş.	Tekokent Arı-3 No:4 Sarıyer/İstanbul		
TELPA Teknoloji Hizmetleri A.Ş.	Hamidiye, Anadolu Cd. No:14, 34408 Kâğıthane/İstanbul	212 371 00 00	212 371 11 99
TUNİK Elektromekanik Sanayi A.Ş.	İstanbul Cad. No:27/1-2 Kavaklıköy-Büyükkçekmece-İSTANBUL	212 624 31 44	212 579 02 32
UDEA Elektronik A.Ş.	Ankara Teknopark 2224 Cad. B Blok No:1/142 İvedik OSB Yenimahalle/ANKARA	312 3956875	312 3956877
ÜNA ENERJİ Yapı Sistemleri A.Ş.	ÜNALLAR Binası Ankara Devlet Karayolu 5. KM KASTAMONU	212 2204788	
VEMUS Endüstriyel Elektronik San. ve Tic. Ltd.Şti.	NOSAB, Organize Sanayi Bölgesi Zeytin Cad. No:14 16140 Nilüfer-BURSA	224 411 10 30	224 411 10 31
WHILONE Teknoloji Yazılım Danışmanlık Ltd. Şti.	Cevat Dünder Cad. Ostim OSB Mah. No:1/1-43 OSTİM TEKNOPARK YENİMAHALLE/ANKARA		
ZER Elektronik Sanayi ve Ticaret Ltd. Şti.	Eskişehir Yolu 9.Km. (Eskişehir Yönü Bilkent-Hacettepe Köprüleri arası) 06520-ANKARA	312 286 03 04	312 286 50 06

TURKISH ELECTRONICS INDUSTRY

COMPUTER SUB-SECTOR

In 2024, domestic companies in Türkiye's computer subsector achieved significant success. Leading local brands such as Casper, Exper, Monster, and Vestel increased their market share in both desktop and laptop production, continuing to be preferred by local consumers and corporate clients. Casper stood out as the first Turkish company to produce a domestic motherboard, building a strong user base with its wide product range and affordable pricing policy. Exper, a leader in both computer and tablet production, became a preferred brand in the Ministry of National Education's digital education projects. Monster differentiated itself in the market with its gaming computers, while Vestel further strengthened its position through its electronic and computer product lines.

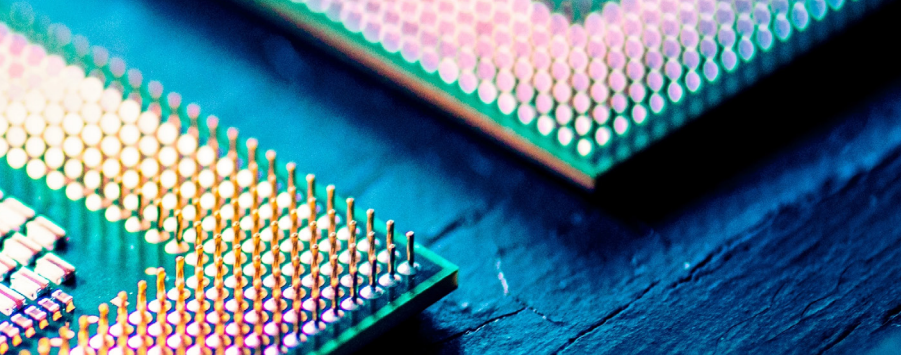
Additionally, Atom Bilişim contributed to the diversification of domestic production by manufacturing high-performance gaming and office

computers under its Dragos and Turbox brands. Türkiye's computer sector has been supported by innovative technologies such as artificial intelligence and hybrid work solutions, leading to growth in both total revenue and exports. Competing with international firms such as Lenovo Türkiye, domestic brands have made notable progress in terms of quality and technology. TÜBİTAK-supported R&D projects and patent applications have also reflected the sector's innovative production capacity.

Thus, 2024 marked a year of substantial growth for Türkiye's computer subsector — both in terms of production capacity and technological development — demonstrating the increasing competitiveness and innovation of local manufacturers.

- [1] TeknoTeleskop – Overview of Computer and Technology Companies in Türkiye (2024)
 [2] Murat Demirci – Türkiye's Domestic Computer Brands (2023)
 [3] Atom Bilişim – Among Türkiye's Top 500 IT Companies
 [4] Yüzde 100 Yerli – What You Should Know About Domestic Computer Brands: Casper, Exper, Monster, Vestel
 [5] Marketing Türkiye – How Much More Will the IT Market Grow?
 [6] TÜBİTAK – A Year Full of Achievements in Science and Technology (2024)

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8443	Machines for printing by means of plates, cylinders and other printing materials of heading 84.42; other printing, copying and fax machines (whether or not combined); their parts, parts and accessories	240.748,00	207.365,00	23.774,00	26.166,00
844331000000	Machines that perform two or more of the print, copy or fax relay functions; computer/networkable	133.755	106.651	7.777	11.733
844332109011	Matrix type printers that can be connected to automatic data processing machines or network; EXCEPT for civil aircraft	14.393	10.222	40	44
844332109012	Laser type printers that can be connected to automatic data processing machines or network; EXCEPT those for civil aircraft	2.415	12.858	2.127	1.891
844332109013	Line printers that can be connected to automatic data processing machines/network	0	280	7	6
844332109019	Other printers that can be connected to automatic data processing machines or network; EXCEPT for civil aircraft	51.823	42.018	6.473	4.447
844339000000	Other printing, copying and fax machines that can be connected to automatic data processing machines or network	5.261	7.028	1.612	720
844332800000	Automatic data processing machines or other machines that can be connected to the network	8.006	3.285	3.663	4.301
844399100000	Assembled electronics, part of the printing machine	9.725	8.169	643	1.254
844399901000	Parts and accessories of optical system copiers	15.370	16.855	1.432	1.770



COMPUTER

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8471	Automatic data processing machines and their units not specified or included elsewhere in the tariff; magnetic or optical readers, machines for entering data into the recording medium by converting it into code, and machines processing this data	3.440.946	2.763.271	147.542	128.792
847130000000	Portable automatic data processing machines (consisting of at least one central processing unit, a keyboard and a screen and weighing	1.877.455	1.389.151	28.404	26.605
847141001000	Other automatic computing machines with at least one central processing unit and one input and one output unit in the same cabinet	347	1.756	104	651
847141009000	Other automatic computing machines with at least one central processing unit and one input and one output unit in the same cabinet	53.444	40.608	7.123	10.995
847149001000	Other automatic data processing machines brought into the system; for use in civil aircraft	153	203	206	449
847149009000	Other automatic data processing machines brought into the system; EXCEPT for use on civil aircraft	89.671	80.635	12.311	13.784
847150001000	Processing units for other automatic computing machines; for use in civil aircraft	575	250	448	64
847150009000	Processing units for other automatic computing machines; EXCEPT for use on civil aircraft	649.247	535.003	26.865	23.399
847160601000	Keyboards for automatic computing machines; for use in civil aircraft	706	367	72	69
847160609000	Keyboards for automatic computing machines; EXCEPT for use on civil aircraft	50.909	55.664	2.117	1.433
847160701000	Other input units and other output units for automatic data processing machines; not used in civil aircraft	484	167	954	844
847160709011	Optical readers for automatic data processing machines; EXCEPT for use on civil aircraft	10.788	9.454	2.424	3.712
847160709012	Magnetic code readers for automatic data processing machines; EXCEPT for use on civil aircraft	481	444	461	452
847160709013	Light pen for automatic data processing machines; EXCEPT for use on civil aircraft	2.439	1.007	13.931	10.099
847160709014	Mouse for automatic computing machines; EXCEPT for use on civil aircraft	39.463	35.593	1.009	719
847160709016	Digitizer for automatic data processing machines; EXCEPT for use on civil aircraft	1.477	1.328	19	549
847160709019	Other input units and other output units for automatic data processing machines; not used in civil aircraft	32.871	31.917	2.184	1.956
847170201000	Main memory units for automatic computing machines; for use in civil aircraft	17	144	2	566
847170209000	Main memory units for automatic computing machines; EXCEPT for use on civil aircraft	52.486	34.121	1.558	788
847170309000	Optical disk units (including magneto-optical ones) for automatic computing machines; used in civil aircraft	13.707	10.512	5.114	1.922
847170501000	Hard disk drive for automatic computing machines; for use in civil aircraft	47.027	74710,2	4.884	1.702
847170509000	Hard disk drive for automatic computing machines; EXCEPT for use on civil aircraft	93.477	73.116	6.028	3.183
847170701000	Other disk volumes for automated computing machines; for use in civil aircraft	16	6	17	0
847170709000	Other disk volumes for automated computing machines; EXCEPT for use on civil aircraft	65.401	42.207	2.258	1.107

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
847170809000	Magnetic tape units for automatic data processing machines; EXCEPT for use on civil aircraft	3.085	18.681	379	1.574
847170989000	Other memory units for automatic computing machines; EXCEPT for use on civil aircraft	128.673	130.014	11.694	4.506
847180000000	Other units of automatic computing machines	179.080	151.010	6.500	10.828
847190000000	Magnetic or optical readers, machines for entering the data by converting the data to the recording medium into code form and processing this data.	47.153	45.202	10.378	6.837
8473	Parts and accessories (excluding boxes, covers and the like) suitable for use only or principally in machinery and apparatus of headings 84.69 to 84.72	188.796	150.346	18.718	15.434
847329900019	Other parts, parts and accessories of other calculators of heading 84.70	0	636	1.474	764
847330200000	Combined electronics that can be used equally in two or more of the machines of headings 84.70 to 84.72	146.747	114.147	13.906	11.677
847330800000	Other axes which are equally suitable for use on two or more of the machinery of headings 84.70 to 84.72	39.816	34.337	2.703	2.520
847350200000	Combined electronics, parts, used in two/more of other machines for writing, accounting, data processing, office	1.059	528	3	6
847350800000	Other combined parts, parts used in writing, calculation, data processing, office, other machine two/more	1.175	698	633	467
8523	Discs, tapes, solid-state permanent storage devices, smart cards and other objects, whether or not recorded, for recording sounds and other phenomena (including matrices and dies for the manufacture of discs, but excluding products of Chapter 37)	289.151	322.609	27.743	27.927
852329190000	Magnetic tapes and magnetic disks for recording sounds and other phenomena; registered	104	174	15	13
852329900000	Other magnetic supports for recording sounds and other phenomena; registered or not	335	295	431	325
852341100000	Optical discs for laser reading systems; unrecorded, excluding erasable, recording capacity <= 900 megabytes	914	465	17	20
852341300000	Optical discs for laser reading systems; unrecorded, excluding those that can be deleted, 900 megabytes < recording capacity <= 18	574	241	319	855
852341900000	Other unrecorded optical supports for recording sounds and other phenomena	251	133	111	388
852349100000	Digital versatile optical discs (DVD) for laser reading systems; registered	8.341	6.315	3.130	3.708
852349200000	Other optical discs for laser reading systems; registered	9.045	7.211	990	1.025
852349900000	Other recorded optical supports for recording sounds and other phenomena	2.370	1.534	1.056	717
852351100000	Solid state permanent semiconductor storage devices for recording sounds and other phenomena; not registered	43.022	37.098	1.837	2.288
852351900000	Solid state permanent semiconductor storage devices for recording sounds and other phenomena; registered	21.768	28.752	2.500	1.368
852352001000	Semiconductor smart card with two or more electronic integrated circuits for recording sounds and other phenomena	31.753	37.191	7.332	6.693
852352009000	Other semiconductor smart cards for recording sounds and other phenomena	168.835	201.890	6.616	7.102
852359100000	Other semiconductor supports for recording sounds and other phenomena; not registered	575	584	1.586	2.277
852359900000	Other semiconductor supports for recording sounds and other phenomena; registered	988	621	1.781	1.131
852380100000	Other supports for recording sounds and other phenomena; not registered	275	106	23	18
8528	Monitors and projectors (not equipped with a set-top box); television receiver equipment, whether or not with radio reception equipment or audio or video recording or reproducing equipment:	123.708	121.316	36.614	32.239
852849000000	Other monitors with cathode ray lamps	116	37	119	111
852862000000	LCD monitors; Designed for use with automatic data processing machines of heading 84.71 and directly	61.012	57.194	27.894	22.616

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
852852910000	Other monitors; Designed for use with automatic data processing machines of heading 84.71 and directly	11.886	8.873	850	794
852852990000	other monitors	32.856	36.461	7.019	7.207
852859000000	projectors; Designed for use with automatic data processing machines of heading 84.71 and directly	17.838	18.752	732	1.512
Sum of Computer		4.283.349	3.564.907	254.391	230.558

DISTRIBUTION OF IMPORT AND EXPORT OF THE COMPUTER IN 2024 BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
North America	USA		148.750		11.580
	Canada		19.800		700
	Sub Total	3,85	168.550	9,68	12.280
European Union	Czech Republic		194.098		21.780
	Ireland		96.945		4.000
	Germany		72.547		17.941
	Poland		81.456		2.147
	Hungary		58.740		6.400
	Sweden		7.200		48
	Netherlands		29.682		18.478
	France		12.478		1.800
	Italy		21.841		4.317
	Austria		18.450		6.210
	England		19.850		6.741
	Spain		94.632		3.450
	Other Countries		44.800		6.025
Sub Total	23,71	752.719	42,23	99.337	
Non-EU Europe	Turkish R. of Northern Cyprus		2.941		24.000
	Other Countries		1.460		2.900
	Sub Total	0,33	4.401	11,42	26.900
North Africa & Middle East	Israel		13.478		4.600
	UAE		8.000		3.700
	Other Countries		6.000		19.800
Sub Total	0,74	27.478	15,97	28.100	
Central Asia & Caucasus	Turkmenistan		0		14.800
	Azerbaijan		0		5.000

DISTRIBUTION OF IMPORT AND EXPORT OF THE COMPUTER IN 2024-BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	Georgia		0		1.800
	Other Countries		0		900
	Sub Total	0,00	0	8,92	22.500
Central and South America	Mexico		42.179		145
	Other Countries		100		130
	Sub Total	0,90	42.279	0,08	275
Far East	China		1.390.650		1.000
	Vietnam		92.730		450
	Thailand		85.789		50
	Taiwan		135.981		5.980
	Singapore		31.542		275
	South Korea		600.975		698
	Japan		52.480		350
	Malaysia		59.785		255
	Philippines		44.630		80
	Indonesia		21.479		1.150
	Hong Kong		6.480		7.000
	Other Countries		300		900
	Sub Total	70,34	2.522.821	3,30	18.188
Free Zones	Other Free Zones		320		9.500
	Sub Total	0,04	320	4,04	9.500
Other Countries	India		28.149		3.000
	Pakistan		80		1.150
	South Africa Republic		60		3.150
	Other Countries		50		6.178
	Sub Total	0,09	28.339	4,36	13.478
	Sum of Computer	100,00	3.546.907	100,00	230.558

PRIMARY COMPANIES OPERATING IN THE COMPUTER SUB-SECTOR (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
ADAM-ARGE	GOSB Teknopark Kemal Nehrozoğlu Cad. 400.Sok. High Tech Binası Gebze-KOCAELİ	262/ 678 72 44	262/ 751 52 71
ARKSIGNER Yazılım ve Donanım San. Tic. Ltd. Şti.	Üniversiteler Mah. 1606 Cad. Bilkent Cyberpark Cyberplaza No:4 A Blok No:603 06800 Çankaya/ Ankara	312/ 4847933	
AYDIN Yazılım ve Elektronik Sanayi A.Ş.	Oğuz Cad. No:7 06935 Sincan-ANKARA	312/ 589 30 00	312/ 589 30 60

PRIMARY COMPANIES OPERATING IN THE COMPUTER SUB-SECTOR (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti.	Güzeltepe Mah. Pembegül Sok. No 7 D 8 34680 Üsküdar-Istanbul	216/ 4601720	
BİNK Teknoloji San. Tic. Ltd. Şti.	Sahabiye Mah. Ahmet Paşa Cad. Kalender İş Mrk. No:41/602 Kocasinan/KAYSERİ	850 242 25 43	
BLC İletişim ve Güvenlik Sistemleri A.Ş.	OSTİM OSB Mah. 100.yıl Cad. 55/E/14 Yenimahalle		
DEVİNNO Teknoloji Yatırımları A.Ş.	Atatürk Mah. Ertuğrul Gazi Sokak, Metropol Istanbul Sitesi C1 Blok No: 2B/111 34758 Ataşehir/İSTANBUL	216/ 7062111	216/ 7062216
EGEBİMTES Bilgi Teknolojileri San ve Tic A.Ş.	1370 sokak, no:42/403 Yalay İş Merkezi, Montrö, Konak, İzmir, 35230	232 489 00 60	
EMPA Elektronik Elektronik San. ve Tic.A.Ş.	İstanbul Dünya Ticaret Merkezi A1 Blok Kat:4 No:200 34149 Yeşilköy İSTANBUL	212/ 465 71 99	212/ 465 71 88
ENTES Elektronik Cihazlar İmalat ve Tic. A.Ş.	Y.Dudullu Org.San.Böl. 1. Cadde No:23 34776 Ümraniye-İSTANBUL	216/ 313 01 10	216/ 314 16 1
ETA Bilgisayar Sanayi ve Tic. Ltd. Şti	Samanyolu Sok. No:75 a 3-4 34360 Şişli-İSTANBUL	212/ 444 13 82	212/ 232 39 21
ERGÜNLER İnşaat Petrol Ürün. Otomotiv Tekstil Madencilik Su Ürün. San. ve Tic. Ltd. Şti.	Pirim Mehmet Mh. 113 Cd. No: 75 32100 Merkez/ İSPARTA	216/ 631 88 86	
FEINMETALL Türkiye Bağlantı Teknolojileri Ltd. Şti.	Yenişehir Mah. Ankara Cad. No:405 360 Office Plaza Kat:5 Ofis:134 Pendik 34912 İstanbul	536 477 21 37	
İNTERDATA Veri Merkezi Ve Entegrasyon Hizmetleri A.Ş.	Üniversiteler Mah. Hacettepe Teknokent 6. ARGE F Blok No:1 Çankaya - Ankara	312 2992056	312 2992057
KÖSTEBEK Araştırma Teknoloji Ticaret A.Ş.	Kızıldere Mah. Eski Ankara Cad. No:4 /3 İç Kapı No:14 Çekmeköy- İstanbul	850 308 97 14	
LENI'S Technologies Limited	Unit Da2 Sutherland House, 43 Sutherland Road, Lon- don, United Kingdom, E17 6BU	+44 20 3923 7000	
LOTEC Teknoloji Ltd. Şti.	Hacettepe Teknokent 6. AR-GE C Blok Kat:2 No:28	312 227 03 06	
MİKROSAY Yazılım ve Elektronik Enerji San. Tic. A.Ş.	Şerifali Mah. Alptekin Cad. No:73/2 34775 Ümraniye-İSTANBUL	216 459 86 60	
NETAŞ Telekomünikasyon A.Ş.	Yenişehir Mah. Osmanlı Bulvarı No:11 Kurtköy- İSTANBUL	216/ 522 20 22	216/522 22 22
ONUR Yüksek Teknoloji A.Ş.	Mutlukent Mahallesi 1942. Cadde No: 39 Ümitköy, Çankaya / ANKARA	312 235 15 50	312 235 15 40
OZİ Güvenlik Sis.Bil.Mak.İnş.San ve Tic.Ltd.Şti	Kartaltepe Mah. Bitişik Bağlar Sk. No:16/A Bakırköy-İs- tanbul		
POLAR Araştırma Teknoloji İletişim Sanayi ve Ticaret A.Ş.	Oğuzlar mahallesi 1372 Cad. 3/4 Balgat Çankaya Ankara	312 999 06 06	
RFT Araştırma Sanayi ve Ticaret A.Ş.	Teknopark Bulvarı No:1 C Blok 34609 Pendik-İSTANBUL	216/ 999 70 00	216/ 999 70 01
SAME Elektronik San. ve Tic. Anonim Şirket	Mutlukent Mah. 2010 Cad. Beysuwillakent sitesi No:1 Beysukent Cankaya	312 212 22 11	
SDT Uzay ve Savunma Teknolojileri Bilişim Üretim Danışmanlık Ticaret A.Ş.	Üniversiteler Mahallesi İhsan Doğramacı Bulvarı No:37/1 Çankaya -ANKARA	312 210 10 15	
TELEGRABHERLABS Ses Sistemleri Sanayi ve Ticaret A.Ş.	Reşitpaşa Mahallesi Katar Caddesi Teknokent ARI-3 No:4 Sarıyer-İSTANBUL	216/ 999 70 00	216/ 999 70 00
TİBET Tech Solutions	49 Sugar Mill Way M2L 1R5 Toronto, ON Canada		
ULAK Haberleşme A.Ş.	Mustafa Kemal Mah. Şehit Öğretmen Şenay Aybüke Yalçın Cad. NO:13/A ÇANKAYA/ANKARA	312/ 2869486	312 /2869488
VHS Elektronik Yazılım Ltd. Şti.	İvedik OSB 1548 Cadde No:7 Yenimahalle / ANKARA	312/230 15 61	
VMS VMS Elektronik Sanayi ve Ticaret A.Ş.	NOSAB Zeytin Cad.No:14 16220 Nilüfer BURSA	224 411 10 30	
WHILONE Teknoloji Yazılım Danışmanlık Ltd. Şti.	Cevat Dündar Cad. Ostim OSB Mah. No:1/1-43 OSTİM TEKNOPARK YENİMAHALLE/ANKARA		
YONGA Teknoloji Mikroelektronik A.Ş.	Teknopark İstanbul Sanayi Mah. Teknopark Bul. No:1/9A Kat:3, 34906 Pendik/İstanbul	216 504 14 10	

TURKISH ELECTRONICS INDUSTRY

TELECOM SUB-SECTOR

In 2024, domestic companies in Türkiye's telecommunications subsector — led primarily by Türk Telekom — achieved remarkable success. Throughout the year, Türk Telekom expanded its fiber infrastructure to 475,000 kilometers, becoming the second-largest fiber network in Europe and providing high-speed internet access to 33.1 million households. The company also increased its mobile subscriber base by 1.1 million, reaching a total of 27.3 million mobile users. With its strong performance in net subscriber growth and service revenues, Türk Telekom emerged as the game changer of the mobile market.

Financially, the company demonstrated robust growth, increasing its revenues by 11.8%, EBITDA by 30.5%, and improving its EBITDA margin by 560 basis points. Türk Telekom also played a pioneering role in 5G technology, connecting 54% of its LTE base stations to fiber and continuing investments in fully 5G-compatible infrastructure.

Moreover, the company led Türkiye's digital transformation with groundbreaking initiatives such as the country's first live 5G sports broadcast and remote surgery operations powered by 5G.

Türk Telekom's commitment to carbon transparency and sustainability also set it apart in the industry, earning an "A" leadership rating and positioning it as a driving force in green transformation. By enhancing the user experience through digital services and AI-based solutions, the company continues to make strong contributions to Türkiye's national digitalization vision.

These achievements clearly demonstrate the progress of domestic firms in Türkiye's telecommunications sector in terms of technological infrastructure, financial performance, and innovation capacity.

[1] Türk Telekom 2024 Annual Report (PDF)

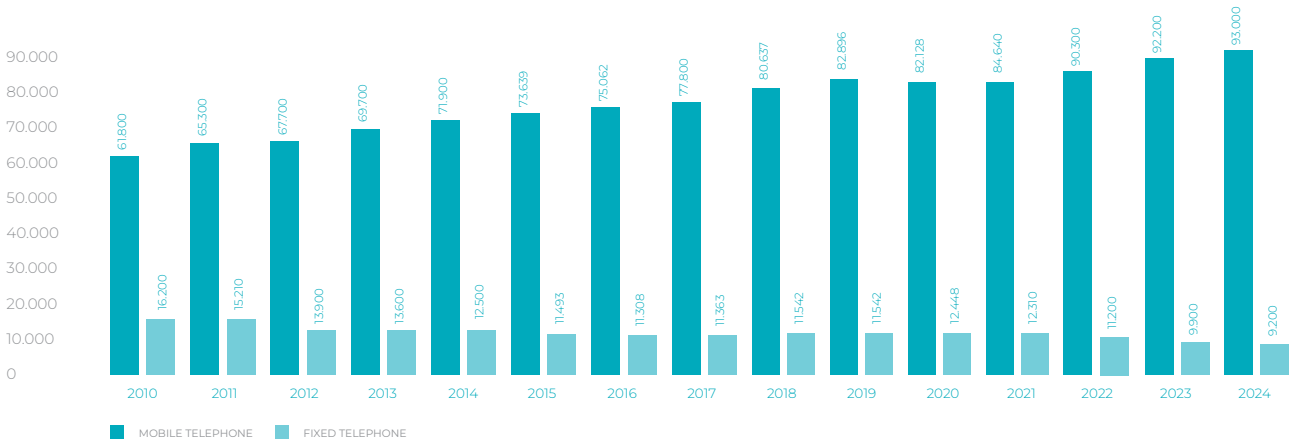
[2] Anadolu Agency – Türk Telekom Became the Game Changer in Mobile in 2024

[3] Türk Telekom Media Center – Türk Telekom Became the Game Changer in Mobile in 2024

[4] Para Dergi – Türk Telekom Ranks Second in Europe in Fiber Infrastructure (2024)

PRODUCT TYPE	IMPORT (\$ Thousand)			EXPORT (\$ Thousand)		
	2022	2023	2024	2022	2023	2024
1. Device for connecting Telephone and Telegraph Lines (automatic telephone exchange etc.)	15.364	5.410	5.225	5.890	4.457	4.682
2. End Devices (telephone, teleprinter, telefax etc.)	28.552	41.642	49.225	4.097	5.299	4.965
3. Transmission Devices (analog digital multiplex device, TV transmitter)	1.410.682	1.709.835	1.420.587	96.345	129.269	103.435
4. Wireless-Telephone / Wireless Telegraph Transceiver	1.710.315	2.182.748	2.419.839	137.397	75.163	117.658
5. Wireless-Telephone / Wireless Telegraph Transceiver satellite etc. Antennas Components and Parts	151.137	170.254	162.425	12.681	16.835	19.901
6. Cables						
Telecom Cables	828.138	1.051.827	1.371.030	1.396.977	1.425.958	1.224.876
Energy Cables	189.610	199.331	489.610	299.450	441.627	745.077
Fiber Optic Cables	256.144	247.216	214.573	103.320	140.099	103.440
TOTAL	4.589.942	5.608.263	6.132.514	2.056.157	2.238.707	2.324.034

Distribution of GSM (Mobile) and Fixed Telephone Subscribers by Years



HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8517	Telephony devices (including telephones for cellular networks or other wireless networks); other apparatus for receiving or transmitting sound, image or other information (including devices for communication in wired or wireless networks (such as local or wide area networks), except for transmitting or receiving devices of heading 84.43, 85.25, 85.27 or 85.28	3.587.947	3.603.606	160.097	150.943
851711000000	Cordless handset cordless telephones	3.359	2.165	140	371
851713000011	Transmitter portable (Cellular) cordless telephone devices with receiver	1.815.348	2.097.909	1.551	1.330
851714000012	Transmitting mobile vehicle (Cellular) wireless telephone devices with receiver	19	81	27	112
851714000019	Other phones for cellular networks or other wireless networks	3.432	4.506	166	127
851718000019	Other telephone devices; others	20.886	12.539	3.270	2.404
851761001000	Base stations for receiving/transmitting audio, video/other information; for cellular network	3.879	3.828	899	489
851761009000	Base stations for receiving or transmitting audio, video or other information; EXCEPT those for cellular network	1.531	1.397	3.558	4.193
851762001000	Machine for receiving, translating, exporting/reproducing audio, video/ other information; for cellular network	115.158	144.585	5.633	4.926
851762009000	Machine for receiving, translating, exporting/reproducing audio, video/ other information; others	1.594.677	1.276.002	123.636	98.508
851769100000	Videophone devices	15.594	12.457	813	865
851769200000	closed-circuit speech systems	5.162	36.768	1.216	1.149
851769909017	Transmitting marine satellite devices with receiver	2.689	590	98	71
851769909024	Transmitter public band (CB) and 49 MHz low power (< 100 milliwatts) radio devices with receiver	261	229	158	58
851769909029	Other devices for receiving or transmitting sound, image or other information	5.953	10.549	18.932	36.340

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8518	Microphones and their supports; loudspeakers (whether or not mounted in their cabinets); head-worn headphones, ear-plugs (whether or not combined with a microphone), kits containing a microphone and one or more loudspeakers; electric audio frequency amplifiers, kit audio amplifiers	0	0	0	0
851890001000	Wired telephone equipment parts	0	0	0	0
851890002000	Parts of wired telephone microphones	0	0	0	0
8525	Transmitting apparatus for radio or television broadcasting, whether or not receiving apparatus or sound recording or reproducing apparatus; television cameras, digital cameras and video recorders	19.658	18.583	3.188	1.174
852550000011	Transmitting devices for television broadcasts	147	193	41	13
852550000012	Transmitting devices for radio broadcasts	270	129	60	44
852550000013	Radiolink and satellite transmitting devices (including Uplink devices)	103	307	25	13
852550000019	Transmitter other devices	646	764	323	186
852560000015	Transmitter television equipment with receiver (transmitters)	498	312	614	354
852560000017	Transmitter land radiolink or satellite devices with receiver (including Uplink devices)	1.688	291	855	239
852560000029	Transmitter other devices with receiver	16.306	16.587	1.271	325
8526	Radar devices, air and maritime traffic auxiliary radio devices and radio control devices for remote control	337.280	302.893	50.903	78.075
852610000011	Radio altimeters	3.552	3.171	545	645
852610000012	meteorological radars	864	181	228	265
852610000019	Other radars	84.204	86.935	5.137	20.808
852691200000	Radio receivers for navigation	63.673	59.335	6.792	6.378
852691800011	Direction finders for navigation	5.415	10.103	267	453
852691800013	Satellite radio receivers for navigation	2.048	1.349	1.472	1.367
852691800019	Other radio assistive devices for navigation	126.314	89.986	12.369	14.969
852692002000	Radio apparatus for remote control, for use in civil aircraft	192	36	45	23
852692009014	Wireless ignition/trigger systems for remote control	254	197	1.401	89
852692009019	Other radio equipment for remote control	50.764	51.598	22.648	33.078
8529	Parts only or principally for appliances of headings 85.25 to 85.28	150.596	120.390	14.075	18.925
852910651000	Internal antennas (including mounted) for radio and television receivers; for use in civil aircraft	198	404	0	47
852910691000	other antennas; for use in civil aircraft	8.153	14.004	1.800	2.109
852910699011	Radio - television transmitting antennas	156	1.931	22	22
852910699013	Antennas of satellite and radiolink receiver and transmitter devices	4.037	7.755	1.182	2.743
852910699018	other antennas	24.466	20.986	4.894	3.560
852910801000	Antenna filters and separators; for use in civil aircraft	94	93	12	3
852910809000	Antenna filters and separators, EXCEPT for civil aircraft use	1.543	3.013	150	139
852910951000	Other devices used with antennas and other components and parts for antennas; for use in civil aircraft	1.662	1.293	327	428
852910959011	Rotor systems for guiding antennas; EXCEPT for use on civil aircraft	662	436	421	103

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
852910959019	Other devices used with antennas and other components and parts for antennas; for use in civil aircraft	10.456	5.688	933	678
852990651000	Electricity formed by connecting/combining two/more components and parts of the devices in 85.26	1.595	3.177	121	494
852990659000	Combined electronic electronics for other devices of headings 85.25 to 85.28 only or mainly	85.367	56.804	426	387
852990971000	Other devices formed by connecting/combining two/more components and parts of the devices in 85.26	5.293	2.659	1.133	1.520
852990979000	Other components and parts for other appliances of headings 85.25 and 85.26 only or principally	6.915	4.076	2.653	6.693
8536	Electrical equipment for switching or protecting electrical circuits with a voltage not exceeding 1000 volts or for making connections to or from an electrical circuit (for example, switches, relays, fuses, surge suppressors, plugs, sockets and sockets, bulb holders and other connectors, junction boxes); connectors for optical fibers, optical fiber bundles or cables)	201.319	160.262	72.003	59.456
853670001000	Plastic connectors for optical fibers, optical fiber bundles or cables	9.315	12.568	1.469	3.752
853670002000	Ceramic connectors for optical fibers, optical fiber bundles or cables	253	230	56	55
853670003000	Copper connectors for optical fibers, optical fiber bundles or cables	54	90	115	197
853670005000	Iron or steel connectors for optical fibers, optical fiber bundles or cables	12.828	4.792	501	654
853690100000	Connectors and connectors for wires and cables; voltage <= 1000V	178.869	142.582	69.863	54.797
8544	İzole edilmiş (emaye kaplanmış veya anodize edilmiş olanlar dahil) teller, kablolar (koaksiyel kablolar dahil) ve diğer izole edilmiş elektrik iletkenler (bağlantı parçaları ile teçhiz edilmiş olsun olmasın); tek tek kaplanmış liflerden oluşan fiber optik kablolar (bağlantı parçalarıyla veya elektrik iletkenleri ile teçhiz edilmiş olsun olmasın)	1.297.095	1.914.951	1.935.681	1.873.514
854411100011	Coil wires of copper; varnished or enamel coated, diameter <= 0.05 mm	4.294	1.183	959	364
854411100012	Coil wires of copper; varnished or enamel coated, 0.05 mm < diameter <= 0.1 mm	1.932	454	35	12
854411100019	Coil wires of copper; varnished or enamelled, diameter > 0.1 mm	45.040	94.113	127.334	58.717
854411900000	Coil wires insulated from copper; EXCEPT those varnished or enamelled	12.003	9.927	12.188	24.869
854419000000	insulated coil wires; EXCEPT those of copper	14.160	12.510	10.126	14.400
854420001011	Ground and underwater cables for telegraph and telephone line; After being isolated, more than one of them is brought together and the coils	1.084	560	792	2.652
854420001019	Other ground and underwater cables; of which more than one are brought together and fitted with pipes/strips after being insulated	944	1.726	1.246	684
854420009011	Other coaxial cables and other coaxial electrical conductors for telegraph and telephone line; isolated	380	21.114	29.016	8.749
854420009019	Other insulated coaxial cables and other coaxial electrical conductors	44.233	43.424	48.332	38.986
854430000000	Spark plugs or other wiring harnesses of the kind used in vehicles, aircraft or ships	507.418	205.862	249.696	468.375
854442100000	Other electrical conductors fitted with connectors (voltage;<1000 V.); used in telecommunications	7.576	2.316	2.569	74.583
854442900000	Other electrical conductors with attached connectors (voltage;<1000 V.); used elsewhere	357.322	211.574	198.622	310.197
854449200000	Ground and underwater cables for telegraph and telephone lines (for voltage=<80 V.)	32.586	91.671	93.591	35.876
854449910000	Cables and wires with a voltage not exceeding 1000 V and a separate electrical conductor wire with a diameter exceeding 0.51 mm; fittings	22.856	674.597	651.454	45.988
854449931119	Other ground and underwater cables (other, for voltage=<80 V.)	3.187	1.292	2.926	3.478
854449931911	Other cables for electrical energy transmission (other, for voltage=<80 V.)	1.477	4.646	5.560	888
854449931919	Other insulated electrical conductors; voltage <= 80V, without fittings attached	87.490	25.050	31.224	79.930

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
854460100000	Other electrical conductors of insulated copper, voltage > 1000V, whether or not fitted with fittings	85.319	183.028	173.944	466.070
854460900000	Other insulated electrical conductors, voltage > 1000V, whether or not equipped with fittings	21.899	275.594	227.974	194.710
854470000000	fiber optic cables	45.897	54.311	68.096	43.984
9030	Oscilloscopes, spectrum analyzers and other instruments and apparatus for measuring or examining electrical quantities (excluding electricity meters of heading 90.28); Instruments and apparatus for measuring or detecting alpha, beta, gamma, X-ray, cosmic or other ionization rays	14.368	11.829	2.760	976
903040001000	Other instruments and apparatus for telecommunications (such as hypsometers and intercoms, gain meters); civil air	58	43	0	4
903040009000	Other instruments and apparatus for telecommunications (such as hypsometers and intercoms, gain meters); civil air	14.310	11.786	2.760	972
Sum of Telecom		5.608.263	6.132.514	2.238.707	2.324.034

DISTRIBUTION OF IMPORT AND EXPORT OF THE TELECOM IN 2024 BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
North America	USA		553.984		35.210
	Canada		48.761		12.579
	Sub Total	2,98	602.745	1,11	47.789
European Union	England		37.541		235.790
	Germany		186.984		190.364
	Bulgaria		263.478		149.872
	France		113.540		137.520
	Italy		79.120		36.741
	Poland		64.874		28.125
	Netherlands		34.580		35.789
	Estonia		34.580		1.030
	Belgium		2.485		1.000
	Romania		47.960		10.300
	Czech Republic		55.820		5.400
	Ireland		59.760		23.700
	Spain		53.420		22.690
	Finland		10.000		17.500
	Hungary		38.500		25.600
Sub Total	15,72	1.160.242	49,30	936.821	
Non-EU Europe	Switzerland		7.600		350.978

DISTRIBUTION OF IMPORT AND EXPORT OF THE TELECOM IN 2024 BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	Turkish R. of Northern Cyprus		330		37.451
	Norway		79.540		18.500
	Macedonia		380		26.578
	Albania		800		16.500
	Serbia		450		21.963
	Russian Federation		550		14.852
	Other Countries		3.200		12.500
	Sub Total	0,42	92.850	3,46	499.322
North Africa & Middle East	Iraq		2.471		88.125
	Israel		17.863		87.741
	Saudi Arabia		350		63.690
	UAE		6.945		58.587
	Algeria		500		42.479
	Egypt		16.842		41.120
	Morocco		9.000		28.120
	Qatar		400		41.630
	Iran		100		29.500
	Jordan		25		30.800
	Syria		0		21.400
	Libya		30		13.472
	Other Countries		9.300		27.864
	Sub Total	0,65	63.826	25,05	574.528
Central Asia & Caucasus	Turkmenistan		95		34.762
	Georgia		7.500		31.595
	Azerbaijan		100		13.000
	Uzbekistan		300		8.500
	Other Countries		200		4.500
	Sub Total	0,17	8.195	7,59	92.357
Central and South America	Mexico		67.825		1.500
	Argentina		3.000		4.900
	Other Countries		1.800		12.000
	Sub Total	1,06	72.625	1,01	18.400
Far East	China		2.864.850		18.743
	Vietnam		790.455		5.600

DISTRIBUTION OF IMPORT AND EXPORT OF THE TELECOM IN 2024 BY COUNTRIES

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	South Korea		164.720		920
	Taiwan		59.871		6.470
	Malaysia		45.950		5.682
	Indonesia		6.850		16.100
	Japan		47.620		500
	Thailand		39.842		800
	Singapore		7.500		5.500
	Other Countries		2.600		3.600
	Sub Total	77,86	4.030.258	4,42	63.915
Free Zones	Bursa Free Zone		59.860		4.000
	Aegean Free Zone		14.705		14.825
	Çorlu European Free Zone		750		6.482
	Other Free Zones		12.700		11.000
	Sub Total	0,84	88.015	2,71	36.307
Other Countries	Australia		4.600		14.785
	Ghana		15		17.800
	India		16.800		10
	Pakistan		124		12.000
	Other Countries		1.450		10.000
	Sub Total	0,29	77.584	5	54595,00
	Sum of Telecom Devices	100,00	6.132.514	100,00	2.324.034

PRIMARY COMPANIES OPERATING IN THE TELECOM SUB-SECTOR (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
ADAM Elektronik Ltd.Şti.	Uzunayna Cad. Çelenk Sok. No:1	216/ 481 48 20	216/ 365 64 76
AYDIN Yazılım ve Elektronik Sanayi A.Ş.	Oğuz Cad. Organize Sanayi Bölgesi No:7 06935 Sincan -ANKARA	312/ 589 30 00	312/ 589 30 60
BATKON Batarya Kontrol Teknolojileri A.Ş.	Reşitpaşa Mah. Katar Cd. Ari-6 Teknokent No:2/49 D:209 Sarıyer/İstanbul	212 286 33 35	
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti.	Güzeltepe Mah. Pembegül Sok. No 7 D 8 34680 Üsküdar-İstanbul	216/ 4601720	
BLC İletişim ve Güvenlik Sistemleri A.Ş.	OSTİM OSB Mah. 100.yıl Cad. 55/E/14 Yenimahalle		
DEVİNNO Teknoloji Yatırımları A.Ş.	Atatürk Mah. Ertuğrul Gazi Sokak, Metropol İstanbul Sitesi C1 Blok No: 2B/111 34758 Ataşehir/İSTANBUL	216/ 7062111	216/ 7062216
EXENTECH Sav. Med. Hav. Bil. Ltd. Şti.	Ankara Teknopark TGB Yerleşkesi 2224. Cd No:1 B Blok Zemin Kat No:B-ÜZ29/B İvedik OSB Mh. Yenimahalle/ANKARA	312 395 07 64	
İNTERDATA Veri Merkezi Ve Entegrasyon Hizmetleri A.Ş.	Üniversiteler Mah. Hacettepe Teknokent 6. ARGE F Blok No:1 Çankaya - Ankara	312 2992056	312 2992057
KAREL Elektronik Sanayi ve Ticaret A.Ş.	Kore Şehitleri Cad. Yzb. Kaya Aldoğan Sok. No:16 34394 Zincirlikuyu-İSTANBUL	212/ 355 48 00	212/ 275 40 01
LENİ'S Technologies Limited	Unit Da2 Sutherland House, 43 Sutherland Road, London, United Kingdom, E17 6BU	+44 20 3923 7000	
LEONARDO Türkiye Havacılık Savunma ve Güvenlik Sistemleri A.Ş.	Karaoğlan Mah. Ankara Cad. No:225 Gölbaşı - ANKARA	312/ 484 51 81	312/ 484 43 32
LOTEC Teknoloji Ltd. Şti.	Hacettepe Teknokent 6. AR-GE C Blok Kat:2 No:28	312 227 03 06	
MULTİTEK Elektronik Sanayi ve Ticaret A.Ş.	Meclis Mah. Atatürk Cad. No:47 34785 Sancaktepe-İSTANBUL	216/ 420 38 38	216/ 415 79 18
NETAŞ Telekomünikasyon A.Ş.	Yenişehir Mah. Osmanlı Bulvarı No:11 34912 Kurtköy-Pendik-İSTANBUL	216/ 522 20 00	216/ 522 22 22
NETELSAN Elektrik Elektronik Sistemleri San. Tic. A.Ş.	Sincan 1. Organize Sanayi Bölgesi Karakoyunlu Caddesi No:4 Sincan/ANKARA	312 257 11 63	
NEXUS Dişfon Akıllı Ev Sistemleri İç ve Dış Ticaret A.Ş.	Oruçreis Mah. Giyimkent 4. Sok. No:40 Esenler İstanbul	212 909 88 76	
ÖZAŞ Telekom. Elektrik Elektronik San. Tic. Ltd.Şti.	Çakmak Mah. Akdeniz Cad. No:25/ 1,2 Ümraniye-İSTANBUL	216/ 412 00 16	312/ 412 93 73
PAVO Tasarım Üretim Elektronik Ticaret A.Ş.	Teknopark İstanbul Teknoloji Geliştirme Bölgesi, Ar-Ge Binaları (Sabiha Gökçen Havalimanı yanı) 1. Blok Zemin Kat 34912 Pendik-İSTANBUL	216/ 354 72 86	216/ 354 76 77
PENTA Elektronik Telekomünikasyon Plastik San. ve Tic. A.Ş.	Atabey Cad. No:20 34794 Çekmeköy-İSTANBUL	216/ 312 94 00	216/ 312 88 13
POLAR Araştırma Teknoloji İletişim Sanayi ve Ticaret A.Ş.	Oğuzlar mahallesi 1372 Cad. 3/4 Balgat Çankaya Ankara	312/ 999 06 06	
RFT Araştırma Sanayi ve Ticaret A.Ş.	Teknopark Bulvarı No:1 C Blok 34609 Pendik-İSTANBUL	216/ 999 70 00	216/ 999 70 01
TALES Elektronik A.Ş.	İTOB OSB Mahallesi İTOB Dokuz Eylül Bulvarı No:10 Menderes/İZMİR	232/ 433 86 63	
TELPA Teknoloji Hizmetleri A.Ş.	Hamidiye, Anadolu Cd. No:14, 34408 Kağıthane/İstanbul	212 371 00 00	212 371 11 99
UDEA Elektronik A.Ş.	Ankara Teknopark 2224 Cad. B Blok No:1/142 İvedik OSB Yenimahalle/ANKARA	312/ 3956875	312/ 3956877
ULAK Haberleşme A.Ş.	Mustafa Kemal Mah. Şehit Öğretmen Şenay Aybüke Yalçın Cad. No:13/A ÇANKAYA/ANKARA	312/ 2869486	312/ 2869488
VEMUS Endüstriyel Elektronik San. ve Tic. Ltd.Şti.	Nilüfer Organize Sanayi Bölgesi Zeytin Cad. No:14 16140 Nilüfer-BURSA	224/ 411 10 30	224/ 411 10 31
YILMAZ KABLO A.Ş.	Maltepe Cad. No:2 Bayrampaşa-İSTANBUL	212/ 544 76 00	212/ 567 81 24
YONGA Teknoloji Mikroelektronik A.Ş.	Teknopark İstanbul Sanayi Mah. Teknopark Bul. No:1/9A Kat:3, 34906 Pendik/İstanbul	216/ 504 14 10	
ZEROTECH Elektronik Sistemler Ür. Paz. İnş. San ve Tic. Ltd. Şti.-	Batı Sitesi Mah., Gersan Sanayi Sitesi, 2306 Cad., No:51 Yenimahalle, ANKARA	312 394 52 66	



TURKISH ELECTRONICS INDUSTRY CONSUMER ELECTRONICS SUB-SECTOR

In 2024, domestic companies in Türkiye's consumer devices subsector achieved significant success. Arçelik and Beko stood out among the top brands in the white goods and small home appliances categories for delivering outstanding customer experience, earning first-place awards at the A.L.F.A. Awards[1]. Moreover, Beko became the only Turkish company to be included in TIME Magazine's list of the world's most sustainable companies, ranking first globally in the home appliances category[1].

According to TÜRKBESD data, domestic sales increased by 7% in 2024, reaching a total of 32.5 million units sold[2]. However, exports declined by 3%, and production fell by 2% compared to the previous year[2].

Despite these minor contractions, the sector achieved notable progress in energy efficiency — for instance, refrigerators have become 16% more energy-efficient over the past decade[2].

Local manufacturers continue to maintain their strong market positions by focusing on sustainability, innovation, and customer-centric strategies, reinforcing Türkiye's competitive presence in the global consumer devices market.

[1] Arçelik Global – Awards and Achievements

[2] Dağıtım Kanalı – TÜRKBESD Announced 2024 Data: The Sector Closed the Year in a Fragile Balance (2025)

DISTRIBUTION OF EXPORT AND IMPORT BY YEARS IN THE CONSUMER ELECTRONICS SUB-SECTOR

PRODUCTS	IMPORT (THOUSAND \$)			EXPORT (THOUSAND \$)		
	2022	2023	2024	2022	2023	2024
Color TV	341.346	335.484	400.634	1.046.265	1.059.660	876.443
Audio Equipment	123.371	140.995	109.164	6.336	11.886	13.504
Video Players	27.026	10.715	9.921	1.813	2.951	3.282
Cash Registers	86.879	125.565	97.846	2.784	3.517	1.830
Electronic Calculators	5.462	7.728	8.340	4.797	3.603	1.627
Audio,Video Cassettes	211.211	272.361	310.580	22.381	22.683	21.764
Radio and TV Receivers and Antenna Trans	386.140	200.855	229.555	24.630	19.916	18.715
Electronic Scales and Equip.	24.581	23.198	24.937	6.293	9.454	9.968
TOTAL	1.206.016	1.116.901	1.190.977	1.115.299	1.133.670	947.133

CONSUMER ELECTRONICS

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2.023	2.024	2.023	2.024
8423	Weights for all kinds of weighing instruments and devices (excluding scales with an accuracy of 5 centigrams or better) (including scales and scales that count and control by weighing)	23.198	24.937	9.453	9.968
842320100000	Scales for weighing matter on conveyor belts; those who measure weight electronically	5.075	5.011	194	114
842310900011	human tartan scales (including those for weighing infants); electrical and electronic ones	3.078	3.184	515	324
842381210000	Electric/electronic scales for weighing and filling materials into containers	3.553	4.816	4.653	4.395
842381230000	Instruments and apparatus for electronically weighing and labeling prepackaged items; weighing capacity <=30	696	1.913	171	116
842381290000	Other weighing instruments and devices that measure weight electronically; weighing capacity <=30 kg	4.587	3.299	290	265
842381250000	Scales that measure weight electronically for shops; weighing capacity <=30 kg	1.574	1.608	1.051	1.611
842381800000	Other weighing instruments and devices; weighing capacity <=30 kg	148	18	63	80
842382200000	Other weighing instruments and apparatus (excluding those weighing motor vehicles) that measure weight electronically; 30 kg < weighing	2.366	2.931	1.327	1.913
842382810000	Control devices that automatically control the weight of the substances according to the predetermined weight; 30kg < weighing	750	760	977	701
842382891000	Other scales; 30 kg < weighing capacity <= 5000 kg	1.372	1.397	210	449
8470	Calculators and pocket-sized machines with computational function that record the given information, replay and display the recorded information; accounting machines with calculating devices, stamping machines used instead of postage stamps, ticket printing and issuing machines and similar devices; cash registers:	130.872	102.570	3.997	2.366
847010000000	Electronic calculators; without external power supply; can record, pocket type	5.123	4.462	101	74
847021000000	Electronic calculators with writing device	51	31	272	394
847029000000	Other electronic calculators	31	34	11	33
847030000000	Other calculators	102	198	95	65
847050000011	Point of sale terminals (POS machines)	94.101	54.417	3.175	1.391
847050000019	Other cash registers	31.464	43.428	342	409
8473	Parts and accessories (excluding boxes, covers and the like) suitable for use only or principally in machinery and apparatus of headings 84.69 to 84.72	2.421	3.615	3.124	1.061
847321100000	Assembled electronics, parts and accessories for electronic calculators (8470.10, 8470.21, 8470.29)	176	555	15	35
847321900000	Other parts, parts and accessories for electronic calculators (8470.10, 8470.21, 8470.29)	8	128	8	5
847329100000	Assembled electronics, parts and accessories for other machines of heading 84.70	1.884	1.925	543	52
847329900012	Other parts, parts and accessories of cash registers of heading 84.70	353	371	1.084	205
847329900019	Other parts, parts and accessories of other calculators of heading 84.70	0	636	1.474	764

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2.023	2.024	2.023	2.024
8519	Devices for recording or reproducing recorded sound	24.486	27.899	4.158	5.291
851930000000	Turntables (turntables); EXCEPT those working with coins or coins	1.391	2.126	36	56
851981000000	Devices that use magnetic, optical or semiconductor supports for recording sound or reproducing the recorded sound	20.676	21.532	3.407	613
852290000000	other parts of sound recording or reproducing apparatus, video recording or display apparatus	2.419	4.241	716	4.622
8521	Video recording or display devices (whether or not with a video tuner)	10.715	9.922	2.951	3.282
852110200000	Magnetic tape video recording/display equipment; belt width=<1.3 cm, belt speed=<50 mm/s	14	26	25	18
852110950000	Other video recording and display devices with magnetic tape	33	33	1.558	1.802
852190000000	Other video recording and display devices	10.668	9.863	1.369	1461
8523	Discs, tapes, solid-state non-volatile storage devices, smart cards and other headstocks 8, whether or not recorded, for recording sounds and other phenomena (including matrices and dies for the manufacture of discs, but excluding products of Chapter 37)	272.361	310.580	22.683	21.764
852321000000	Magnetic backing stripe cards; registered or not	463	276	451	266
852329150018	Videotapes, unrecorded	65	188	0	10
852329150029	Other magnetic tapes, magnetic disks; not registered	2.444	1.538	149	57
852329190000	Magnetic tape and discs for reproducing phenomena other than audio/video; registered	104	174	15	13
852351100000	Solid state permanent semiconductor storage devices for recording sounds and other phenomena; not registered	43.022	37.098	1.837	2.289
852351900000	Solid state permanent semiconductor storage devices for recording sounds and other phenomena; registered	21.768	28.752	2.500	1.368
852352001000	Semiconductor smart card with two or more electronic integrated circuits for recording sounds and other phenomena	31.753	37.191	7.332	6.693
852352009000	Other semiconductor smart cards for recording sounds and other phenomena	168.835	201.890	6.616	7.102
852359100000	Other semiconductor supports for recording sounds and other phenomena; not registered	575	584	1.586	2.277
852359900000	Other semiconductor supports for recording sounds and other phenomena; registered	988	621	1.781	1.131
852380100000	Other supports for recording sounds and other phenomena; not registered	275	106	23	18
852380900000	Other supports for recording sounds and other phenomena; registered	2.069	2.163	393	541
8527	Receiver devices for radio broadcasts (whether or not with a sound recording or reproducing device or clock in the same cabin)	116.509	81.265	7.728	8.213
852712000000	Pocket Radio Cassette Player	39	38	568	280
852713000000	I Radio broadcast receiving devices operating without an external power source; sound recording/replaying recorded sound	3.736	4.097	49	94
852721200000	Radio tape with laser reading system for motor vehicles; Numerical Radio Data receiving and decoding signals with external power supply	53.411	47.327	2.402	1906
852721520000	For motor vehicles, external power supply, cassette type analog and digital readout, voice recording/transmitting, Numerical Radio Data	4.030	7.625	233	0
852721590000	Another device for motor vehicles, other than power supply, that records or transmits sound, receives and decodes Numerical Radio Data signals	51.385	18.582	369	723
852721700000	For motor vehicles, without power supply, with laser reading system, recording or transmitting sound, receiving radio broadcasts, other	152	319	1.157	3.609
852721920000	Motor stone, cassette type radio tape recorder with analogue and digital reading system, voice recording/recording, external power source	46	20	2.046	1.165
852721980000	Other radio tape for motor vehicles; Sound recording/recording alone, with external power source	1.437	1.338	11	8
852729000000	Radio broadcast receiver devices for motor vehicles that can only operate with an external power source	456	347	15	41

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2.023	2.024	2.023	2.024
852791000000	Other devices receiving radio broadcasts powered by an external power source; sound recording/replaying recorded sound	1.499	1.320	58	72
852792000000	Other devices receiving radio broadcasts powered by an external power source; sound recording/reproducing devices	132	52	678	137
852799000000	Other devices receiving radio broadcasts	184	200	142	178
8528	Monitors and projectors (not equipped with a set-top box); television reception equipment, whether or not with a radio broadcast receiver or sound or video recording or reproducing apparatus	335.484	400.634	1.059.660	876.473
852842000000	cathode ray lamp monitors; Designed for use with automatic data processing machines of heading 84.71.	21.674	7.827	7.615	8545,1
852849000000	Other monitors with cathode ray lamps	116.087	87.592	11.917	11185,6
852852100000	Other monitors; Used solely or principally in automatic data processing machines of heading 84.71.	16.031	127.591	2.525	3.716
852862000000	projectors; Designed for use with automatic data processing machines of heading 84.71 and directly	17.838	18.752	732	1.512
852871110000	Electronic assembly image (video) tuners for insertion into automatic data processing machines	42	27	173	0
852871150000	It is a micro-processor device that can receive TV signals, with internet access modem and interactive information exchange function.	1.968	3.616	2.380	3550,98
852871190011	Video tuners for receiving satellite TV broadcasts not designed to include video images or screens	529	1.378	5.072	3.005
852871190019	Other video (video) tuners not designed to include video or display	1.890	7.389	1.671	1.809
852871910000	Other computer with internet access modem and interactive information exchange function, a microprocessor device capable of receiving TV signals.	22.720	16.130	695	1.817
852871990000	Other television receiving devices not designed to contain video or display	227	151	52.155	57.405
852872100000	Color teleprojectors	440	1.404	24.183	8.317
852872200000	Other color television receiver equipment equipped with video recording or reproducing apparatus	133.334	134.273	903.494	697.157
852872300000	Color television receivers with a picture tube inside	0	0	100	124
852872400000	Other color television receiver devices with liquid crystal display (LCD) technology display	2.333	826	20.723	58.568
852872600000	Other color television receiver devices with plasma instrument panel (PDP) technology display	45	66	81	73
852872800000	Other color television receiver devices	318	491	18.387	14.290
852873000000	Other television receiver equipment in black and white or other monochrome	7	950	7.759	5398,4
8529	Parts only or principally for appliances of headings 85.25 to 85.28	200.855	229.555	19.916	18.715
852910659000	Internal antennas (including mounted) for radio and television receivers; for use in civil aircraft	1.269	259	1.040	1.614
852990920000	Does not belong to television cameras of subheadings 8525.80.11 and 8525.80.19 and apparatus of headings 8527 and 85.28	199.586	229.295	18.876	17.101
Sum of Consumer Electronics		1.116.901	1.190.977	1.133.670	947.133

DISTRIBUTION OF IMPORT AND EXPORT OF THE CONSUMER ELECTRONICS IN 2024 BY COUNTRY

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
North America	USA		17.420		700
	Canada		1.650		30
	Sub Total	0,89	19.070	0,02	730
European Union	Germany		25.706		168.862
	England		5.026		132.286
	France		4.827		71.343
	Poland		77.523		40.771
	Spain		1.523		49.494
	Czech Republic		26.186		3.346
	Italy		2.802		55.453
	Sweden		776		50.728
	Slovakia		18.702		2.250
	Portugal		29.930		446
	Netherlands		29.805		20.557
	Romania		550		24.686
	Hungary		28.113		15.018
	Greece		115		39.304
	Austria		2.497		24.647
	Bulgaria		2.987		1.956
	Croatia		10		11.193
	Ireland		3.011		9.360
	Finland		4.399		6.777
	Denmark		438		5.322
Belgium		1.995		2.037	
Other Countries			46		8.283
Sub Total		20,34	266.967	90,04	744.119
Non-EU Countries	Switzerland		450		2.150
	Serbia		1.265		15.478
	Turkish R. of Northern Cyprus		0		6.750
	Macedonia		1.785		5.000
	Bosnia and Herzegovina		5		8.420
	Norway		2.500		1.600
	Kosova		0		4.310

DISTRIBUTION OF IMPORT AND EXPORT OF THE CONSUMER ELECTRONICS IN 2024 BY COUNTRY

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	Other Countries		400		6.350
	Sub Total	0,24	6.405	3,23	50.058
North Africa & Middle East	Tunisia		20.580		53.396
	Iran		250		383
	Morocco		0		9.638
	Israel		2.500		738
	Egypt		1.200		10.096
	Algeria		0		2.120
	Iraq		750		2.942
	Libya		0		1.654
	Lebanon		340		2.068
	UAE		50		591
	Saudi Arabia		800		2.439
	Other Countries		770		3.400
	Sub Total	0,99	27.240	4,32	89.465
Central Asia & Caucasus	Azerbaijan		15		15.800
	Turkmenistan		0		9.300
	Georgia		250		5.750
	Other Countries		0		857
	Sub Total	0,00	265	1,37	31.707
Central and South America	Mexico		847		45
	Other Countries		11		798
	Sub Total	0,05	858	0,04	843
Far East	China		329.132		1.537
	South Korea		320.689		228
	Taiwan		62.372		44
	Vietnam		21.300		198
	Japan		8.675		4
	Malaysia		8.648		68
	Philippines		5.583		14
	Indonesia		4.313		5.108
	Singapore		2.136		29
	Thailand		11.559		39
	Hong Kong		2.738		744

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	Other Countries		50.750		493
	Sub Total	75,68	827.895	0,18	8.506
Free Zones	Istanbul I. and Trade Free Zone		530		12.000
	Aegean Free Zone		0		600
	Other Free Zones		0		900
	Sub Total	0,00	530	0,24	13.500
Other Countries	India		41.557		65
	Other countries		455		8.140
	Sub Total	1,81	42.012	0,56	8.205
	Sum of Consumer Electronics	100,00	1.190.977	100,00	947.133

NETA
TECHNOLOGIES

MOBILE SATELLITE COMMUNICATION SYSTEMS



PRIMARY COMPANIES OPERATING IN THE CONSUMER ELECTRONICS SUB SECTOR (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
ANSAL Endüstriyel Test San. Tic. A.Ş.- İSTANBUL	Akcaburgaz Mah. 592 Sok. No:10-12/2 Esenyurt - İSTANBUL	212 549 80 45	
ATMACA (SUNNY) Elektronik Sanayi ve Ticaret A.Ş.	Namık Kemal Mah. 177.Sok. No:2 34522 Esenyurt-İSTANBUL	212/ 412 12 12	212/ 4121499
BARFAS Otomasyon Teknolojileri San. ve tic. Ltd Şti.	Yukarı Dudullu Mh. Tavukçu Yolu Cd., Anıl Sokak No:5 Ümraniye/İSTANBUL	216 466 46 36	
BARKO- MED Elektronik Sanayi ve Ticaret A.Ş.	İvedik OSB Mah. 145 Cad. No:4 Yenimahalle- ANKARA	312/ 442 92 57	312/442 92 58
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti.	Güzeltepe Mah. Pembegül Sok. No 7 D 8 34680 Üsküdar-İstanbul	216/ 4601720	
ENTES Elektronik Cihazlar İmalat ve Tic. A.Ş.	Y.Dudullu Org.San.Böl. 1. Cadde No:23 34776 Ümraniye-İSTANBUL	216/ 313 01 10	216/ 314 16 15
ERCÜNLER İnşaat Petrol Ürün. Otomotiv Tekstil Madencilik Su Ürün. San. ve Tic. Ltd. Şti.	Pirimehmet Mh. 113 Cd. No: 75 32100 Merkez/ İSPARTA	216 631 88 86	
EXENTECH Sav. Med. Hav. Bil. Ltd. Şti.	Ankara Teknopark TGB Yerleşkesi 2224. Cd No:1 B Blok Zemin Kat No:B-ÜZ29/B İvedik OSB Mh. Yenimahalle/ANKARA	312 395 07 64	
FOCUS Elektronik Hong Kong Company Ltd. Şti.	Goodwill Ind Bldg No 36 - 44 Pak Tin Par Street Tsuen Wan Hong Kong		
MYSIA Elektrik Elektronik Bilgisayar Yazılım San. Tic. A.Ş.	Alaaddin Bey Mah. Nilüfer Ticaret Merkezi 622 Sk. Sera Plaza 8/B Nilüfer - BURSA	224 443 24 65	
NETA Elektronik Cihazlar San. ve Tic. A.Ş.	Y.Dudullu Org.San. Bölgesi And Sitesi No:18 34775 Ümraniye-İSTANBUL	216/ 420 43 43	216/ 420 43 49
NETELSAN Elektrik Elektronik Sistemleri San. Tic. A.Ş.	Sincan 1. Organize Sanayi Bölgesi Karakoyunlu Caddesi No:4 Sincan/ANKARA	312 257 11 63	
PAVO Tasarım Üretim Elektronik Ticaret A.Ş.	Teknopark İst Teknoloji Geliştirme Bölgesi Ar-Ge Binaları 1. Blok Zemin Kat 34912 Pen- dik-İstanbul	216/ 354 72 86	216/ 354 76 77
TELPA Teknoloji Hizmetleri A.Ş.	Hamidiye, Anadolu Cd. No:14, 34408 Kâğıthane/İstanbul	212 371 00 00	212 371 11 99
TİBET Tech Solutions	49 Sugar Mill Way M2L 1R5 Toronto, ON Canada		
TOĞİ Teknoloji San. ve Tic. Ltd. Şti.	Balmumcu Mah Gazi Umur Paşa Sokak No:12/ B1 Beşiktaş / İSTANBUL	8502551155	
ÜNA ENERJİ Yapı Sistemleri A.Ş.	ÜNALLAR Binası Ankara Devlet Karayolu 5. KM KASTAMONU	212 / 2204788	
VMS Elektronik Sanayi ve Ticaret A.Ş.	NOSAB Zeytin Cad.No:14 16220 Nilüfer BURSA	224 411 10 30	
WHILONE Teknoloji Yazılım Danışmanlık Ltd. Şti.	Cevat Dünder Cad. Ostim OSB Mah. No:1/1-43 OSTİM TEKNOPARK YENİMAHALLE/ANKARA		
ZENİT Led ve Aydınlatma TEKN.REK.SAN.TİC.A.Ş.	Deri OSB Mahallesi Yan Sanayi Cad. Deri OSB Sitesi YA11 Parsel No:17/1/2 Tuzla - İstanbul / TR	216/ 5910035	216/ 5910074
ZEROTECH Elektronik Sistemler Ür. Paz. İnş. San ve Tic. Ltd. Şti.	Batı Sitesi Mah., Gersan Sanayi Sitesi, 2306 Cad., No:51 Yenimahalle, ANKARA / TR	312 394 52 66	



TURKISH ELECTRONICS INDUSTRY

DEFENSE ELECTRONICS

SUB SECTOR

In 2024, domestic companies in Türkiye's defense electronics subsector achieved remarkable success in both exports and technological innovation. Baykar led the sector with 1.83 billion USD in exports, followed by TUSAŞ (Turkish Aerospace Industries) with 750 million USD, ASFAT with 644 million USD, ARCA Defense with 600 million USD, TUSAŞ Engine Industries (TEI) with 390 million USD, and ASELSAN with 217 million USD.

ASELSAN strengthened its global presence through its advanced radar, electronic systems, and communication technologies, while Roketsan, with 179 million USD in exports, continued to be a key player in missile and rocket technologies. These companies have made substantial

contributions to Türkiye's economy and national security, exporting advanced defense technologies to over 40 countries as part of the nation's strategic goal of achieving full defense industry independence.

A notable milestone was the export of ASELSAN's ASELFLIR-500 electro-optical system to 16 countries, underscoring Türkiye's growing international reputation for innovation and reliability in defense technologies. As a result, Türkiye's defense electronics industry not only climbed higher in global rankings but also set a record-breaking export volume exceeding 7.15 billion USD in 2024.

- [1] Baykar – Export Reports and Achievements (2024)
[2] TUSAŞ – Annual Export Performance Summary (2024)
[3] ASELSAN – Defense Technologies and International Partnerships (2024)
[4] Roketsan – Export and Product Development Highlights (2024)

PRIMARY COMPANIES OPERATING IN THE DEFENSE ELECTRONICS SUB SECTOR (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
ADAM AR-GE Haberleşme Teknolojileri Araştırma Geliştirme Ltd.Şti.	GOSB Teknopark Kemal Nehrozoğlu Cad. 400 Sok. High Tech Binası ,Gebze-KOCAELI	2262/ 678 72 44	262/ 751 52 71
AYDIN YAZILIM (AYESAS) ve Elektronik Sanayi A.Ş.	Oğuz Cad. No:7 Organize Sanayi Bölgesi 06935 Sincan-ANKARA	312/ 589 30 00	312/ 589 30 60
BARKO- MED Elektronik Sanayi ve Ticaret A.Ş.	İvedik OSB Mah. 145 Cad. No:4 Yenimahalle- ANKARA	312/ 442 92 57	312/442 92 58
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti.	Güzeltepe Mah. Pembegül Sok. No 7 D 8 34680 Üsküdar-İstanbul	216/ 4601720	
BRENSAN Enerji Savunma San. Tic. Ltd. Şti.	Teknopark Ankara İvedik OSB Mah. 2224. Cad. No:1 Yenimahalle- Ankara	312/ 219 46 10	
C3 TEKNOLOJİ Bilişim Elektronik San. ve Tic. Ltd. Şti.	Ümit Mah. 2531. Sokak No:4 Çankaya/ Ankara	312/ 241 27 69	
DEICO Mühendislik San. Tic A.Ş.	Serhat Mah. Ankara Teknopark Yerleşkesi 224. cad No:1 F blok, z-12, Yenimahalle, Ankara	312 395 68 44	312 395 68 45
DEVİNNO Teknoloji Yatırımları A.Ş	Atatürk Mah. Ertuğrul Gazi Sokak, Metropol İstanbul Sitesi C1 Blok No: 2B/111 34758 Ataşehir/İSTANBUL	216/ 7062111	216/ 7062216
ELİMKO Elektronik İmalat ve Kontrol Ticaret Ltd. Şti.	8. Cadde 21. Sokak No:16 06510 Emek-ANKARA	312 2126450	312 2124143

COMPANY	ADDRESS	TELEPHONE	FAX
EMPA Elektronik Sanayi ve Ticaret A.Ş.	İstanbul Dünya Ticaret Merkezi A1 Blok Kat:4 No:200 34149 Yeşilköy-İSTANBUL	212/ 465 71 99	212/ 465 71 88
ETA Elektronik Tasarım Sanayi ve Ticaret A.Ş.	ODTÜ İkizleri B Blok Zemin Kat 06531 ODTÜ Teknokent-ANKARA	312/ 210 16 16	312/ 210 16 13
EXENTECH Sav. Med. Hav. Bil. Ltd. Şti.	Ankara Teknopark TGB Yerleşkesi 2224. Cd No:1 B Blok Zemin Kat No:B-ÜZ29/B İvedik OSB Mh. Yenimahalle/ANKARA	312 395 07 64	
FEINMETALL FEINMETALL Türkiye Bağlantı Teknolojileri Ltd. Şti.	Yenişehir Mah. Ankara Cad. No:405 360 Office Plaza Kat:5 Ofis:134 Pendik 34912 İstanbul	536 477 21 37	
FOCUS Elektronik Hong Kong Company Ltd. Şti.	Goodwill Ind Bldg No 36 - 44 Pak Tin Par Street Tsuen Wan Hong Kong		
GESK Elektrik Elektronik Yazılım Sanayi ve Tcaret Ltd. Şti.	Yıldız Teknik Uni. Teknopark B1 No:405 Esenler İstanbul.	212 220 22 34	212 483 70 35
İMCA Elektronik ve Bilişim San. Tic. A.Ş.	İşçi Blokları Mah. Muhsin Yazıcıoğlu Cad. No:57/115 Çankaya/Ankara, Türkiye	312/ 483 35 85	
İSTANBUL SAVUNMA SİSTEMLERİ Tasarım Entegrasyon San. Ve Tic. A.Ş.	Muallimköy Mahallesi, Deniz Caddesi, Bilişim Vadisı No:143, Gebze KOCAELİ		
İNTERDATA Veri Merkezi Ve Entegrasyon Hizmetleri A.Ş.	Üniversiteler Mah. Hacettepe Teknokent 6. ARGE F Blok No:1 Çankaya - Ankara	312 2992056	312 2992057
KAREL Elektronik Sanayi ve Ticaret A.Ş.	Esentepe Mah. Kore Şehitleri Cad. Yzb.Kaya Aldoğan Sok. No:16 34394 Şişli-İSTANBUL	212/ 355 48 00	212/ 275 40 01
LENİ'S Technologies Limited	Unit Da2 Sutherland House, 43 Sutherland Road, London, United Kingdom, E17 6BU	+44 20 3923 7000	
LEONARDO Türkiye Havaçılık Savunma ve Güvenlik Sistemleri A.Ş.	Karaoğlan Mah. Ankara Cad. No:225 Gölbaşı - ANKARA	312/ 484 51 81	312/ 484 43 32
LOTEC Teknoloji Ltd. Şti.	Hacettepe Teknokent 6. AR-GE C Blok Kat:2 No:28	312/ 227 03 06	
NETAŞ Telekomünikasyon A.Ş.	Yenişehir Mah. Osmanlı Bulvarı No:11 34912 Kurtköy-Pendik-İSTANBUL	216/ 522 20 00	216/522 22 22
MYLASER Mekanik Elektronik Optik ve Medikal Sistemleri A.Ş.	Malıköy Başkent OSB Mah. 22. Cad. No:2, Sincan-Ankara	312/ 210 01 35	
ONUR Yüksek Teknoloji .Ş.	Mutlukent Mahallesi 1942. Cadde No: 39 Ümit- köy, Çankaya / ANKARA	312 235 15 50	312 235 15 40
PAVO Tasarım Üretim Elektronik Ticaret A.Ş.	Teknopark İstanbul Teknoloji Geliştirme Bölgesi, Ar-Ge Binaları 1. Blok Zemin Kat 34912 Pendik-İSTANBUL	216/ 354 72 86	216/ 354 76 77
RFT Araştırma Sanayi ve Ticaret A.Ş.	Teknopark Bulvarı No:1 C Blok 34609 Pendik-İSTANBUL	216/ 999 70 00	216/ 999 70 01
SAME Elektronik San. ve Tic. Anonim Şirket	Mutlukent Mah. 2010 Cad. Beysuvillakent sitesi No:1 Beysukent Cankaya	312 212 22 11	

COMPANY	ADDRESS	TELEPHONE	FAX
SAVRONİK Elektronik San. ve Tic. A.Ş.	Organize Sanayi Bölgesi 20.Cad. No:19 26110 ESKİŞEHİR	222/ 236 15 90	222/ 236 15 89
TEKNOPAR Endüstriyel Otomasyon San. ve Tic. A.Ş	İvedik OSB 1471. Cad. No: 3-5 06370 Yenima- halle / ANKARA		
TUALCOM Elektronik A.Ş.	Mustafa Kemal Mah. 2119. Cad. No:11/1 06530 Çankaya/ANKARA	312/ 485 22 85	
UÇ SAVUNMA Elektronik Mühendislik İmalat Mümessillik Tic. ve San. LTD Şti.	Ergazi Mah. 1819 Cad. No:1 Kat:4 Yenimahalle Ankara	312/ 250 51 00	
UDEA Elektronik A.Ş.	Ankara Teknopark 2224 Cad. B Blok No:1/142 İvedik OSB Yenimahalle/ANKARA	312/ 3956875	312/ 3956877
ULAK Haberleşme A.Ş.	Mustafa Kemal Mah. Şehit Öğretmen Şenay Aybüke Yalçın Cad. NO:13/A ÇANKAYA/ANKARA	312/ 2869486	312 /2869488
VMS Elektronik Sanayi ve Ticaret A.Ş	NOSAB Zeytin Cad.No:14 16220 Nilüfer BURSA	224 411 10 30	
WHILONE Teknoloji Yazılım Danışmanlık Ltd. Şti.	Cevat Dündar Cad. Ostim OSB Mah. No:1/1-43 OSTİM TEKNOPARK YENİMAHALLE/ANKARA		
ZER Elektronik San. ve Tic. Ltd.Şti.	Mustafa Kemal Mah. 2127 Sokak 18/7 06520 Balgat-Ankara	312/219 46 47	
ZEROTECH Elektronik Sistemler Ür. Paz. İnş. San ve Tic. Ltd. Şti.	Batı Sitesi Mah., Gersan Sanayi Sitesi, 2306 Cad., No:51 Yenimahalle, ANKARA	312 394 52 66	

EKONOMİ YAZDIYSA DOĞRUDUR!



İlkeli ve bağımsız gazeteciliğin gururu ile
Türkiye'ye ekonomiyi sunuyoruz

Bölge ekleri



Sektör ekleri

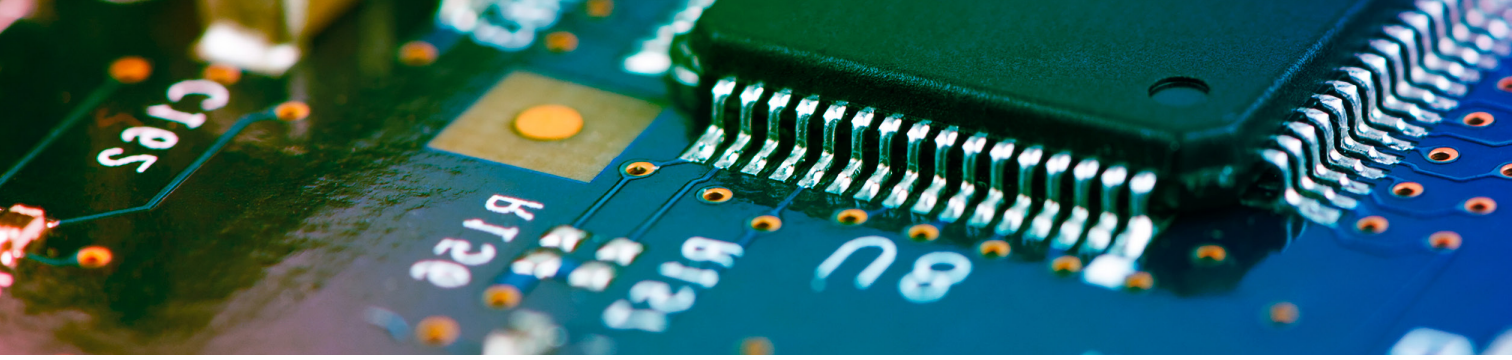


Özel ekler



Kitap eki





TURKISH ELECTRONICS INDUSTRY

OTHER PROFESSIONAL INDUSTRIAL ELECTRONIC DEVICES SUB SECTOR

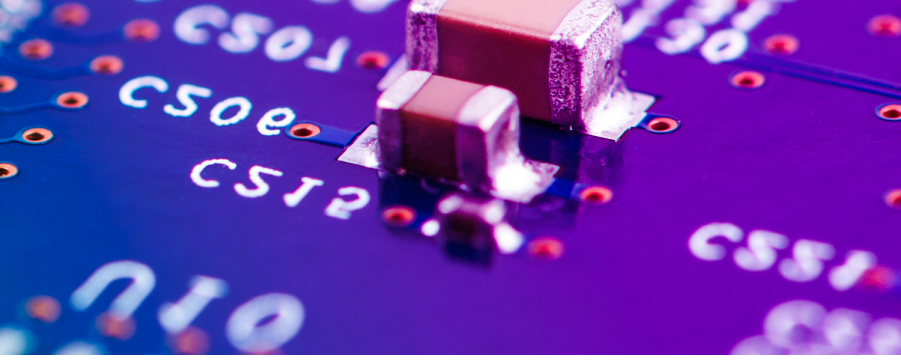
In 2024, domestic companies in Türkiye's Other Professional and Industrial Devices subsector achieved significant success. Technological advancements accelerated particularly in the fields of industrial automation, measurement, and control systems.

GNC Makina reinforced its leadership in CNC machines, Industry 4.0 and IIoT systems, robotic technologies, and quality control devices by achieving high sales and winning prestigious awards at the MAKTEK 2024 Fair. The Türkiye Measurement, Control, and Automation Systems Fair also served as a central hub for innovation and collaboration in the sector, showcasing a wide range of products including flow, pressure,

and temperature instruments, sensors, software, and engineering solutions, thereby driving the industry's development.

Furthermore, companies operating in the composites sector reached a market volume of approximately 2 billion USD through high value-added products and exports, continuing growth in strategic areas such as automotive, aerospace, and energy. These developments indicate that Türkiye's domestic technological production capacity in industrial devices is increasing, enabling local firms to become competitive players in global markets.

PRODUCTS	IMPORT (THOUSAND \$)			EXPORT (THOUSAND \$)		
	2022	2023	2024	2022	2023	2024
1. Audio and Visual Systems	570.829	506.394	498.372	25.099	17.184	15.375
2. Industrial Electronic Devices						
a. Static Converters	1.162.621	1.361.177	1.532.510	223.757	330.746	306.263
b. Automation Devices	623.630	775.907	778.130	124.319	137.056	122.482
c. Signaling and Alarm Device	131.443	137.985	164.943	35.373	37.472	41.719
d. Induction Furnaces	89.976	76.729	89.189	50.821	54.369	62.009
3. Medical Electronics	716.741	848.563	828.088	154.623	197.332	193.635
4. Test and Measuring Instruments	779.216	1.124.124	1.305.018	152.110	230.717	202.053
5. Automotive Electronics (Taximeter, Tachometer)	202.655	264.226	335.785	11.228	17.473	18.449



OTHER PROFESSIONAL INDUSTRIAL ELECTRONIC DEVICES

6. Electrical Clocks	0	0	0	0
7. Other Devices	293.463	403.867	455.817	83.530
TOTAL	4.570.574	5.498.972	5.987.852	860.860

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
8443	Machines for printing by means of plates, cylinders and other printing materials of heading 84.42; other printing, copying and fax machines (whether or not combined); their parts, parts and accessories	70	126	40	82
844391100000	Parts of machinery and apparatus for use in the manufacture of semi-conductors	70	126	40	82
8486	Machinery and apparatus of a kind used solely and principally for the manufacture of semiconductor discs or ingots, semiconductor assembly, electronic integrated circuits or flat panel displays; machinery and equipment specified in note 9(c) to this chapter; parts, parts and accessories	93.212	84.749	2.417	1.207
848610000000	Machinery and apparatus for the manufacture of discs or ingots	24.958	9.787	108	25
848620000000	Machinery for the manufacture of semiconductor assembly or electronic integrated circuits	14.161	38.549	836	395
848640001000	Manufacturing device for producing mask/mesh from a light-resistant coated substrate	0	52	377	0
848640009000	Other machinery and devices specified in note 9 (c) to this chapter	27.739	34.605	4.531	1.562
848690000000	Semiconductor disk, electronic integrated circuit, other component of flat panel display	1.535	1.126	240	259
8504	Electrical transformers, static converters (eg rectifiers) and inductors	1.267.895	1.447.761	328.289	304.974
850440959011	Uninterruptible power supplies used with automatic data processing machines	50.915	59.010	34.601	37.708
850440839019	Rectifiers; EXCEPT those for use in civil aircraft, LED drivers and electric vehicles	16.563	17.794	13.816	15.603
850440831000	Rectifiers; For use in civil aircraft	450	722	511	592
850440951000	Static converters (EXCEPT battery chargers, rectifiers and inverters)	5.014	5.536	982	1.270
850440839019	Rectifiers; EXCEPT those for use in civil aircraft, LED drivers and electric vehicles	16.563	177.940	13.816	15.603
850440859000	Inverters, power <= 7.5 kVA; EXCEPT for use on civil aircraft	67.352	74.203	9.204	10.861
850440869000	Inverters, power > 7.5 kVA; EXCEPT for use on civil aircraft	525	483	13.248	16.238
850440959019	Static converters (EXCEPT battery charger, rectifier and inverter); civil air stone, for electric vehicle	33.410	36.760	36.572	37.915
850440601000	Battery chargers; For use in civil aircraft	302	1.588	1.567	905
850440831000	Rectifiers; For use in civil aircraft	450	722	511	592
850440839012	Rectifiers; EXCEPT LED drivers and those for use in civil aircraft	78.875	67.057	713	1.558

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
850440851000	Inverters; Power <= 7.5 kVA and intended for use in civil aircraft	1.397	874	418	1.096
850440859000	Inverters; EXCEPT those for use in civil aircraft with a power <= 7.5 kVA	67.352	74.202	9.204	1.969
850440869000	Inverters; EXCEPT those with a power > 7.5 kVA and intended for use in civil aircraft	525.407	484.399	13.248	10.207
850440951000	Other static converters; For use in civil aircraft	5.014	5.536	982	1.270
8514	Electric stoves and furnaces used in industry or laboratories (including those operating through induction or dielectric loss); Other industrial or laboratory apparatus for use in thermal processes by induction or dielectric loss	76.729	89.189	54.369	62009
851419800011	Resistance cookers and ovens used in industry	30.457	33.830	12.173	17.701
851419800012	resistance cookers and ovens for laboratory	6.313	6.671	1.843	1.902
851420100011	Induction cookers and ovens used in industry	7.627	16.534	13.272	15.356
851420100012	induction cookers and ovens used in the laboratory	1.408	1633,24	115	75
851420800011	Industrial furnaces and furnaces operating with dielectric loss	5.414	8.033	1.874	1.817
851420800012	Laboratory furnaces and furnaces operating with dielectric loss	871	506	323	263
851440000000	Thermal treatment devices operating with induction/dielectric loss	11.729	8.298	1.340	1.360
851490700000	Electric stoves and ovens used in industry and laboratories, etc. part, part	13.109	13.683	23.429	23.535
8518	Microphones and their supports; loudspeakers (whether or not mounted in their cabinets); head-worn headphones, ear-plugs (whether or not combined with a microphone), kits containing a microphone and one or more loudspeakers; electric audio frequency amplifiers, kit audio amplifiers	5.700	5.790	2.135	1792
851840300000	Telephonic amplifiers and measuring amplifiers	1.141	1.658	139	124
851840000000	Other electrical audio amplifiers (amplifiers)	4.363	2.925	1.689	1.454
851850000000	Set of audio amplifiers	196	1.207	308	1821
8519	Devices for recording or reproducing recorded sound	3.340	2.026	2.594	1821
851920910000	Sound recording/exporting devices with laser reading system; working with banknotes, debit cards and other means of payment	2.807	1.832	750	333
851920990019	Other sound recording/exporting devices; working with banknotes, debit cards and other means of payment	533	194	1.844	1.488
8525	Transmitting apparatus for radio or television broadcasting, whether or not receiving apparatus or sound recording or reproducing apparatus; television cameras, digital cameras and video recorders	497.354	490.556	12.455	11762
852580110011	Image-only television cameras (with three/more camera tubes)	141.820	143.741	41	40
852580110012	Both audio and video television cameras (with three/more camera tubes)	1.241	1.949	43	26
852580190011	Other image-only television cameras; EXCEPT those with three or more camera tubes	75.113	77.620	245	240
852580190012	Television cameras that provide both sound and image; EXCEPT those with three or more camera tubes	59.096	55.974	2.422	2.341
852580300000	digital cameras	41.177	40.264	37	30
852580910000	Cameras that can only record sound and images taken by television cameras	164.896	157.954	8.546	7.965
852589000000	Image recorder other cameras	14.011	13.054	1.121	1.120
8530	Electrical signaling, safety or traffic control and command devices (other than those of heading 86.08) for use on railways, trams, roads, inland riverways, vehicle parking lots, ports or airports	29.057	55.861	10.718	14.414
853010000000	Electrical signaling, safety or traffic control and command devices for railways or tramways	19.869	40.596	749	524

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
853080000011	Electrical devices for automatic control and management of traffic in ports and airports	3.513	9.336	1.638	2.336
853080000012	Electrical signal, safety or traffic control and command devices for highways	971	564	3.174	5.031
853080000019	Electrical signaling, safety or traffic control and command devices for internal riverways and vehicle parking lots	1.618	1.853	4.040	5.692
853090000000	Parts and parts for appliances of heading 85.30	3.086	3.512	1.117	831
8531	Electrical audio or visual signaling devices (e.g. bells, sirens, dashboards, anti-theft or fire alarms) (excluding those of heading 85.12 or 85.30)	108.928	109.082	26.754	27305
853110300011	Gas alarm devices for buildings	684	1.124	3.483	2.619
853110300019	Anti-theft or fire alarms and similar devices for use in buildings; EXCEPT gas alarm devices	42.275	38.928	8.244	8.524
853110950000	Anti-theft or fire alarms and similar devices; EXCEPT for use in buildings	20.182	19.592	5.832	5.309
853120200000	Dashboards with light-emitting diode assembly (LED)	27.605	35.023	4.085	5.919
853120400011	Color dashboards with active matrix liquid crystal assembly (LCD)	6.878	4.354	2.340	1.535
853120400012	Black and white or other monochrome instrument clusters with active matrix liquid crystal assembly (LCD)	4.061	2.053	517	413
853120950000	Other instrument clusters with liquid crystal assembly (LCD)	7.244	8.009	2.253	2.987
8543	Electrical machinery and apparatus with a specific function not covered or specified elsewhere in this Chapter	403.867	455.817	113.462	173.826
854310000000	Particle accelerators	4.214	1.729	307	60
854320000000	Signal generators	11.845	12.421	2.561	1.567
854370100000	Electrical machines with translation or dictionary function	46	345	6	0
854370300000	antenna amplifiers	3.956	5.606	21.406	6562
854370500000	Sun beds, sun lamps and similar sunbathing equipment	378	294	75	158
854370600000	Electrifying devices for fences	3.292	770	245	300
854370900011	mine detectors	10.297	8.341	242	169
854370900012	High frequency (RF) or intermediate frequency (IF) amplifiers	58.594	87.030	1.339	1.628
854370900013	audio combining units	7.735	8.679	314	299
854370900014	Noise reduction units used in voice recorders	46	74	74	27
854370900015	Infrared remote control devices (remote control)	34.912	32.704	1.996	1.461
854370900019	Other electrical machinery and devices with unique functions	245.858	277.076	76.205	155.502
854390001000	Electronic micro-assemblies of electrical devices with unique functions	570	569	136	885
854390009000	Other parts/parts of electrical appliances with specific functions	22.124	20.177	8.556	5.208
9018	Medical, surgical, dental and veterinary instruments and apparatus (including scintigraphy, other electromedical and eye-testing devices)	546.578	536.043	149.113	141.264
901812000000	Ultrasonic examination devices	43.771	49.795	2.367	2.865
901813000000	Magnetic resonance imaging devices	49.110	57.393	4.851	6.432
901814000000	Scintigraphy devices	11.467	11.487	63	66
901819100000	For simultaneous monitoring of two or more parameters used in medicine, surgery, dentistry and veterinary	36.851	24.488	5.904	5.547
901819900011	Electroencephalography devices (EEG)	12.377	1.351	115	116

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
901819900012	Fiberscopes (with or without monitor camera)	5.832	28	11	27
901819900013	Phonocardiographs and cardioscopes	102	54	4	0
901819900014	Electromyography (EMG)	1.056	879	130	61
901819900019	Other electrodiagnostic devices used in medicine, surgery, dentistry and veterinary medicine	17.705	20.455	5.663	5.225
901890300011	kidney machines	17.900	10.118	392	632
901890300013	Dialysis and fistula sets	23.634	23.506	5.647	3.046
901890300019	Other kidney dialysis devices (kidney machine and dialyzers)	933	795	2.570	1.926
901890500019	Transfusion and infusion devices used in medicine, surgery, dentistry and veterinary medicine	16.238	6.321	2.497	2.552
901890750000	Nerve stimulation devices used in medicine, surgery, dentistry and veterinary medicine	4.357	3.859	166	280
901890840012	All kinds of scalpels	2.614	1.351	268	170
901890840018	Intrauterine instruments	753	1.654	285	231
901890840019	Other instruments and devices used in medicine, surgery, dentistry and veterinary medicine	301.878	322.511	118.180	112.090
9022	X-ray, alpha, beta or gamma-ray equipment (whether or not for medical, surgical, dental or veterinary uses) (including radiographic or radiotherapy equipment), X-ray tubes and other X-ray generators, high voltage generators, control cabinets and tables, screens, examination or treatment tables, armchairs and the like	301.985	292.045	48.219	52.371
902212000000	Computed tomography devices	62.349	46.060	7.620	1.156
902213000000	x for dentistry; beam devices	22.102	22.231	338	1.138
902214000000	X-ray devices for medical, surgical or veterinary purposes	96.237	87.071	11.538	13.145
902219000000	Other X-ray devices	48.181	57.529	8.975	11.572
902221000000	Alpha, betai gamma-ray devices for medical, surgical, dental or veterinary uses	2.280	1.438	79	598
902229000000	Alpha, beta or gamma ray devices used for other purposes	2.213	3.933	832	1.039
902230000000	x ray tubes	31.075	35.637	11.314	14.868
902290200000	Parts and accessories of tools working using X-Ray	28.436	30.427	5.070	5.328
902290800019	Other generators producing X-rays, other devices with alpha, beta, gamma rays, tubes, etc. other parts, parts, accessories for	9.112	7.719	2.453	3.526
9024	Machinery and apparatus for testing and checking the hardness, durability, strength, elasticity or other mechanical properties of materials (such as metal, wood, textiles, paper, plastics)	44.405	46.302	20.086	18767
902410200000	Electronic devices for multi-purpose/tensile tests and controls determining the mechanical properties of metals	6.960	7.949	1.400	626
902410400000	Electronic devices for synthetic tests and controls for determining the mechanical properties of metals	5.067	3.072	1.092	769
902410801000	Electronic devices for other tests and controls determining the mechanical properties of metals	2.863	3.207	375	1.735
902410809000	Electrical machinery and devices that determine the mechanical properties of metals	2.298	774	1.033	814
902480001000	Electrical apparatus for testing and checking the hardness, durability, strength, or other mechanical properties of materials	18.039	21.492	6.567	8.452
902480009000	For testing and checking the hardness, toughness, strength, or other mechanical properties of materials	5.261	5.213	7.805	4.045
902490001000	Assemblies, parts of electrical/electronic devices for substance properties	1.791	1.923	852	1.239
902490009000	Parts, parts of other devices for substance properties	2.126	2.672	962	1.087

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
9025	Hydrometers and similar floating instruments, thermometers, pyrometers, barometers, hygrometers and psychrometers (whether or not with recording equipment) and combinations thereof	138.109	139.612	38.782	26.754
902511200000	Thermometers used in clinics or veterinary medicine	73	23	19	28
902511800011	Ovulation liquid thermometer (solid glass body, mercury)	1.937	269	4.435	1042
902511800019	Other thermometers with liquid	1.486	970	590	638
902519001100	Other thermometers and other pyrometers (not combined with other instruments); for civil aircraft	7.588	8.607	2.059	2.550
902519001900	Other thermometers and other pyrometers (not combined with other instruments); EXCEPT those for civil aircraft	68.752	71.242	8.873	8.489
902580201000	Barometers (not combined with other instruments); electronic or electrical	48	108	41	32
902580209000	Barometers (not combined with other instruments); EXCEPT electronic or electrical	215	174	34	136
902580409000	Electronic hydrometers and similar floating instruments, hygrometers, psychrometers and combinations thereof; s	17.652	17.471	858	1.149
902580802000	Electric hydrometers and similar floating instruments, hygrometers, psychrometers and combinations thereof; s	278	174	56	185
902580809000	Other hydrometers and similar floating instruments, hygrometers, psychrometers and combinations thereof; civilian	4.474	4.879	877	1.169
902590001100	Parts for electric/electronic hydrometers, thermometers, pyrometers, barometers, hygrometers, psychrometers; civil pile	187	80	83	80
902590001900	Parts for other hydrometers, thermometers, pyrometers, barometers, hygrometers, psychrometers; in civil aircraft	1.199	1.067	111	200
902590002111	Resistance sweat for other electrical/electronic hydrometers, thermometers, pyrometers, barometers, hygrometers, psychrometers	3.814	3.637	633	189
902590002112	Sensors for other electrical or electronic optical pyrometers	27	12	9.928	1484
902590002113	Thermoscope for other electrical or electronic hydrometers, thermometers, pyrometers, barometers, hygrometers, psychrometers	16.546	16.975	6.848	6.693
902590002119	Other axle for other electrical or electronic hydrometers, thermometers, pyrometers, barometers, hygrometers, psychrometers	7.106	7.124	1.551	1.125
902590002900	Other parts for hydrometers, thermometers, pyrometers, barometers, hygrometers, psychrometers	6.728	6.800	1.786	1.566
9026	Instruments and apparatus (such as flow meters, level gauges, manometers, calorimeters) for measuring or inspecting the flow, level pressure or other variable properties of liquids and gases (excluding instruments and devices of heading 90.14, 90.15, 90.28 or 90.32)	294.345	430.711	62.952	78.645
902610211000	Electronic flow meters; for use in civil aircraft	343	557	55	80
902610219000	Electronic flow meters; EXCEPT for use on civil aircraft	28.605	32.097	4.453	4.985
902610291000	Electronic instruments and apparatus (excluding flowmeters) for measuring or controlling the flow or level of liquids; s	3.616	4.180	634	789
902610299000	Electronic instruments and apparatus (excluding flowmeters) for measuring or controlling the flow or level of liquids; s	3.084	43.965	5.686	5.997
902610819000	Flowmeters (EXCEPT electronic ones); EXCEPT for use on civil aircraft	6.224	6.299	1.640	1.335
902610891000	Instruments and apparatus (electronic and flowmeters) for measuring or controlling the flow or level of liquids	4.652	4.376	1.244	1.541
902610899000	Instruments and apparatus (excluding electronic and flowmeters) for measuring or controlling the flow or level of liquids	21.368	28.131	1.059	12.320
902620201000	Electronic instruments and apparatus for measuring or controlling the pressure of liquids and gases; in civil aircraft	7.510	86.693	1.079	1.713
902620209000	Electronic instruments and apparatus for measuring or controlling the pressure of liquids and gases; in civil aircraft	103.843	111.301	12.347	12.605
902620409000	Spiral or metal diaphragm type pressure gauges for liquids and gases; EXCEPT those used on civil aircraft	10.044	10.354	1.960	2.299
902620801000	Other instruments and apparatus for measuring or controlling the pressure of liquids and gases; EXCEPT electronic ones, siv	1.876	2.034	178	200

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
902620802000	Pressure control switches for liquids and gases; EXCEPT those electronic and those used in civil aircraft	10.657	10.546	1.397	1.784
902620808000	Other instruments and apparatus for measuring or controlling the pressure of liquids and gases; electronic and civil air stone	31.323	34.420	7.539	8.547
902680201000	Electronic instruments and apparatus for measuring or controlling other changeable properties of liquids and gases; si	776	766	43	84
902680209000	Electronic instruments and apparatus for measuring or controlling other changeable properties of liquids and gases; si	32.502	24.778	3.768	9.031
902680801000	Instruments and devices for measuring/controlling other changeable properties of liquids and gases; electronic ones HAR	382	793	55	31
902680809000	Instruments and devices for measuring/controlling other changeable properties of liquids and gases; electronic and civil	9.742	9.113	6.957	6.851
902690001000	Parts for instruments and apparatus for measuring/controlling the flow, level, pressure or other properties of liquids and gases	994	1.048	3.443	1.497
902690009000	Parts for instruments and apparatus for measuring/controlling the flow, level, pressure or other properties of liquids and gases;	16.804	19.260	9.389	6.955
9027	Instruments and apparatus for physical and chemical analysis (polarimeters, refractometers, spectrometers, gas or smoke analyzers); instruments and apparatus for measuring or inspecting fluidity, porosity, expansion, surface tension or the like; instruments and apparatus (including exposure meters) for measuring or examining heat, light and sound; microtomes	418.308	435.959	45.218	43.668
902710100000	Gas or smoke analyzers; electronic ones	148.461	159.752	6.047	9.553
902710900000	Gas or smoke analyzers; EXCEPT electronic ones	10.450	9.719	7.763	5.606
902720000000	Chromatographs and electrophoresis devices	13.740	12.313	2.596	2.755
902730000011	Optical beam (such as UV, visible rays, IR) spectrometers	35.590	31.811	3.827	3.880
902730000019	Spectrophotometers and spectrographs with optical rays (such as UV, visible rays, IR)	6.149	5.264	3.062	1.297
902750000000	Other instruments and devices with optical rays (UV, visible rays, IR) for physical or chemical analysis	63.728	75.817	4.478	4.626
902789100000	Exposure meters	1.210	135	67	29
902789300000	pH meters, rH meters and other instruments that measure conductivity	11.318	10.571	2.470	2.053
902789900000	Physical and chemical analysis to measure or inspect fluidity, porosity, expansion, surface tension, or the like.	127.662	130.576	14.909	13.870
9029	Revolution counters, production counters, taximeters, mileometers, pedometers, etc.; speedometers and tachometers (excluding those of headings 90.14 and 90.15); strobos	264.226	335.785	17.473	18.449
902910001000	Electric or electronic revolution counters used in civil aircraft	4.383	3.104	27	20
902910002000	Electronic or electrical cycle counters, production counters, taximeters, milometers, pedometers and similar	45.969	39.545	6.445	5.788
902910009000	Revolution counters, production counters, taximeters, milometers, pedometers and the like; 9029.10.00.10.00 and 90	5.026	44.863	1.684	1.558
902920311000	Speedometers for land vehicles; electronic or electrical	143.060	154.161	3.022	4.361
902920319000	Speedometers for land vehicles; EXCEPT electronic or electrical	36.415	67.640	1.862	1.114
902920381000	Electronic or electric speedometers for use in civil aircraft	1.001	791	261	294
902920389000	Speedometers and tachometers; EXCEPT speedometers used in land vehicles and civil aircraft	21.348	17.758	2.850	3.815
902920901000	stroboscopes; electronic or electrical	142	123	12	21
902920909000	stroboscopes; EXCEPT electronic or electrical	201	216	238	194
902990000000	Revolution counter, production counter, taximeter, mileometer, pedometer and the like, speedometers, tachometer and strobo	6.681	7.585	1.073	1.285
9030	Oscilloscopes, spectrum analyzers and other instruments and apparatus for measuring or examining electrical quantities (excluding electricity meters of heading 90.28); Instruments and apparatus for measuring or detecting alpha, beta, gamma, X-ray, cosmic or other ionization rays	84.303	89.584	9.599	11.840

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
903010009000	Instruments and apparatus for measuring or detecting ionization rays; For use on civil aircraft H	12.870	30.232	1.451	2.069
903020001000	Oscilloscopes and oscillographs; for use in civil aircraft	43	60	0	500
903020009000	Electronic multimeters (without recording device); EXCEPT for use on civil aircraft	6.070	3.856	1.305	1.483
903031009011	Electric multimeters (without recording device); EXCEPT for use on civil aircraft	11.265	10.430	1.230	889
903031009012	Electronic multimeters (with recorders); EXCEPT for use on civil aircraft	1.562	3.456	118	320
903032009011	Electric multimeters (with recorders); EXCEPT for use on civil aircraft	13.478	11.103	1.736	2.660
903032009012	Electric multimeters for other use (with logger device)	1.362	659	40	54
903039001100	Other electronic instruments and devices (with recording device) for measuring/controlling voltage, current or power	128	127	15	12
903039001900	Other electronic instruments and devices (with recording device) for measuring/controlling voltage, current or power	20.317	17.972	2.053	2.557
903039002100	Other instruments and devices (with recording device) for measuring/controlling voltage, current or power	166	98	2	1
903039002900	Other instruments and devices (with recording device) for measuring/controlling voltage, current or power	5.498	3.108	1.050	1.213
903082000000	Devices for measuring, controlling semiconductor discs, apparatus	4.003	1.682	142	65
903084001000	Other instruments and apparatus for civil aircraft (with recording device)	50	7	0	2,5
903084009000	Other instruments and apparatus for measuring or controlling electrical quantities (with recording devices);	7.491	6.794	456	14
9031	Measuring or inspection instruments, devices and machines not specified or included elsewhere in this chapter; profile projectors	144.654	162.724	15.924	22.379
903110001000	Machines for balancing mechanical parts (balancing machines); electronic or electrical	5.914	10.474	1.703	1.975
903110009000	Machines for balancing mechanical parts (balancing machines); EXCEPT electronic or electrical	2.148	600	123	308
903120001000	Experiment stands; electronic or electrical	20.869	21.067	1.791	2.578
903120009000	Experiment stands; EXCEPT electronic or electrical	1.888	10.079	1.702	2.198
903141000000	For the control of semiconductor disc/patterns or the control of photo-mask/mesh used in the manufacture of semiconductor blanks	2.018	27.978	12	33
903149100000	Profile projectors	2.935	4.581	42	180
903149900000	Other optical instruments and apparatus for measurement or control, not specified or included elsewhere in this chapter	108.882	87.946	10.551	15.107
9032	Automatic adjustment and control instruments and devices	775.907	778.130	137.056	122.482
903210201000	Electronic thermostats; for use in civil aircraft	1.608	2.318	509	674
903210209000	non-electronic thermostats; EXCEPT for use on civil aircraft	32.030	31.942	7.850	7.683
903210801000	Pressure controllers (manostats); for use in civil aircraft	505	624	89	109
903210809000	Electronic pressure control devices (manostats); EXCEPT for use on civil aircraft	37.727	35.655	23.626	14.505
903220001000	Pressure controllers (manostats); EXCEPT those electronic and for use in civil aircraft	4.700	4.644	2.566	2.623
903220009011	Hydraulic or pneumatic adjustment or control instruments and devices; for use in civil aircraft	11.601	4.317	655	1.883
903220009019	Hydraulic or pneumatic level control devices; EXCEPT for use on civil aircraft	18.988	9.827	3.619	3.096
903281001000	Automatic smoke extraction regulators from chimneys	1.090	461	264	349
903281009011	Hydraulic or pneumatic other adjustment or other control instruments and devices; for use in civil aircraft	801	952	728	561

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
903281009012	Other adjustment or other control instruments and devices	541	67	60	41
903281009019	Parts for automatic adjustment or control instruments and apparatus; for electronic or electric ones	167.810	173.576	2.388	2.399
903289000000	Parts for automatic adjustment or control instruments and apparatus; EXCEPT for electronic or electric ones	481.491	495.706	88.518	83.160
903290001000	Parts and accessories of electrical/electronic automatic adjustment, control instruments and devices	6.376	6.920	649	581
903290009000	Parts and accessories of other automatic adjustment, control instruments and devices	10.638	11.120	5.534	4.817
9101	Wrist watches, pocket watches and other watches (including timers) (with envelopes of precious metal or metal clad with precious metal)	0	0	0	0
910110000000	Electrically powered wristwatches with mechanical gauge only	0	0	0	0
910119000000	Other electrically powered wristwatches	0	0	0	0
910121000000	Self-winding wrist watches	0	0	0	0
910129000000	other wrist watches	0	0	0	0
910191000012	Other electrically operated stopwatches	0	0	0	0
910191000019	Other pocket watches and other watches	0	0	0	0
910199000012	Other chronometers (envelopes encased in precious metal)	0	0	0	0
910199000019	Other watches (envelope plated with precious metal)	0	0	0	0
9102	Wristwatches, pocket watches and other watches (including timers) (excluding those of heading 91.01)	0	0	0	0
910211000000	Watch; electrically operated only with mechanical indication	0	0	0	0
910212000000	Watch; powered only by electronics with an opto-electronic display	0	0	0	0
910219000000	Watch; others powered by electricity	0	0	0	0
910221000000	Watch; others with automatic winding	0	0	0	0
910229000000	Watches; electrical workers; others	0	0	0	0
910291000011	pocket watches; electrical workers	0	0	0	0
910291000012	Stopwatch; electrical workers	0	0	0	0
910291000019	Other watches; electrical workers	0	0	0	0
910299000011	Other pocket watches; those who work otherwise	0	0	0	0
910299000012	Other stopwatches; otherwise working	0	0	0	0
910299000019	Other watches; those who work otherwise	0	0	0	0
9103	Clockwork and alarm clocks (excluding clocks of heading 91.04)	0	0	0	0
910310001000	Clock machine alarm clocks; electrically powered	0	0	0	0
910310009000	Desk clocks with clock machines; electrically powered	0	0	0	0
910390001000	Clock machine alarm clocks; working the other way	0	0	0	0
910390009000	Desk clocks with clock machines; working the other way	0	0	0	0
9104	Clocks and the like for instrument tables of motor vehicles, aircraft, spacecraft, ships or other means of transport	0	0	0	0
910400000011	Clocks and the like for electronic/electrical instrument tables of transport vehicles	0	0	0	0

HS Code No.	PRODUCT TYPE	IMPORT		EXPORT	
		2023	2024	2023	2024
910400000019	Clocks and the like for other instrument tables of transport vehicles	0	0	0	0
9105	Other Watches	0	0	0	0
910511000000	alarm clocks; electrically powered	0	0	0	0
910519000000	alarm clocks; battery/battery powered	0	0	0	0
910521000000	wall clocks; electrically powered	0	0	0	0
910529000000	wall clocks; battery/battery powered	0	0	0	0
910591000000	Other watches; electrically operated (including timers)	0	0	0	0
910599000000	Other watches that work without electricity	0	0	0	0
9107	Clockwork or synchronous motor devices that actuate a mechanism at a given time (devices and other devices that stop according to the clock setting)	0	0	0	0
910700000011	Electrical/electronic time control devices and clocks	0	0	0	0
910700000019	Other kinds of clocks that actuate a mechanism	0	0	0	0
9108	Pocket or wrist watch machines (complete or combined)	0	0	0	0
910811000000	Pocket/wrist watch machine; with battery/battery mechanical indicator	0	0	0	0
910812000000	Pocket/wrist watch machine; opto-electronic display, battery, etc.	0	0	0	0
910819000000	Pocket/wristwatch machine; other battery powered	0	0	0	0
910820000000	Pocket/wristwatch machine; auto winding	0	0	0	0
910890000000	Pocket/wristwatch machine, other (complete/assembled)	0	0	0	0
Sum of Industrial		4.570.574	5.987.852	804.643	1.135.811

DISTRIBUTION OF IMPORT AND EXPORT OF OTHER PROFESSIONAL INDUSTRIAL ELECTRONIC DEVICES in 2024 BY COUNTRY

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
North America	ABD		598.740		35.740
	Canada		60.450		500
	Sub Total	11,01	659.190	3,19	36.240
European Union	Germany		825.123		42.650
	Italy		405.940		25.478
	France		255.750		18.874
	England		204.630		21.000
	Czech Republic		155.850		4.450
	Hungary		145.960		19.369
	Spain		120.478		14.785
	Netherlands		85.951		32.547
	Romania		45.900		29.690
	Austria		71.651		6.000
	Poland		46.961		10.125
	Finland		38.500		750
	Slovakia		34.796		2.785
	Sweden		36.410		950
	Denmark		33.741		1.650
	Belgium		19.500		6.840
	Bulgaria		11.250		4.965
	Estonia		14.741		380
	Slovenia		12.700		450
	Portugal		11.800		2.000
Other Countries			26.500		12.500
Sub Total		43,49	2.604.132	22,74	258.238
Non-EU Europe	Switzerland		295.620		40.457
	Norway		11.584		550
	Macedonia		1.572		2.000
	Russian Federation		4.580		4.365
	Turkish R. of Northern Cyprus		30		700
	Ukraine		1.800		1.500
	Other Countries			1.750	
Sub Total		5,29	316.936	4,76	54.022

DISTRIBUTION OF IMPORT AND EXPORT OF OTHER PROFESSIONAL INDUSTRIAL ELECTRONIC DEVICES in 2024 BY COUNTRY

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
North Africa & Middle East	Israel		78.650		6.500
	Iran		300		2.300
	Saudi Arabia		210		77.820
	UAE		5.520		301.963
	Egypt		900		14.789
	Iraq		10		13.258
	Cezayir		5		16.981
	Suriye		0		6.874
	Tunisia		1.800		3.800
	Other Countries		350		15.000
	Sub Total		1,47	87.745	40,44
Central Asia & Caucasus	Turkmenistan		10		53.741
	Azerbaijan		30		46.950
	Georgia		250		11.360
	Kazakhstan		0		9.520
	Other Countries		120		6.350
	Sub Total		0,01	410	11,26
Orta ve Güney Amerika	Mexico		79.640		4.000
	Costa Rica		15.746		10
	Dominican Republic		6.800		15
	Brazil		3.600		1.700
	Other Countries		380		4.450
	Sub Total		1,77	106.166	0,90
Far East	China		921.478		51.320
	Japan		298.630		2.400
	South Korea		286.512		6.000
	Taiwan		83.470		225
	Thailand		397.650		1.000
	Malaysia		48.750		900
	Indonesia		43.890		5.800
	Vietnam		8.472		2.000
	Philippines		6.796		2.750
	Hong Kong		3.697		3.950
	Other Countries		2.500		2.300

Group Name	Country Name	Ratio (%)	Import (\$ Thousand)	Ratio (%)	Export (\$ Thousand)
	Sub Total	35,10	2.101.845	8,63	97.968
Free Zones	Aegean Free Zone		4.130		6.850
	Çorlu European Free Zone		3.698		2.897
	Istanbul I. and Trade Free Zone		450		2.460
	Other Free Zones		2.700		25.710
	Sub Total	0,18	10.978	3,34	37.917
Other Countries	India		78.550		25.300
	Bangladesh		6.600		2.000
	South Africa Republic		4.300		3.330
	Other Countries		11.000		23.415
	Sub Total	1,68	100.450	4,76	54.045
	Tüketici Cihazları Toplamı	100,00	5.987.852	100,00	1.135.811

PRIMARY COMPANIES OPERATING IN THE SUB SECTOR OF OTHER PROFESSIONAL INDUSTRIAL ELECTRONIC DEVICES (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
ALFAMAŞ Elektronik Elektrik İmalat San. Tic. A.Ş.	Dağyaka Mah. 20289 Cad.No:7 Kahramankazan/ ANKARA	312 814 55 77	
ANSAL Endüstriyel Test San. Tic. A.Ş.- İSTANBUL	Akcaburgaz Mah. 592 Sok. No:10-12/2 Esenyurt - İSTANBUL	212 549 80 45	
ARTI Endüstriyel Elektronik A.Ş.	İvedikOSB Mahallesi, 2224. Cadde, No: 1/258, 06378 Yenimahalle -ANKARA	312 257 26 83	
BARKO- MED Elektronik Sanayi ve Ticaret A.Ş.	İvedik OSB Mah. 145 Cad. No:4 Yenimahalle- ANKARA	312/ 442 92 57	312/ 442 92 57
BATKON Batarya Kontrol Teknolojileri A.Ş.	Reşitpaşa Mah. Katar Cd. Arı-6 Teknokent No:2/49 D:209 Sarıyer/İstanbul	212 286 33 35	
BARFAS Otomasyon Teknolojileri San. ve tic. Ltd Şti.	Yukarı Dudullu Mh. Tavukçu Yolu Cd., Anıl Sokak No:5 Ümraniye/İSTANBUL	216 466 46 36	
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti.	Güzeltepe Mah. Pembegül Sok. No 7 D 8 34680 Üsküdar-İstanbul	216/ 4601720	
BİLGİ Elektronik Sanayi ve Ticaret A.Ş.	Dudullu Organize Sanayi Bölgesi 1.Cadde İsmet Tarman İş Merkezi No:1/32 Ümraniye-İSTANBUL	216 455 88 46	
BRC Test ve Otomasyon Sist. San. Tic. Ltd. Şti.A.Ş.	İkitelli OSB Giyim San. Sitesi 4 Ada A Blok Kat:3 No: 304 Başakşehir / İstanbul	212 320 59 45	212 320 59 45
C3 TEKNOLOJİ Bilişim Elektronik San. ve Tic. Ltd. Şti.	Ümit Mah. 2531. Sokak No:4 Çankaya/ Ankara	312/ 241 27 69	
DAİİCHİ Elektronik San. Tic A.Ş.	Aşirefendi Cad. No:15 İmar Han Kat:4 Sirkeci / Fatih / İstanbul, 34112	216/ 4711442	
DANNIE Elektronik ve Elektronik Şirketi	Yedigöl Orkide Sok. No: 44 Muratpaşa / Antalya		
DEICO Mühendislik San. Tic A.Ş.	Serhat Mah. Ankara Teknopark Yerleşkesi 224. cad No:1 F blok, z-12, Yenimahalle, Ankara	312 395 68 44	312 395 68 45
DEVİNNO Teknoloji Yatırımları A.Ş.	Atatürk Mah. Ertuğrul Gazi Sokak, Metropol İstanbul Sitesi C1 Blok No: 2B/111 34758 Ataşehir/İSTANBUL	216/ 7062111	216/ 7062216

PRIMARY COMPANIES OPERATING IN THE SUB SECTOR OF OTHER PROFESSIONAL INDUSTRIAL ELECTRONIC DEVICES (TESİD MEMBERS)

COMPANY	ADDRESS	TELEPHONE	FAX
EGES Elektrik ve Elektronik Gereçleri Sanayi ve Ticaret A.Ş.	Taşocağı Yolu Yelken Sok. No:10 / 3 34550 Bağcılar-İSTANBUL	212/ 446 41 21	212/ 446 41 27
ELİMKO Elektronik, İmalat ve Kontrol Ticaret Ltd. Şti.	8. Cad. 21. Sok. No:16 06510 Emek- ANKARA	312/ 212 64 50	312/ 212 41 43
ELİAR Elektronik Sanayi A.Ş.	Sağlam Fikir Sokak No:1 ESENTEPE ŞİŞLİ İSTANBUL	212/ 274 30 31	212/ 274 20 30
ELKOTEK Mühendislik ve Danışmanlık Hizmetleri A.Ş.	Yıldız Posta Cad. Emekli Subay Evleri No28/3 34394 Esentepe-Şişli-İSTANBUL	212/ 970 39 00	212/ 212 29 17
ELEKTROTEL Elektronik Ve Telekomünikasyon San.Tic.Ltd.Şti.	Yukarı Dudullu Mah. 3.Cadde No:5/34-35-36 Saraçoğlu İş Merkezi Ümraniye/İSTANBUL	216 420 90 92	
EMKO Elektronik Sanayi ve Ticaret A.Ş.	Demirtaş Organize Sanayi Bölgesi Karanfil Sok. 16369 BURSA	224/ 261 19 00	224/ 261 19 12
EMT Elektronik Mühendislik San. Tic. Ltd. Şti.	Çamlıca Mahallesi, Anadolu Bulvarı No:16, Regnum Ticaret Merkezi B Blok No: 5 06200 Yenimahalle ANKARA	312/ 472 20 60	
EMPA Elektronik Sanayi ve Ticaret A.Ş.	İstanbul Dünya Ticaret Merkezi A1 Blok Kat:4 No:200 34149 Yeşilköy-İSTANBUL.	212/ 465 71 99	212/ 465 71 88
ENWAİR Enerji Teknolojileri A.Ş.	Reşitpara Mah. Katar Cad. ARI 6 Enerji Tek- nokent 2/49 Ofis: 208 Sarıyer- İSTANBUL	212/ 328 40 41	
ERA Elektronik Sanayi ve Ticaret A.Ş.	Dudulu OSB, 4. Cadde 11 34776 Ümraniye-İSTANBUL	216/ 466 88 07	216/ 415 35 74
ERGÜNLER İnşaat Petrol Ürün. Otomotiv Tekstil Madencilik Su Ürün. San. ve Tic. Ltd. Şti.	Pirim Mehmet Mh. 113 Cd. No: 75 32100 Merkez/ İSPARTA	216 631 88 86	
EXENTECH Sav. Med. Hav. Bil. Ltd. Şti.	Ankara Teknopark TGB Yerleşkesi 2224. Cd No:1 B Blok Zemin Kat No:B-ÜZ29/B İvedik OSB Mh. Yenimahalle/ANKARA	312 395 07 64	
GESK Elektrik Elektronik Yazılım Sanayi ve Ticaret Ltd. Şti.	Yıldız Teknik Uni. Teknopark B1 No:405 Esenler İstanbul.	212 220 22 34	212 483 70 35
KAREL Elektronik Sanayi ve Ticaret A.Ş.	Esentepe Mah. Kore Şehitleri Cad. Yzb.Kaya Aldoğan Sok. No:16 34394 Şişli-İSTANBUL	212/ 355 48 00	212/ 275 40 01
LOTEC Teknoloji Ltd. Şti.	Hacettepe Teknokent 6. AR-GE C Blok Kat:2 No:28	312/ 227 03 06	
MYSIA Elektrik Elektronik Bilgisayar Yazılım San. Tic. A.Ş.	Alaaddin Bey Mah. Nilüfer Ticaret Merkezi 622 Sk. Sera Plaza 8/B Nilüfer - BURSA	224 443 24 65	
MAKELSAN Makine Kimya Elektrik San. Tic. Ltd.Şti.	İstanbul Deri Org. San. Bölğ. 2. Yol 1-5 Parsel 34957 Orhaneli Mevkii Tuzla-İSTANBUL	216/ 428 65 80	216/ 327 51 64
MİKROSAY Yazılım ve Bilgisayar San. Ve Tic.A.Ş.	Şerifali Mah. Alptekin Cad. No:73/2 34775 Ümraniye-İSTANBUL	216/ 459 86 60	216/ 459 83 70
MULTİTEK Elektronik Sanayi ve Ticaret A.Ş.	Meclis Mah. Atatürk Cad. No:47 Sancaktepe-İSTANBUL	216/ 420 38 38	216/ 415 79 18
PAVO Tasarım Üretim Elektronik Ticaret A.Ş.	Teknopark İstanbul Tekn. Gel. Bölğ. Ar-Ge Bin. 1. Blok Zemin Kat 34912 Pendik-İSTANBUL	216/ 354 72 86	216/ 354 76 77
POLAR Araştırma Teknoloji İletişim Sanayi ve Ticaret A.Ş.	Oğuzlar mahallesi 1372 Cad. 3/4 Balgat Çankaya Ankara	312/ 999 06 06	
POWER Elektronik San. Tic. A.Ş.	Armağan Evler Mah. Diriliş Cad. İpekçi Sokak NO:12 Ümraniye/ İstanbul	216 /4816699	216/ 4816609
SANEL Sanayi Elektroniği İmalat ve Ticaret A.Ş.	Orta Mh. Yetkin Sk. No: 4 34956 Tuzla / İstanbul	216 / 4272650	
SDT Uzay ve Savunma Teknolojileri Bilişim Üretim Danışmanlık Ticaret A.Ş.	Üniversiteler Mahallesi İhsan Doğramacı Bulvarı No:37/1 Çankaya -ANKARA	312 210 10 15	
TALES Elektronik A.Ş.	İTOB OSB Mahallesi İTOB Dokuz Eylül Bulvarı No:10 Mendere/İZMİR	232/ 433 86 63	
TEKNOPAR Endüstriyel Otomasyon San. ve Tic. A.Ş.	İvedik OSB 1471. Cad. No: 3-5 06370 Yenimahalle / ANKARA		
TELEGRABHERLABS Ses Sistemleri Sanayi ve Ticaret A.Ş.	Reşitpaşa Mahallesi Katar Caddesi Teknokent ARI-3 No:4 Sarıyer-İSTANBUL		

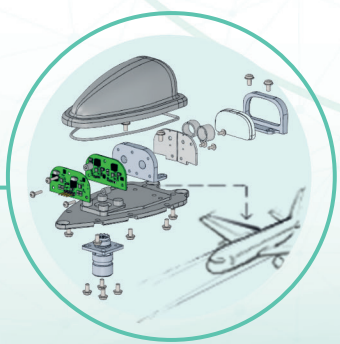
COMPANY	ADDRESS	TELEPHONE	FAX
TİBET Tech Solutions	49 Sugar Mill Way M2L 1R5 Toronto, ON Canada		
TOĞİTEK Teknoloji San. ve Tic. Ltd. Şti.	Balmumcu Mah Gazi Umur Paşa Sokak No:12/B1 Beşiktaş / İSTANBUL		
VEMUS Endüstriyel Elektronik San. ve Tic. Ltd.Şti.	Nilüfer Organize Sanayi Bölgesi Zeytin Cad. No:14 16140 Nilüfer-BURSA	224/ 411 10 30	224/ 411 10 31
VHS Elektronik Yazılım Ltd. Şti.	İvedik OSB 1548 Cadde No:7 Yenimahalle / ANKARA	312/230 15 61	
WHILONE Teknoloji Yazılım Danışmanlık Ltd. Şti.	Cevat Dünder Cad. Ostim OSB Mah. No:1/1-43 OSTİM TEKNOPARK YENİMAHALLE/ANKARA		
YILMAZ KABLO Sanayi A.Ş.	Maltepe Cad. No:2 Bayrampaşa-İSTANBUL	212/ 544 76 00	212/ 567 81 24
ZER Elektronik Sanayi ve Ticaret Ltd. Şti.	Mustafa Kemal Mah. 2127 Sokak 18/7 06520 Balgat-Çankaya ANKARA	312/ 219 46 47	
ZEROTECH Elektronik Sistemler Ür. Paz. İnş. San ve Tic. Ltd. Şti.	Batı Sitesi Mah., Gersan Sanayi Sitesi, 2306 Cad., No:51 Yenimahalle, ANKARA	312 394 52 66	



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TESİD MEMBER COMPANIES

ACRON Elektronik Sanayi ve Ticaret A.Ş. -BOLU
ADAM Elektronik Ltd.Şti.- İSTANBUL
ALFAMAKS Elektronik Elektrik İmalat San. Tic. A.Ş. – ANKARA
ANSAL Endüstriyel Test San. Tic. A.Ş.- İSTANBUL
ANKAREF İnovasyon Teknoloji A.Ş. - ANKARA
ARGELA Yazılım ve Bilişim Teknolojileri San. ve Tic. A.Ş.- İSTANBUL
ARGOSAİ Teknoloji A.Ş.- ANKARA
ARKSİGNER Yazılım ve Donanım San. Tic. Ltd. Şti. – ANKARA
ARTI Endüstriyel Elektronik A.Ş. - ANKARA
ARTRON Tasarım Üretim Elektronik Ticaret A.Ş. – ANKARA
ARVENTO Mobil Sitemleri A.Ş.- ANKARA
ATMACA Elektronik Sanayi ve Ticaret A.Ş.- İSTANBUL
AYDIN Yazılım ve Elektronik Sanayi A.Ş. – ANKARA
BARFAS Otomasyon Teknolojileri San. Tic. Ltd. Şti. - İSTANBUL
BARKO-MED Elektronik Tic. A.Ş.- ANKARA
BATKON Batarya Kontrol Teknolojileri A.Ş. – İSTANBUL
BERRİN ERDEN NEO Mühendislik Danışmanlık Gıda San. Tic. Ltd. Şti. – İSTANBUL
BİNK Teknoloji San. Tic. Ltd. Şti. -KAYSERİ
BLC İletişim ve Güvenlik Sistemleri A.Ş. – ANKARA
BRC Test ve Otomasyon Sistemleri San. Tic. Ltd.Şti. – İSTANBUL
BRENSAN Enerji Savunma San. Tic. Ltd. Şti. – ANKARA
C3 TEKNOLOJİ Bilişim Elektronik San. ve Tic. Ltd. Şti. – ANKARA
DAİİCHİ Elektronik Sanayi ve Ticaret A.Ş. -İSTANBUL
DANNIEE Elektronik ve Elektrik Ltd. Şti. - ANTALYA
DEICO Mühendislik Sanayi ve Ticaret A.Ş. -ANKARA
DEVİNNO Teknoloji Yatırımları A.Ş. - İSTANBUL
EKA Transformatör Elektrik İnşaat Turizm İthalat İhracat Ltd. Şti. - ANKARA
ELDOR Elektronik ve Plastik Malzeme Üretim ve Ticaret Ltd. Şti. -İZMİR
ELEKTRA Elektronik Sanayi ve Ticaret A.Ş.-İSTANBUL
ELEKTROTEL Elektronik ve Telekomünikasyon San. Tic Ltd. Şti. – İSTANBUL
ELİAR Elektronik Sanayi A.Ş. İSTANBUL
ELİMKO Elektronik, İmalat ve Kontrol Ticaret Ltd. Şti.-ANKARA
EMGE Elektro Mekanik Gereçler Endüstrisi A.Ş.
EMKO Elektronik Sanayi ve Ticaret A.Ş.-BURSA
EMPA Elektronik Sanayi ve Ticaret A.Ş. A.Ş. – İSTANBUL
EMT ELEKTRONİK San. Tic. Ltd. Şti.-ANKARA
ENTES Elektronik Cihazlar İmalat ve Ticaret A.Ş.-İSTANBUL
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