SAHA İSTANBUL DEFENCE AND AEROSPACE CLUSTER

ELECTRIC AND ELECTRICAL TECHNOLOGIES URGE PROJECT COMPANIES

SAHA İSTANBUL ELECTRIC AND ELECTRONIC TECHNOLOJIES PROJECT 2 COMPANIES

SAHA ISTANBUL DEFENCE, AVIATION AND SPACE CLUSTER

Inline to achieve a common synergy by clustering the power of our industrialist companies operating in the Northern Marmara corridor to produce technological products with high added value, which produces half of Turkey's national income, in March 2015, with the initiatives of 27 founding members, SAHA Istanbul Defence, Aviation and Space Clustering Association was established. The cluster has chosen Technopark Istanbul, located in Pendik, as its centre.

SAHA Istanbul, which still has a very rapid growth by recruiting more than 900 members from all regions of Turkey, has become one of the largest clusters of the European Aviation Clusters Union of which Turkey is a member, with its companies universities and institutions. By establishing SAHA Istanbul Technology Economic Enterprise within SAHA Istanbul, it has created an infrastructure to carry out effective activities.

In 2018, it successfully held the first SAHA EXPO fair as a domestic fair, and in the following process, SAHA EXPO Fuarcılık A.Ş. was established. It will continue as an international fair in the form of the defence Industry Specialization Fair, which will be held every two years, both in physical and virtual environments. SAHA EXPO A.S. has succeeded in realizing the world's first 3D Virtual defence Industry Fair. In November 2021, it showed the success of making the world's first hybrid defence Industry, both physical and virtual.

In 2020, by establishing the National Aviation Industry Committee MİHENK under the World Civil Aviation Quality Group - IAQG / European Civil Aviation Quality Group-EAQG, Turkey has entered the European Civil Aviation Quality kitchen and paved the way for TURKAK's accreditation of our domestic companies to issue AS 9100 certificates.

Within SAHA Istanbul, projects are carried out by project groups under technical committees. These projects can be aimed at acquiring technologies that the country does not have yet, or they can be in the form of developing new products with unique concepts by consolidating existing but different sector talents.

In addition, efforts to improve the export of different production sectors are carried out with the Ur-Ge projects carried out within the committees.

To ensure that our companies participate more in defence, civil aviation and space projects, we make their talents known, make market-developing efforts for them, and develop cooperation between parts, components, subsystem manufacturers, system and platform manufacturers. It provides support to our

companies, relevant public authorities, science and research institutions and universities, with the idea of creating clusters by guiding, informing and guiding our companies in every branch of the defence industry, in the aerospace industry, thus increasing our national production capabilities and capacity.

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ARTRON

ARTRON is founded in 2011 and since then is a supplier of avionics subsystems to aerospace industry. Artron has extensive knowledge and broad expertise in the development of electronic hardware and software for aerospace & defence applications. Today, Artron manufactures tens of different products for local aerospace and defence industry in Turkey.

The main activities of ARTRON include development and manufacturing of electronic boards, subsystems and software solutions for defence products, test, simulation and analysis. ARTRON creates embedded applications interfacing with standard data bus protocols, including MIL-STD-1553/1760, ARINC 429/717/664, AFDX®, serial, CANBUS, more. Artron is known as a developer and manufacturer of avionic data bus hardware and software solutions, delivering single and multi-protocol products.

The main product lines of Artron is listed as:

- Single Board Computers, System-on-Modules based on Xilinx FPGAs
- Stores Management Systems: Stores Management Computers, Store Interface Units, Munition Interface Units
- Onboard computer / UAV mission computer
- Safety and Arming Devices and Safety-Critical Air Platform Avionics
- Avionic Communication Units and Protocol Converters
- DC Brushless Motor Controllers and Control Actuators
- Inertial Measurement Units (IMU) and guidance kits

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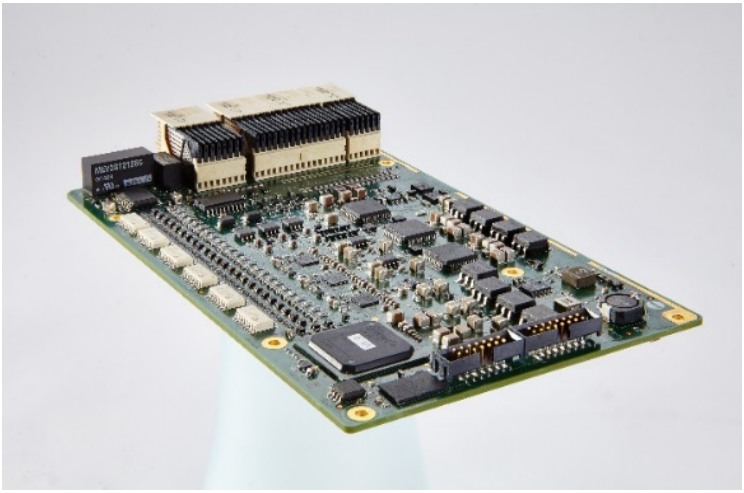
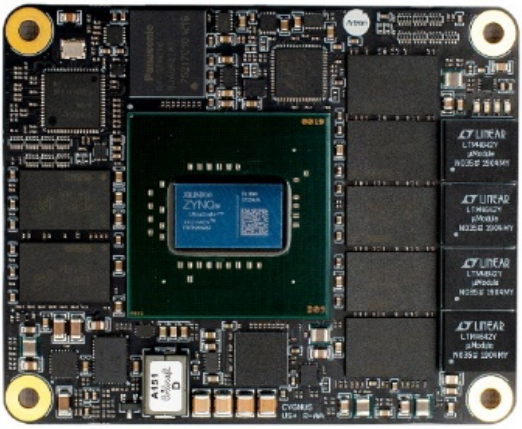


SOM Processing Modules*Comm Boards for Civil Aviation*



SOM Processing Modules

AYROTEC

Ayrotec was established in İstanbul in 2017, to provide product design, engineering and production services to defense, aviation and space industry.

Our experienced team in the sector of defence includes industrial designers, mechanical engineers, electronical engineers and technical draftsmen.

Product design, engineering calculations, technical documentation and manufacturing of the products such as rugged keyboards, rugged displays, operator consoles, special purpose cabinets, rugged electronic device cases compatible with military standards are among our main competencies.

Contact Information

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www.ayrotec.com - Senior Mechanical Design Engineer - Harun Eren - harun.eren@ayrotec.com - + 90506 965 08 26 - info@ayrotec.com
+90 216 504 1120 - Sanayi Mah. Teknopark Bulvarı No:1/2A, 201, Teknopark İstanbul, 34906, İstanbul, Turkey

RSK-01 RUGGED SILICONE KEYBOARD

RSK-01 is a rugged silicone waterproof keyboard designed for harsh environment. It is durable to vibration, shock and corrosion. Tested to MIL-STD 810, MIL-STD- 461, MIL-STD-167. FSR technology is used on pointer.

RSK-02 RUGGED SILICONE KEYBOARD

RSK-02 is a rugged silicone waterproof keyboard designed for harsh environment. Case material is aluminum. It is durable to vibration, shock and corrosion. Backlight option is available. FSR technology is used on pointer.

C TECH INFORMATION TECHNOLOGIES INDUSTRY AND TRADE INC.

C Tech Information Technologies Industry and Trade Inc. founded in 2005, operates in Defense, Aerospace and Satellite Technologies, Communication Systems, Cyber Security, Modeling and Simulation. CTech accomplishes its mission of developing innovative products and creating solutions for national and international markets with its knowledge and experience in information and communication technologies and with its experienced human resources. CTech has system engineering, electronic hardware design, digital design, communication system design, RF design, embedded and PC based software design and system development capabilities and integration and production capabilities comprised by these capabilities. CTech offers products and solutions to various public, private and international stakeholders as the contractor of the projects.

The head office of our company is located in Teknopark Istanbul Campus in Kurtköy, Istanbul and we have an office in the Cyberpark Campus in Bilkent, Ankara. Having vision of providing value added products and solutions to its stakeholders; CTech has an R & D and production infrastructure compliant with software development and electronic design and production.

Our company also has the Production Permission Certificate from the Ministry of National Defense, the AS9100D Certificate and the IS0-9001:2021 Certificate, as well as the National and NATO Confidential Facility Security Certificates. In CTech's activities rely on internationally accepted standards and approaches such as CMMI Level-3 quality standard, IEEE-12207 and MLL-STD-973. Moreover, infrastructure activities are continuing for Manufacturing License Certificate and AS9100 Certificate. For the ISO27001 Certificate, the infrastructure works have been completed and certification is awaited. Having many national and international business partners, our company has been declared by TUBITAK as the second Turkish company which participates in R & D project within the scope of European Union Eureka Program as of 2012. Since February 2018, C Tech has been Turkish Aerospace Industries subsidiary.

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SkyARX
KU-18
Seamless &Secure
Communication
on UAVs

TerraARX
Seamless & Secure
Communication
in Off-Road Terrain
Conditions

SecureARX
SATCOM TERMINAL
Resistant to
Jamming,
Suppression &
Interception

modeo
live
Strike The Center
of Seamless Live
Video & Data
Transmission
LIVE

SkyARX
KA-12
Seamless & Secure
Communication
on UAVs

MOBIoT
Simple, Reliable,
Flawless, Secure &
Affordable Bonding
Gateway

HeliARX
Seamless
Secure
Broadband
Communication

MAHREK TECHNOLOGY

Mahrek Technology, which started with a motto of “Local Production, Global Service”, is a new generation technology brand which has been operating with its products in Technology Tracking Systems, Security Systems, Automotive Industry and sector based solutions. Mahrek Technology, which was established with the knowledge accumulation and experience of current partners, has been providing solutions to its customers which are in line with the needs of digital age and which make life easier by developing appropriate products for the technology transformation caused by Industry 4.0. Mahrek Technology has a total of 50 employees 27 of whom are R&D staff. The company has been offering customer oriented service in 81 cities, İstanbul Headquarters, Gebze R&D Center and Ankara Regional Offices. Mahrek Technology, which has a purpose of producing innovative and high added value products and marketing them in international markets since its establishment, has an aim of becoming one the leading technology companies in Turkey.

PRODUCT GROUP

- Vehicle and Object Tracking Solutions
- Personnel Management and Mission Tracking Solutions
- Industry-Based Artificial Intelligence Applications

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mahrek
TEKNOLOJİ
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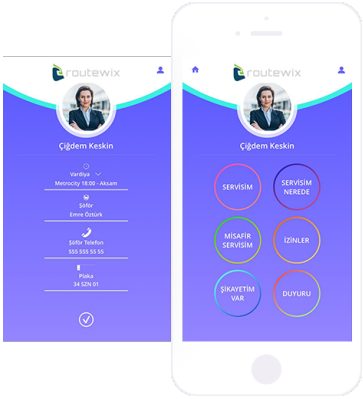
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İZİNLER
ŞİKAYETİM VAR
DUYURU

mahrek
TEKNOLOJİ
MA-CP-10

Müşteri Deneyim Ekranı
11:00
12:30
mahrek
Have a
moment?
Please take
our survey

mahrek
TEKNOLOJİ

NETA ELECTRONIC INDUSTRY & TRADE INC.

Established in 1987, NETA Elektronik is a R&D and industrial enterprise that has more than 200 people working daily for 30 years. Developing products with its R&D infrastructure, NETA performs its production cycle in the facility with 3500m2 closed area in Dudullu, Istanbul. It maintains its industry-leading position in Turkey especially with mobile antenna systems products. It produces nearly 10 thousand antennas per year and regularly exports to nearly 30 countries. The products of NETA, which mainly work with European countries, are used in many countries from England, Qatar, Russia to Australia. Working with the R&D Center and Facility Security facilities, NETA has completed the process of being an approved supplier of main contractors such as Roketsan and Havelsan. Products for the Defence Industry include Ku / Ka band SOTM and VSAT antennas, S band telemetry and data-link antennas.

PRODUCT GROUP

- Antenna Systems
- Receivers
- Professional Receivers
- Türksat Cable

Contact Information

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NETA
HD MARINESAT MPR310
Digital Satellite Receiver / Control Box

NETA

NETA

NETA

NETA

28x10cm
800gr
NETA
4G MiFi
21x17x3cm
350gr

PAVOTEK

Pavotek design and produce first-class electronic and embedded system solutions even the most challenging customer requirements. Our solutions include IP network communication devices, communication / control systems, power transmission / distribution units, unmanned avionics systems, and energy distribution systems with excellent energy efficiency. We build upon our broad experiences to deliver each and every project. We design and manufacture a wide range of products from ruggedized military computers to robust switches and routers that are located in data centers. As one of Turkey's leading technology bases, our country's indigenous technologies in critical areas in terms of national security under the responsibility we have undertaken several strategic initiatives to improve and we have been very successful in this regard. Our products have been extensively tested and used for more than a decade and have reached an excellent field experience. Combined with our highly ambitious attitude, sensitivity to innovation and our mission-ready execution to experiment new ideas. This led us to have unique products within our portfolio. Crucially, we have gained key competencies in various and complementary issues. This gives us the advantage of discovering solutions that our competitors cannot access. Our goal is to focus on creating value for all our customers by receiving and processing this comprehensive information.

As we develop and produce our own designs, we also offer OEM (Original Equipment Manufacturer) or ODM (Original Design Manufacturer) service to our customers. Our R&D engineers turn their ideas and customer requirements into electronic and mechanical designs. We carry out the entire process consisting of design, production, test and certification stages within our own structure. We are among the few Turkish companies that can design and offer components that meet military and avionics grade certification requirements such as DO-178, DO-254 and DAL-A, DAL-B, DAL-C.

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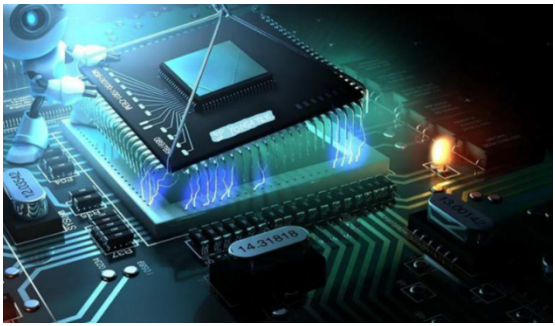
Website: www.pavotek.com.tr



KIVA SoC - KIRMIK Intelligent Video Analytics (KIVA) SoC is our company's next and AI supported solution for smart city applications.

RUGGEDIZED LAPTOP COMPUTERS

VOIP TERMINAL

DEFENCE MODEMS

PROTECTION RELAY

MILITARY POWER DISTRIBUTION UNIT

PAVO SERVERPSRV7-01

YONGATEK MICROELECTRONICS

Yongatek Microelectronics is a high-tech company operating in highly demanding industries worldwide. Its mission is to be one of the few global brands to develop technology in Semiconductor IC/ASIC/SoC/Chip Design, 5G/6G and Satellite Communications, Video Processing and IoT.

Yongatek Microelectronics is located in Turkey and have offices in Istanbul and Ankara. Yongatek Microelectronics provides services to national and international companies for ASIC/FPGA design, UVM and RISC-V based SoC verification projects. We also have strong expertise in verifying hardware requirements according to RTCA DO-254 standards.

Yongatek Microelectronics' verification team has 10+ and our ASIC&FPGA design team includes 5+ qualified engineers which are led by experienced experts in their area. We have verified about 22.000+ requirements within 14 different projects. We have experience on a wide portfolio of EDA tools from Synopsys, Mentor Graphics, and Aldec to support our verification and ASIC implementation flows.

We also provide solutions for embedded systems and have developed important R&D products like Multiple Object Video Tracker, H264 Video Codec IP, Digital Moving Map and ADAS (Advanced Driver Assistant Systems).

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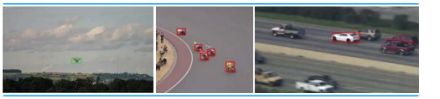
UR-GE

SAHA İSTANBUL

Türkiye

iZCi - Video Tracker

- iZCi is an Automatic Multiple Object Tracker which provides Simultaneous tracking of multiple arbitrary objects in real world environments.
- With ease of integration to any Reconnaissance and Surveillance System, iZCi brings up Target Tracking capability without interfering actual system architecture.
- iZCi module is designed to tackle the compelling situations posed by unconstrained, real life environments and bring longrunning research activities out of the laboratory to living world scenarios.
- iZCi can be adopted to any Military or Industrial application where high frame rates are of concern.
- Distinctive performance exhibited over current video trackers by its redetection performance during occlusions and other complex scenarios makes iZCi mission proven where precise timing is critical.



Highlighted Features:

- Simultaneous tracking of multiple arbitrary objects in real-world environments
- Supporting two modes of tracking: Target(Point) / Scene (Area) Track
- Real Time Operation with high acquisition and processing rates (up to 100 fps)
- Robust and adaptive target modeling for rapid scene changes
- Superior performance for obscured scenes and occlusion handling
- Secured performance during continuous FOV changes
- Compatible with various imaging sensors Short/Mid/Long Wave IR & Visible Light
- Supports multiple tracks simultaneously
- Expansion option for higher number of multiple tracks with add-on modules
- Expansion option with automatic track initialization module
- Expansion option for image stabilization during tracking
- Standalone operation for pc or embedded platforms

YONGATEK

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ASIC FPGA DESIGN

System Design

- Specification
- System Model Development
- Requirement Management and Traceability

Digital Design

- High Level Design
- Micro Architecture Documentation
- RTL Coding with VHDL or Verilog
- Functional Simulations
- Directed Tests
- System Verilog based UVM Tests
- Formal Verification

Logic Synthesis

- Constraints
- DFT (Design for Tests) Implementation

Gate Level Simulations

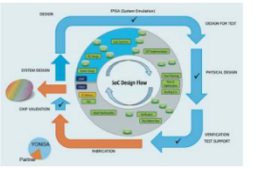
- STA for hand-off before backend

FPGA Prototyping for ASIC

- Board level validation

Physical Design

- Floor Planning
- Place and Route
- DRC



Verification and Test Supports

- STA for sign-off before tape-out
- Test Pattern Generations

Tape-out and Fabrication
Chip Validation
Cost Effective Supply Chain Management

YONGATEK

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YÖNTEM TECHNOLOGY LTD.

Established in 1997,specialized in turnkey projects including design, manufacturing, programming, in-site installation, and after-sales services. Services on: Power Electronics, Aviation Electronics, Aviation education and entertainment equipments, Maritime education equipments, simulation systems and UV-C air cleaning appliances. Since 2002 started to act on simulation systems. Quality based on certification leads to tender and export culture for the company. Proud member of SAHA ISTANBUL.

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Bridge Simulator

Mockup Cockpit Simulator

Interactive Learning Stations (Learning Management and Evaluation System) – EiTrain

Car Simulator

Aviation Training Sets – Autopilot

SAHA EXPO DEFENCE & AEROSPACE EXHIBITON

SAHA EXPO Defence & Aerospace Exhibition organized by SAHA Istanbul the largest industrial cluster of Türkiye and Europe with 876 companies and 24 universities, organized under the auspices of the Presidency, with the participation and support of the Ministry of Foreign Affairs, Ministry of Interior, Ministry of National Defense, Ministry of Industry and Technology, Ministry of Trade, Defense Industry Agency, and other civil and military public institutions. It is an international platform where the increase in Türkiye's domestic production potential and its independent production power are exhibited. At SAHA EXPO, where high-tech products are exhibited, many strategically important products in the defense, aviation, maritime and space industries are introduced for the first time. SAHA EXPO 2022 Defence & Aerospace Exhibition, under the auspices of the Presidency of the Republic of Türkiye, with the support of a total of 18 institutions, including 5 Ministries and 13 Civil/Military institutions, under the management of SAHA Istanbul, was organized by SAHA EXPO Inc. for the third time in Istanbul Expo Center between 25-28 October 2022. SAHA EXPO 2022 Exhibition, which was started with the aim of "to make the maximum contribution to the promotion of Türkiye and the Turkish defence, security, aviation and space industry and to increase its export potential" and which was held after a long planning and preparation period, from 109 countries: 78,643 visitors, including 390 foreign and 567 domestic, 957 companies, 268 official delegations, 112 commercial delegations, and 40,000 industry professionals. Thousands of B2B, G2B and G2G meetings and booth visits, 9 international panels and 3 keynote speaker sessions, product launches by 281 companies and 114 signing ceremonies with a financial value of over 1 billion dollars and an export rate of at least 60% were held at the exhibition.

SAHA
İSTANBUL
SAVUNMA, HAVACILIK VE UZAY KÜMELENMESİ DERNEĞİ

SAHA
EXPO
SAVUNMA HAVACILIK VE UZAY SANAYİ FUARI
KARA
DENİZ
HAVA
UZAY