

# Pakistan Aerospace & Defense Capabilities























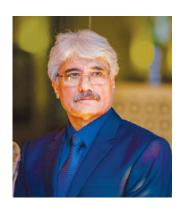






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#### The President's Message

Dear Members, Partners, and Stakeholders,

It is a distinct honor to address you as President of the Pakistan Aerospace Council at this pivotal moment in our shared journey. We stand at the edge of extraordinary transformation, where technological progress accelerates with unprecedented speed, leaving in its trail a wealth of opportunities for the innovative, capable, and industrious to capitalize upon.

PAeC is a dynamic cluster of engineering enterprises that aspires to transform and push boundaries in aerospace design, advanced manufacturing, electronics, UAVs, radar, control systems, and other cutting-edge domains. Our member organizations carry the hallmark of engineering excellence while embracing the urgency of global relevance. You are the architects of Pakistan's emergence as a credible, competitive player in the international aerospace and high-tech arena. Your ingenuity and resolve are the lifeblood of PAeC's success.

But technology alone is not enough. To truly shape the future, we must invest in people. Bridging the divide between academia and industry is no longer optional it is imperative. Our human capital must be equipped not just to meet tomorrow's challenges, but to define them. PAeC is actively launching new initiatives to connect our brightest minds with global opportunities, to be anchored by cutting-edge design and innovation hubs envisioned as national beacons of excellence, incubation, and entrepreneurial growth.

Collaboration is our catalyst. By forging deeper ties with technical institutions, hosting strategic dialogues on defense and aerospace technologies, and pursuing joint ventures, we cultivate a culture of continuous learning and enduring partnership. Our unified presence at global exhibitions under the "Pakistan Aerospace" banner will amplify our voice, showcase our strength, and assert our place on the world stage.

I call upon each of you, our members and partners, to embrace this vision with conviction. Let us innovate relentlessly, collaborate fearlessly, and create opportunities that transcend borders and expectations. Together, we will elevate Pakistan's aerospace industry to new heights, shaping a future defined by excellence, global impact, and national pride.

Warm regards,

Shahid Rafiq President Pakistan Aerospace Council (PAeC)



#### Pakistan Aerospace & High-Tech Industries Cluster

The Pakistan Aerospace Council (PAeC) is a dynamic cluster and Business Support Organization (BSO) bringing together enterprises engaged in the Aerospace, Defense, and High-Tech Electronics markets. Established to promote high-value addition and advanced technology manufacturers of Pakistan, PAeC plays a pivotal role in addressing national needs for technology acquisition while driving exportled, sustainable growth of the Pakistani aerospace industry.

Aligned with its vision, PAeC is committed to strengthening Pakistan's position in the global aerospace ecosystem by fostering innovation, excellence, and international collaborations. It supports the development of aviation and related technologies, enhances the global visibility of Pakistani aerospace, and strives for a steadily expanding market share.

PAeC works to safeguard and advance its members' interests at policy levels, facilitate strong networking, and generate business opportunities through participation in major international and local exhibitions and industry platforms. With a focus on a well-functioning triple helix structure, linking Industry, Academia, and Government, PAeC envisions building an ecosystem where Pakistani high-techindustries compete, collaborate, and lead on the global stage.

#### **Pakistan Aerospace Foundation**

Formerly Pakistan Aerospace Council (PAeC)

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# **Strategic Objectives**

Pakistan Aerospace Council's activities are focused on the following key objectives:

- Improving the image and profile of Pakistan's High Tech Sector.
- Influencing the policy debates & procedures of most importance to our industries.
- Supporting Pakistan's high-value manufacturing and supply chains.
- Encouraging investments in technology and innovation.
- Supporting business development opportunities in the Global Market.
- Maximizing the growth, exposure, and influence of member organizations.
- Sustainable growth of the Private High-tech Sector in Pakistan.



## **PAKISTAN** at a Glance

Official Name : Islamic Republic of Pakistan

Capital : Islamabad

Time Zone : UTC+5 (Pakistan Standard Time)
Official Languages : Urdu (National), English (Official)

Currency : Pakistani Rupee (PKR)
Government : Parliamentary Democracy

Head of State : President Head of Government : Prime Minister

Flag : Pakistan flag is Dark Green and white, with a five-pointed White Star inside a

white crescent.

Geographical Location : Approximately 24° and 37° North latitude and 61° and 75° East longitude. South

Asia,

Calling Code : +92

Boundary : India to the East, Afghanistan to the West, Iran to the Southwest, and China to

the Northeast. To its south is the Arabian Sea coastline. Total land borders 6,774

km.

Climate : Four seasons are recognized:

A cool, dry winter from November to February
 A hot, dry spring from March through May

3) The summer, rainy season, also known as the southwest monsoon period,

occurs from June to September

4) The autumn from October to November

Literacy Rate : 63% (Males: 73.4 % Females: 51.9%)

Area : 796,095 sq km (Land: 770,875 sq. km, Water: 25,220 sq. km

Coastline : 1,046 km along the Arabian Sea
Maritime Border : Maritime border with Oman.
Population : 255.3 million (2025 EST.)

#### **Map of Pakistan**





# PAKISTAN COUNTRY PROFILE

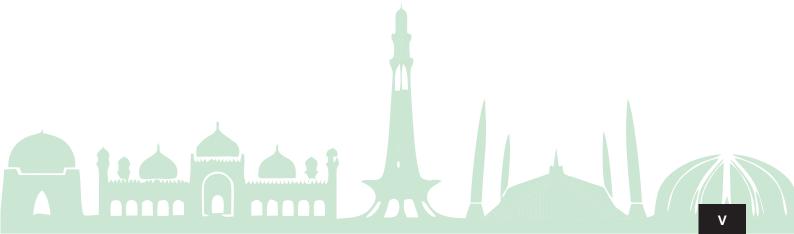
Pakistan is a strategically located nation at the crossroads of South Asia, Central Asia, the Middle East, and China, making it an important hub for trade, logistics, and regional connectivity. With a steadily expanding economy driven by Textiles & Apparel, Automotive, Engineering, Aerospace & Defence, IT, Pharmaceuticals, Cement, Fertilizer & Chemicals, Agriculture, Surgical Instruments, Food Processing & Beverages, Sports Goods, Renewable Energy and Leather Products, Pakistan presents vast opportunities for investors and industry leaders.

Pakistan features a diverse landscape with majestic mountains in the north (including the Himalayan and Karakoram ranges), the fertile plains of the Indus basin, expansive plateaus, and desert areas, offering both natural beauty and rich resources. Its infrastructure continues to expand with modern Motorways, upgraded Rail networks, and seaports such as **Karachi Port, Gwadar Port,** and **Port Qasim.** A network of over 20 Airports, including 10 International Airports and major hubs at **Karachi, Lahore**, and Islamabad, facilitates passenger and cargo operations, while projects like **Skardu** and **Gwadar** airport expansions enhance air transport capacity.

Pakistan has developed capabilities in Aerospace manufacturing, UAVs, satellite applications, and MRO services, supported by a skilled workforce of engineers, IT professionals, and technicians. Emerging technologies such as Artificial Intelligence, Fintech, Blockchain, and Healthtech are gaining momentum, creating opportunities for innovation and global collaboration.

Rich in natural resources, including **Gold, Copper, Natural Gas, Oil, Coal, Chromite, Limestone, Gypsum, Gemstone, Rock Salt** and **Hydropower** potential, Pakistan also boasts world-renowned landscapes such as K2, the Karakoram Range, and the diverse terrains from the Himalayas to the Arabian Sea, along with the historic Indus Valley Civilization. It is home to UNESCO World Heritage Sites, including Mohenjodaro, Takht-i-Bahi and Sahr-i-Bahlol, Taxila Ruins, Lahore Fort and Shalamar Gardens, Makil, Thatta Historical Monuments and Rohtas Fort. The country's vibrant culture, rich cuisine, and renowned hospitality further add to its appeal as a destination for tourism and investment alike.

Pakistan maintains an open investment regime, allowing 100% foreign ownership in many sectors, with incentives offered through **Special Economic Zones** and initiatives like the **China–Pakistan Economic Corridor (CPEC)**. Trade agreements with the EU, China, Turkey, Malaysia, Indonesia, Azerbaijan, Sri Lanka, and other nations further position Pakistan as an emerging player in regional and global commerce.



## **Engineering Universities in Pakistan**

According to the Higher Commission of Pakistan rankings, the following comprise the top-ranking Engineering Universities in the country.

National University of Sciences & Technology

https://nust.edu.pk/

• Ghulam Ishaq Khan Institute of Engineering Sciences & Technology

https://giki.edu.pk/

University of Central Punjab

http://ucp.edu.pk/

NED University of Engineering and Technology

https://www.neduet.edu.pk/

• Pakistan Institute of Engineering & Applied Sciences

https://www.pieas.edu.pk/

Air University

https://www.au.edu.pk/

Institute of Space Technology

https://www.ist.edu.pk

University of Engineering and Technology, Lahore

https://uet.edu.pk/

• University of Engineering and Technology, Peshawar

https://www.uetpeshawar.edu.pk/

University of Engineering and Technology, Taxila

https://www.uettaxila.edu.pk/

Government College University, Lahore

http://gcu.edu.pk/

Dawood University of Engineering & Technology

http://duet.edu.pk/

• Balochistan University of Information Technology, Engineering and Management Sciences

https://www.buitms.edu.pk/

Quaid-e-Awam University of Engineering, Science and Technology

http://quest.edu.pk/

Sarhad University of Science and Information Technology

http://suit.edu.pk/

HITEC University

https://www.hitecuni.edu.pk/

CECOS University of Information Technology & Emerging Sciences

http://www.cecos.edu.pk/

• Balochistan University of Engineering and Technology

https://www.buetk.edu.pk/

Government College University, Faisalabad

https://gcuf.edu.pk/

Minhaj University Lahore

https://www.mul.edu.pk/

## **Pakistan's Industrial Clusters**

#### **Textiles & Apparel:**

- Faisalabad: "Manchester of Pakistan," Hub for spinning, weaving, dyeing, and garments
- Karachi Export-oriented garment units, knitwear, home textiles
- Lahore & Multan Garments, embroidery, towels, and home furnishings
- Sialkot & Faisalabad Sportswear, hosiery, knitwear

#### **Automotive & Engineering**

- Karachi Assembly of cars, motorcycles, buses, and trucks; auto parts manufacturing
- Lahore & Sheikhupura Car assembly plants, motorcycles, tractors, agricultural machinery
- Faisalabad & Gujranwala Engineering workshops, Light machinery

#### Aerospace & Defence

- Kamra (Attock) Aircraft manufacturing, maintenance, and avionics (PAC Kamra)
- Rawalpindi / Islamabad & Karachi: Aerospace & Defense Manufacturers
- Taxila, Heavy Industries Taxila, Heavy Mechanical Complex
- Karachi Karachi Shipyard & Engineering Works (ships, submarines)
- National Aerospace Science & Technology Park (NASTP)
- National Incubation Center for Aerospace Technologies (NICAT)

#### Surgical Instruments & Sports Goods

• Sialkot Over 70% of the world's surgical instruments and the official FIFA World Cup footballs are made in Pakistan

#### **Pharmaceuticals**

- Karachi Leading pharmaceutical manufacturing, chemicals, and petrochemicals
- Lahore & Islamabad Formulation plants, research facilities

#### **Chemicals:**

• Karachi, Lahore, Hub, Sheikhupura, and Multan.

#### **Cement Manufacturing Plants:**

DG Khan, Chakwal, Attock, Hub, Kohat, Nowshera Hattar
 & Mianwali

#### **Fertilizer Production:**

 Karachi, Multan, Daharki, Mirpur Mathelo, Sheikhupura, and Sadigabad.

#### **Agriculture & Food Processing**

- Punjab Plains: One of the world's largest producers of Rice, Wheat, Sugarcane, and Mangoes
- Sindh & Khyber Pakhtunkhwa Sugar mills, edible oils, and packaging

#### **Leather Products**

• Karachi, Kasur, Sialkot & Lahore – Tanneries, leather garments, gloves, and shoes.

#### Renewable Energy & IT

- Sindh & Punjab Wind and solar farms
- Islamabad, Lahore & Karachi IT parks, Software Houses, and tech incubators. One of the fastest-growing IT export sectors, with global recognition in freelancing and software services.



# **Major Airlines of Pakistan**













www.air-karachi.com

# **Professional Industry Associations**

Pakistan Aerospace Council (PAeC)

https://pakaero.com.pk/

Pakistan Auto Parts Manufacturers Association (PAAPAM)

https://www.paapam.com/

• All Pakistan Textile Mills Association (APTMA)

https://aptma.org.pk/

Pakistan Textile Exporters Association (PTEA)

https://ptea.org.pk/

• Pakistan Software Houses Association for IT & ITES (P@SHA)

https://www.pasha.org.pk/

• Pakistan Pharmaceutical Manufacturers Association (PPMA)

https://ppma.org.pk/

Pakistan Foundry Association (PFA)

https://www.pfa.org.pk/

• The Institution of Electrical and Electronics Engineers Pakistan

https://www.ieeep.org.pk/

• Pakistan Leather Garments Manufacturers & Exporters Association

https://www.plgmea.pk/

• Pakistan Plastic Manufacturers Association

https://pakplas.com.pk/

• All Pakistan PVC Pipe Manufacturer Association Manufacturers

http://apppma.org/

• Pakistan Readymade Garments Manufacturers & Exporters Association

https://www.prgmea.org/

Pakistan Tanners Association (PTA)

https://www.pakistantanners.org/

Pakistan Ethanol Manufacturers Association (PEMA)

https://pema.pk/

Pakistan Cotton Ginners' Association

https://www.pcga.org/

• Association of Consulting Engineers Pakistan

https://www.acep.org.pk/

All Pakistan Security Agencies Association (APSAA)

https://www.apsaa.com.pk/

• Pakistan Artificial Leather Manufacturing Association

https://palma.com.pk/

• Pakistan Gloves Manufacturers and Exporters Association

https://pgmea.org.pk/



#### **Event Highlights**

- Aerospace Excellence Exhibition Featuring Latest Innovations
- Display of Manufacturing Capabilities by Pakistani Manufacturers
- Specialist Speakers from Aerospace, Aviation and Tech Industry
- Networking with OIC Countries
- Symposium on Market Trends & Tech **Advancements**
- Aerospace Tech Demonstrations and **Product Exhibits**
- International Aerospace Collaboration with Global Exhibitors



This is an excellent opportunity to showcase product and technologies to local and international customers. It is a step toward link with OIC member countries as well as local, customers and defense, Electronics, Instrumentations markets.

#### **Book Your Stand Now!**

- Limited Spaces
- First-come, first-served basis

https://form.jotform.com/252191717905460

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**Exhibition Venue** 

COMSTECH Secretariat: 33-Constitution Avenue, G-5/2, Islamabad-44000 Pakistan www.comstech.org





## **Aero Engine Craft Private Limited**



Indigenously Developed Jet Engine R&D Prototype

**Specification:** Single Spool Turbojet Engine 100 KGF

# Chief Designer & Manufacturer:

Masood Latif Qureshi Co-Founder & CTO Aero Engine Craft Pvt. Ltd.



#### **Project Lead & Contact:**

Dr. Sarah Qureshi CEO & Co-Founder Aero Engine Craft Pvt. Ltd.



Visiting Academic,
Aerospace,
Cranfield University, UK
MSc. Aerospace Dynamics
PhD. Aerospace Propulsion
Cranfield University, UK
Private Pilot

#### **Contact:**

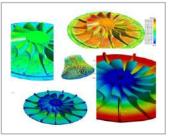
- aeroenginecraft@outlook.com
- in in/sarah-qureshi
- @aeroenginecraft

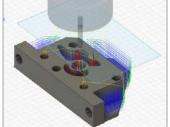
- R&D Aerospace & Automotive
- Jet Engine Development
- IC Piston Engine Development
- Rotary Engine Development
- Digital Electronic Controllers

Aero Engine Craft Private Limited is Pakistan's first commercial aerospace and engine R&D Company. It has been exclusively setup to develop indigenous jet engines for both the local and global markets. At present, we are developing the first generation of environmentally friendly contrail-free aero engines for the global aviation industry, as well as jet engines for drone applications. The company aims to bridge the technological vacuum in aerospace propulsion and jet engines in the civil and military domains. The company is based in Islamabad, where it has a technical laboratory and key mechanical machinery and electronics research and prototyping facility.











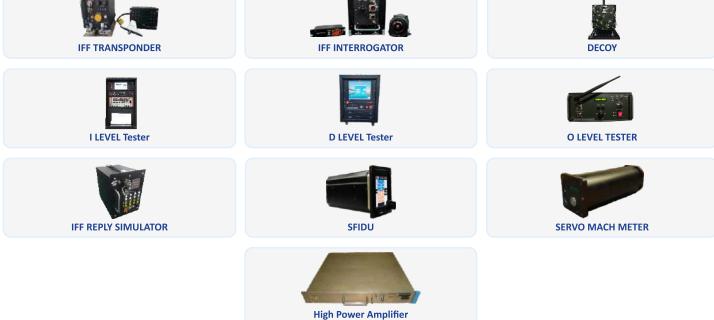




#### **About Us:**

A leading research and development company in the field of Electronics & Software. We have specialized nucleus of around 600 + employees to develop and manufacture prototype to finished products of next generation design for Defence and Commercial use. Our expertise in RF, Embedded Systems, Power Solutions, PCB Designing, Mechanical, and Software Solutions allows us to model our products to meet international quality standards at a competitive price.







# The Alsons Group

# PAKISTAN'S LARGEST PRIVATELY OWNED MANUFACTURER AND EXPORTER OF HIGH-TECH DEFENCE PRODUCTS AND MEDICAL DEVICES

The Alsons Group is one of Pakistan's largest, most vertically integrated, and diverse groups of engineering concerns. With over 70 years of innovative manufacturing experience in the Automotive, Aerospace & Defence, Power & Energy, Lighting and Medical Device industries of Pakistan, we have been exporting precision parts, components and assemblies to Europe since 1992.

























Aviation MRO (Pvt) Ltd was founded in Pakistan in 2008. Since then, it has evolved as a major name in the Aerospace and Defence sector working with a global network of over 300 OEMs, Authorized Repair Centres, Distributors, and Re-sellers. Aviation MRO setups in Pakistan, Canada, USA, and Germany have, at a steady growth rate, so far served customers in 20 countries and 5 continents.

Full Motion Flight Simulators - SMK aircraft



Full Motion Flight Simulators - MI-17 Helicopter



Aerospace Raw Materials



MRO for General Aviation USA Origin Aircraft



Aviation Grade Hardware



Russian Helicopters MRO & Spares Support



Aviation Replacement Parts



Supply Chain & Logistical Services







Contact Us



# Legacy of Excellence

Solutions for Low-to-Medium Volume Machinery Makers

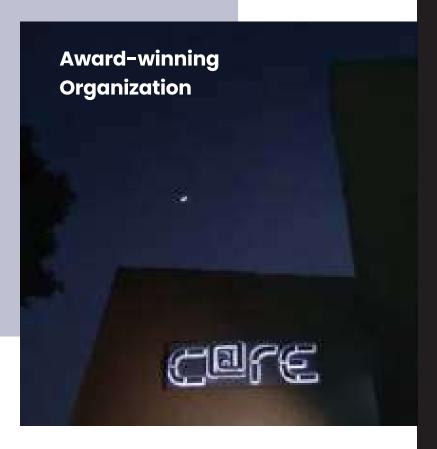


#### Our Expertise:

- ✓ Specialist Vehicle Electrical Systems
- ✓ Agricultural & Farm Machinery Harnesses
- ✓ Motorhome & RV Electrical Installations
- ✓ Electric Motorbike Power & Control Systems
- ✓ Custom Industrial Applications

#### **Our Commitment to Excellence:**

- ✓ Industry Standard IPC-WHMA-A-620 Conformance
- ✓ Full Material Traceability & Documentation
- ✓ Dedicated European Customer Support
- ✓ Continuous Process Improvement & Innovation



#### **Products**

- OPTIMAL Enterprise Resource Planning
- VENT- Supply Chain Management
- **DISPATCH** E-Governance System
- INTELLECT GRAPHICS Data Analytics
- CEDULE Job Shop Scheduler
- WISER MACHINES Smart Sensing Nodes for Industry 4.0
- CHAMELEON Security & Crypto Device
- **C-WITCH** Cognitive Router
- Mil Spec Rugged Layer 2 Switch
- OZONE Digitized Airspace Management
- LISTEN Network Monitoring
- Solid State Auto Loader for Tanks
- WISER MERCHANT Crypto Currency
- CBDC Digital Payment Platform

# Center for Advanced Research in Engineering

# Company Profile

Center for Advanced Research in Engineering [CARE] Pvt Ltd is one of the most celebrated ICT organization in Pakistan. With more than two decades since its establishment, CARE has successfully executed projects with innovative designs and has also claimed regional distinction by consecutively winning 12 Asia Pacific ICT Alliance Awards and 13 PASHA awards since 2010.

## **Services & Expertise**

- Multi-layer PCB Design
- ASIC Design
- PFGA based & DSP based Design
- Power Electronics
- Embedded Systems
- Cyber Security
- Artificial Intelligence
- Internet of Things

#### **Muhammad Aamer**

**Director Projects** 

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- 🔀 aamer@carepvtltd.com
- www.carepvtltd.com
- Plot No 424, Service Road East, I-9/3, Islamabad, Pakistan



# SOLUTIONS FOR ENGINEERING & MANUFACTURING









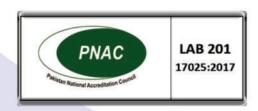




#### **Certifications**











PROUDLY STRENGTHENING

PAKISTAN'S

DEFENSE INDUSTRY

SINCE 1953

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- (L) @daudsonsarmoury
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Roll Forming Facilities (Off-site)
Fabrication | Metal Cutting | Metal Forming
Plastic Injection Molding and Forming
Sheet Metal Fabrication and Forming
Surface Treatment Processes











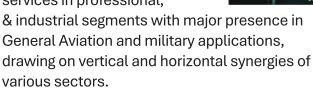






AST WEST INFINITI was founded in 1983 by US educated engineering entrepreneur dreaming to bridge technological gap between **East** & **West**, today we continue to pursue the same, lead by US educated second generation in the family.

We Engineer, Integrate, produce, Develop and Market, electronic technology products & services in professional,



**AVIONICS INTEGRATION SOLUTIONS: We** integrate Avionics in Aircraft, as a 32 year old regional Partner of **GARMIN**, specializing in Glass Cockpit

Avionics Suites, Flight Data Recorders, Helicopter Avionics & Autopilot Upgrade; with past work experience in Chinese A5, F7; Russian MIG29, MI-17; French Mirage III, AS-350, SA316, SA365; US Cessna 206, 208, 172 Bell 206, 212, 412, Sea King WS61 and Pakistani PAC Super Mushak Saab MFI17; and counting, iAero flight data recorder & flight debriefing system has been integrated in PAC/Saab MFI-17.

We manufacture Aircraft Avionics Harnesses, Ancillary Avionics like Lithium Avionics Backup Battery, Trim Monitoring System, **Remote** Power Disconnect & **DC-DC** converters.





#### **AERODROME AIR RADIO, ILS, ADS-B SOLUTIONS**

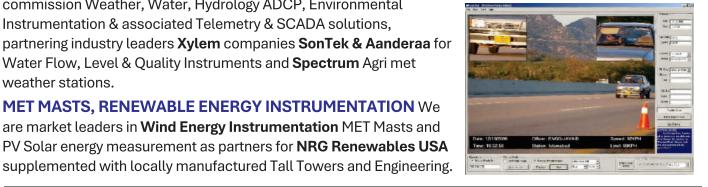
including ECOM GRC-105V /105U Ground to Air Transceivers, AWOS Automatic Weather Observation Systems, Ground Aerodrome awareness Systems, Navaids, ADS-B from multiple industry partners.

TRAFFIC SPEED CAMERAS SpeedWitness™ Traffic Speed Cameras for speed enforcement and **SpeedWatch™** Radar Speed advisory Boards.

#### WEATHER /WATER /HYDROLOGY TELEMETRY & SCADA We market, engineer, install and

commission Weather, Water, Hydrology ADCP, Environmental Instrumentation & associated Telemetry & SCADA solutions, partnering industry leaders Xylem companies SonTek & Aanderaa for Water Flow, Level & Quality Instruments and Spectrum Agri met weather stations.

#### **MET MASTS, RENEWABLE ENERGY INSTRUMENTATION** We are market leaders in Wind Energy Instrumentation MET Masts and PV Solar energy measurement as partners for NRG Renewables USA



The above products & services represent only a **snapshot** of the more recent business, in our 42-year history, we have delivered several other areas including UAVs and products in electronics & avionics technology segments, responding to the user demand and technology advancements. Our head office & factory is in the Industrial sector Islamabad, Pakistan, and branch offices in Lahore and Karachi and East West Infiniti, in USA.





## **Engineering Systems Pak**

Contact Person : Dr. Hammad Bin Khaleeq

Contact No : +92 321 5007008

Email : hbkhaleeq@enggsyspak.com

Website : http://enggsyspak.com/

Adress : Plot # 259, St. 8, Industrial Area I-9/3,

Islamabad, Pakistan



#### **COMPANY PROFILE:**

Engineering Systems Pak (ESP), specializes in research and development of Unmanned Aerial Vehicles (UAVs). ESP is a team of dedicated Professionals; our team has vast experience of more than 25 years in the design, manufacture & operations of Unmanned Aerial Systems.

UAV Solutions - Our extensive experience and innovative approach to all aspects of Unmanned Aerial Vehicles result in outstanding operational solutions for its national and international customers. Machining / Process Specialization - Air Vehicle Design & Fabrication, Mechanical Design & Manufacturing, Avionics & Embedded

#### **EXPERTISE**:

- Unmanned Aerial Systems
- Aerial Targets
- Advanced Engineering Solutions
- Civil Application UAVs

#### UAS CAPABILITIES:

- Airframe
- Ground Control Station
- Auto-Tracking System
- Telemetry
- System Integration

#### Avionics

- Navigation & Control Software
- EO Payload
- On the Field Diagnostics
- Training

#### **PRODUCTS PORTFOLIO**

- Surveillance & Monitoring:
- Medium Range UAV Condor (Range up to 200km)
- Tactical Range UAV Pelican (Range up to 100km)
- Close Range UAV Optimus (Range up to 50km)
- Mini Range UAV Ababeel
- (Range up to 10km)

#### **AERIAL TARGETS:**

- Subsonic Aerial Target (Range up to 50km)
- High Speed Aerial Target (Range up to 100km)

#### **ACCESSORIES**

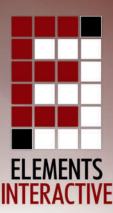
- Ground Control Station
- Command & Navigation Software
- Auto-Tracking Antenna System
- Field Diagnostic Equipment
- EO Payload



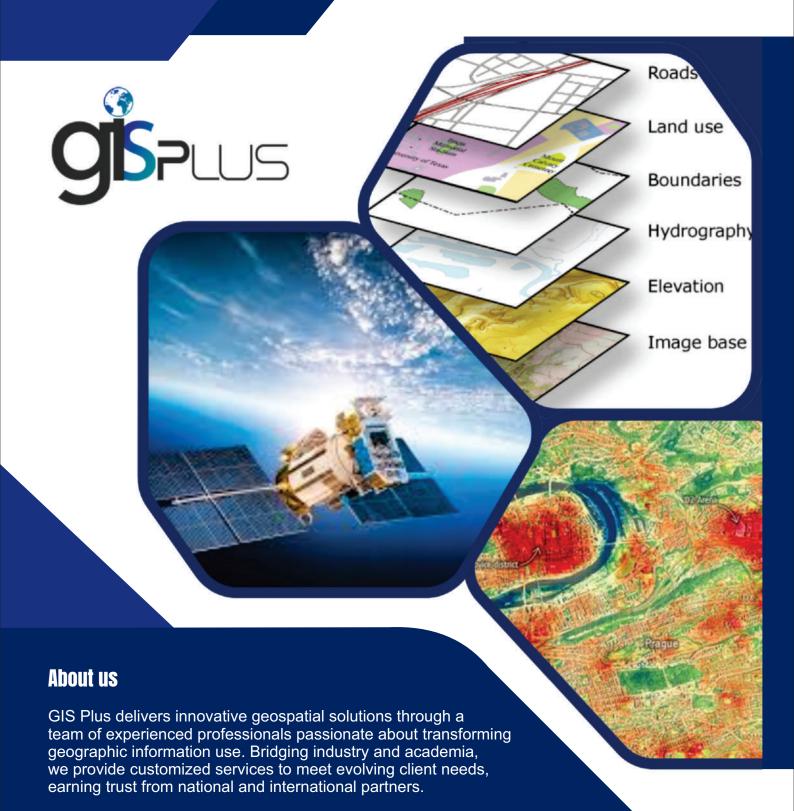




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TRANSFORMATIONAL MEDIA SOLUTIONS FOR THE TECH INDUSTRY



**Our working Agenda** 

- Mission: Provide quality GIS services to expand footprint and benefit communities.
- Vision: Be a leader in Geospation technology.
- Values: teamwork is essential; loyalty to customers;
- passion is key to sucess.

**CONTACT US:** 

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**ADDRESS:** 

Office: 2310, 2nd floor, Building 1, National Science and Technology Park (NSTP) Sector H-12, Islamabad, Pakistan

# HYBRID AVIATION TOURISM FLIGHTS

Hybrid Aviation, officially cleared by the Civil Aviation Authority of Pakistan (CAA), is now operating flights to **SKARDU** from Lahore and Islamabad, using our state-of-the-art **Diamond Aircraft DA62.** 



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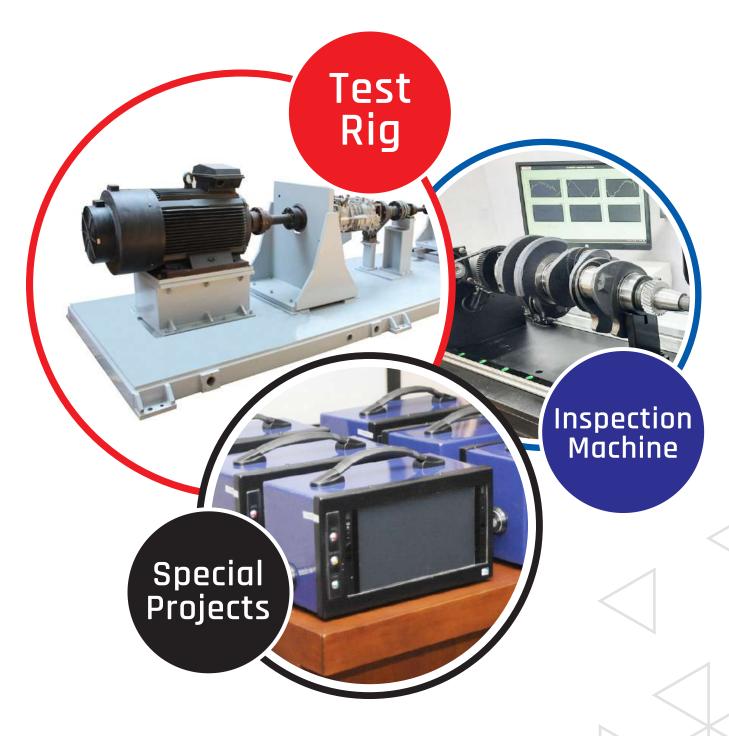
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Vacuum Pumps: Likud ring, rotary, roots, turbo-molecular, ion, diffusion, ejector etc. Vacuum Guages: Bourdon, capactance, thermocouple, Pirani, hot & cold cathode, etc. Vacuum Valves: Bellow-sealed, gate, globe, magnetic, motorized, electro-pneumatic etc. Vacuum Traps: Ice, liquid nitrogen, oil mist filters, baffles, etc.

Leak Detection Techniques: Vacuum and pressure leak detection, etc.

Vacuum Switches: All ranges and types.

Mass-spectrometers: Monopole and Quardropole

Vacuum Control and Display: All Types of coating and other system.

Leak Detectors: Halogen and helium leak detectors, etc Coatings Plants: Thermal Evaporators, Chemical Vapor **Deposition, Sputtering** 

Leak Detectors: Helium Leak Detectors

Vacuum Furnaces: All Types

Vacuum System Accessories: All Types

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# Institute of Electrical and Electronics Engineers (IEEE)

World's largest technical professional body with over 420K+ members across 160+ countries and publishes leading research, develops standards & hosts global conferences.

#### **IEEE Islamabad Section**

#### **Section Overview:**

- Established 2000
- Part of Region 10 (Asia-Pacific)

#### Pakistan Presence & Growth:

- One of 3 Sections in Pakistan
- 650+ members
- 100+ senior members

#### **Our Dynamic Community**

#### **Technical Society Chapters:**

6 Chapters active:
 Robotics, Power & Energy
 Computer, Control Systems (and more)

#### **Affinity & Student Groups:**

- Women in Engineering (WIE)
- Young Professionals (YP)
- 10+ Student Branches active across universities





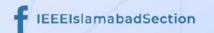


IEEE Engineering in



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#### **Company Profile:**

Agri Drone Services is a leading provider of professional drone services, offering a wide range of aerial solutions for various industries. With a focus on innovation and safety, we deliver high-quality aerial data and imagery to help our clients make informed decisions and streamline their operations. Our team of experienced pilots and technicians ensures the highest standards of service, utilizing the latest drone technology to capture accurate and detailed aerial footage. Whether it's aerial photography, videography, mapping, or inspection services, Ari Drone Services is committed to delivering exceptional results tailored to our clients' specific needs.

#### Pakistan pioneers Agri-Drone service provider









#### **Drones Services:**

- Agriculture Drones
- Drone Surveillance Service
- Drone Inspection Services
- Custom Services
- Holistic Drone Solution
- Drone Frame
- Universal Mounting Equipment

#### **AlServices:**

- Al Development Services
- Machine learning technology
- Al Modeling
- Natural Language Processing NLP
- Artificial intelligence
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- ObjectTracking
- Data Scraping
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- International Branding & Digital Marketing
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- Strategic Partner & Distribution Channel Development
- **High-Impact Trade Show & Exhibition Management**
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Paradigm 3D is an EASA Part 21G certified additive manufacturing facility specializing in solutions for the aviation and oil & gas industries. Paradigm 3D deliver high-quality production parts with reliable lead times, expert guidance and a wide range of materials and finishes.



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#### (European Aviation Safety Agency)

As an EASA Part 21G certified facility, Paradigm 3D ensures adherence to the highest European aviation safety and quality standards for additive manufacturing





**Aviation Solution** Specializing in solutions for the aviation industry, providing high-performance additive manufactured components that meet stringent aerospace requirements



Oil & Gas Application Delivering specialized additive manufacturing solutions for the demanding environments of the oil & gas industries, ensuring durability and performance



















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#### Company Profile

RWR is an electronic systems developer, manufacturer, and engineering services provider. Established in 1988, we specialize in Embedded Systems, custom RF Modules/Systems, Digital Signal Processing, and Embedded Software Applications.

RWR is a vertically integrated company with all the necessary facilities to carry out most activities in-house. This allows complete control over all aspects of quality.

The company designs and manufactures full systems in-house, including airborne and ground SDR boards, tactical data links, anti-GNSS jamming systems, radar warning receivers, ESM/ELINT systems, reactive IED jammers, and fire-control computers. These systems equip aircraft, UAVs, and ground vehicles of the Pakistan Air Force, Navy, and Army.

#### Our Custom-built Facility

- · Design Center for Digital , RF and Software Teams
- PC layout and Packaging Section
- · RF semirigid cable, PCB, and Dodule Fabrication Facility
- Machine Shop
- Bring Up & Production Labs
- Environmental and ESS Test Chambers







Assembly Jigs



Stamping Dies



Moulds



**Gantry Structure** 



Inspection Fixtures



Aerospace Machined Parts (Titanium, Aluminum, Stainless Steel & Inconel)

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- Precision CNC Machined Parts
- Test Benches
- Armoured Vehicle Jigs
- Chassis Jigs
- Aircraft & UAV Jigs

- Machining Fixtures
- Stamping Dies
- Moulds (Plastics, Rubber & Composite)
- Engine Overhauling Tools
- Gantry Structure & Assembly Line Equipments
- Ground Support Equipment



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# **About Solunox**

SoluNox Pvt Ltd is a trademark-registered company got approval to start business in Mar 2017 by Security Exchange Commission of Pakistan (SECP). The same year it was registered at KCCI (Karachi Chambers of Commerce & Industry). Company started its business with multifaceted mandate to undertake Research & Development projects in dual technologies used in Aerospace and Maritime. SoluNox Pvt Ltd is the 1st company in Pakistan's private Sector to develop its maritime and aerospace design house.





Sajid Ali Khan Tareen











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### **TERESOL PRODUCTS & CAPABILITIES**

#### **About Teresol:**

TeReSol is a reputed R&D company and possesses a proven track record in developing and integrating complex embedded systems and enterprise software solutions. We have extensive experience working on advanced video compression technologies, custom Al algorithms, and scalable enterprise software architectures.

#### **EMBEDDED SOLUTIONS**



#### **Hardware & Embedded Software Development:**

Design, development, and integration of hardware (PCBs, FPGAs) and embedded software using industry best practices and standards like MISRA C and DO-178C.



#### **Real-Time Operating Systems:**

We implement real-time OS solutions (e.g., VxWorks) for deterministic system performance.



#### **Low-Level Device Drivers:**

Teresol develops low-level device drivers to ensure seamless interaction between hardware components and software.



#### AI & Machine Learning Integration:

We integrate ML algorithms into embedded systems for military-grade capabilities like object detection, tracking, and real-time decision-making on constrained hardware.

#### **Our Mission:**

TeReSol aspires to become a leading research and development organization that supports the technological needs of its diverse clientele. The company seeks to collaborate with international players in emerging fields of technology, fostering knowledge-sharing and growth opportunities.

#### **ENTERPRISE SOFTWARE SOLUTIONS**



#### **Enterprise User Service Platforms:**

Teresol builds enterprise-grade user service platforms using open-source, cloud-native, and scalable service-oriented architectures.



#### **Core Banking Modernization:**

We modernize legacy core banking systems into advanced, cloud-native, open-source solutions with microservices and high-performance workload management.



#### **Command & Control Systems:**

Teresol develops and upgrade advanced Command and Control Systems for enhanced situational awareness and decision-making in military and paramilitary operations.



#### **Standards Compliance:**

We deliver software and systems fully compliant with military standards such as DO-178C, MIL-STD-704, and MIL-STD-810.

#### **DELIVERED PRODUCTS**



PowerPC based **CPU Card** 



**Graphics Processing** Module - 3U



**Power Supply Module** (Mil-Std-704 compliant)



Video Compression Module (XGA)



**Display Computer for** fighter aircraft



Multi-Channel Digital Video Recorder for fighter aircraft



Al-enabled Auto-Tracker for main battle tanks



Military Grade Looms/Harness

**DOMAINS** Avionics



Access Control System (i-MPLOYEE)



**Automotive Fleet** Management System

#### **CERTIFICATIONS**









#### Information and Communication Technology (ICT)

**Defense Solutions** 

Fintech Solutions



#### **EXPERTISE**

- **Customized Embedded Systems Enterprise Software Solutions**
- Al Development Services System Integration

### TERESOL

#### **KEY HIGHLIGHTS**

- Over a decade of R&D experience
- 13 operational and active solutions with public and private customers

#### **PRODUCTS QUALIFICATIONS**









Contact Person: Dr. Naveed Igbal Contact Number: +92 321 8570824

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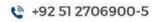
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- Rawalpindi Flying Club, established in 1957, has proudly served the civil aviation sector of Pakistan for over six decades.
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