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ADVANCETECH EMBEDDED
FUTURISTIC DESIGNS

Welcome to AdvanceTech Technology
Keeps You Ahead

28 Years of Excellence

MAKE IN INDIA

Business Units

Nuclear Energy

Radiation Detection
Monitoring
Corrosion

Industrial

SCADA
MES
SENSORS
IOT
Panels

Education

Teaching
Equipment

Mil Aero

Rugged CPU
Rugged I/O
Mil !553
VPX VME

BFSI

Voice Loggers
Turrets
Software
BI

Group Companies

28 Years of Excellence

Our History

1995

Advance Tech was Established

2021

Excellence Centre in Bengaluru

Embedded SW HW Design Development

2023

Nuclear Experience Centre

In Mumbai

2024

Digital Transformation Center

InVadodara

ADVANCETECH EMBEDDED
FUTURISTIC DESIGNS

Group Companies

1995
Founded by Technocrats

Mumbai
HQ, with offices in Bengaluru, Hyderabad. Kolkata, Delhi ,Dubai UAE

100+
Employees.
(and growing!)

Industries

Pharma	A&D	Automotive	Heavy Industry	High-Tech	Medical Devices	BFSI	Nuclear

Management Team

Pradip Kulkarni
Group chairman and MD

Nijesh Parmar
Director and CTO

Arindam Gupta
Director and COO

Jagan
Head Mil Aero

Vaishali Singh
Director

Rajesh
Software Head

Veluswmy – Deisign Head

Ramakrishna N

Dhanush M

Partners

NAII
MIRION
IDEAL
CORMET
ASCON
REDLION

Business Units

Nuclear Research

Radiation
Detection
Monitoring
Corrosion

Mil Aero

Rugged CPU
I/O
!553
VPX VME

Industrial

SCADA
MES
SENSORS
IOT
Panels

BFSI

Voice Loggers
Turrets
Software
BI

Education

Teaching
Equipment

Services

Hardware Software
Development
Offshore SLA and MSA
Design engineering
L1 ,L2,L3 Support
Managed Services

Excellence Center Mumbai

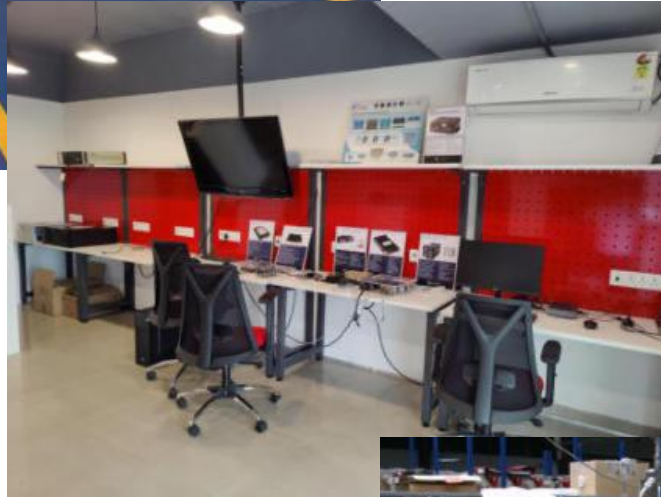## Excellence Center Bengaluru

Excellence Center Vadodara

Group Companies

INVANSYS
INNOVATON TO THE CORE

DigiConics
INTELLIGENCE DELIVERED

advancetech
INTERNATIONAL

Joint Ventures History

iCONICS
Make the Invisible Visible™

kontron

CYBERTECH
INTERNATIONAL

Make in India

Value Addition in Manufacturing:

1. Under the "Make in India" initiative, the company manufactures systems in India.
2. Value is added through activities such as mechanical work, electronics, system integration, calibration, and design engineering.
3. The company is an authorized exclusive distributor for some of the world's leading companies.

Manufacturing and Acceptance Test Facility:

1. The company boasts a 10,000 square feet manufacturing and acceptance test facility.
2. This facility is equipped to conduct tests and calibration for all kinds of system integration tasks.

Installation Support Services:

1. The company has a factory-trained team of engineers.
2. They provide installation and support services, including 24x7 availability for critical installations.
3. There are local spares maintained and repair facilities equipped with the necessary equipment to meet strict Service Level Agreement (SLA) timelines.
4. Engineers are available to visit customers within India, neighboring countries, and international customers in the Middle East, Africa, and Europe.

Joint Ventures:

1. Advance Tech and its founders have established successful joint ventures.
2. Partnerships include a SCADA software company from the USA, a scientific instruments company from France, an embedded systems manufacturer from Germany, and a voice logger company from the Netherlands.
3. These joint ventures focus on providing cost-effective manufacturing, manpower, and infrastructure.
4. The ventures leverage 28+ years of goodwill and a large customer base (1000's of customers) for easy market access.

Digital Factory
Rugged and Embedded Systems

DIGITAL FACTORY

ERP BASED TRACK A TRACE

IOT BASED QUALITY CHECKS

PEOPLE INDEPENDENT MANUFACTURING

EXPORTING TO FRANCE AND US

DESIGN TEAMS

EMBEDDED SOFTWARE TEAM

MECHANICAL FABRICATION

ADVANCETECH EMBEDDED
FUTURISTIC DESIGNS
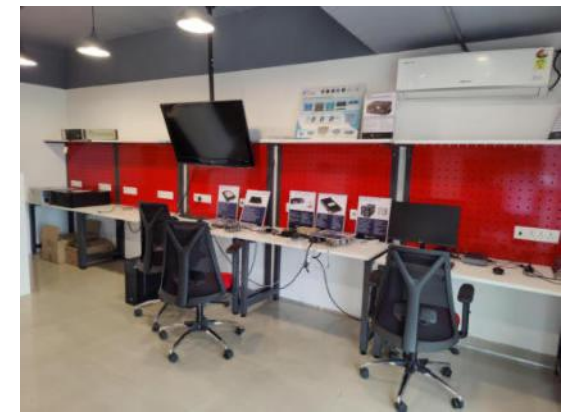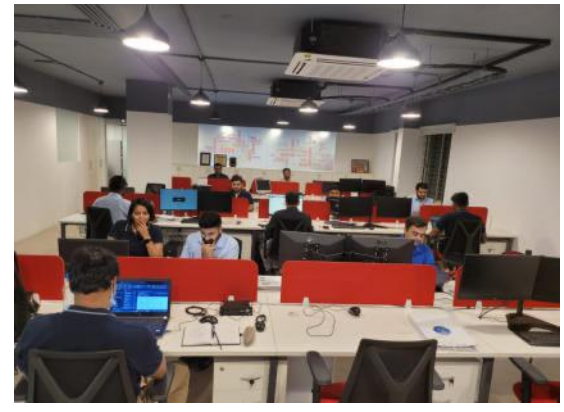
Nuclear Energy and Research
From Detection to Protection
For Safer Tomorrow

Miron Technologies
Excellence Center

Excellence at cost of 1 million USD

Spread in 6000 SFT facility

State of the art systems from Mirion

Up skill Training and Hands on for Users

Make in India with value add

Digital Transformation
From Sensors to Servers

Control Instruments FACTORY

Spread in 10,000 SFT factory in Gujarat

Manufacturing Control Panels, Skids

Manufacturing , Sensors Mil grade

Calibration facility of world standard

Panels Sensors Scada MES Software

Design Engineering

Hardware Development Process

Planning	Analysis	Design	Implementation	Testing	Production
• Hardware Requirement	• Feasibility Study • Bom Optimization	• Hardware Design • Schematic • PCB Design and Layout • ID Design • Mechanical Designe	• Component Procurement • PCB Fabrication • Board Assembly • Generate Mode	• Design Verification & Validation • Certification	• Arrange Mass production • Production Quality Control • Cost-down Optimization
• Software Requirement	• Feasibility Study • Resource Identification	• Detailed Software Design • Test Strategy Document	• Software Library Code • Application Code	• Integration Testing • System Testing • Acceptance Testing	• Production Testing • Defect Report

Hardware and Software Skills

Specification → **Research** → **Design** → **Prototyping** → **Development** → **Testing** → **Production**

Embedded software design
- Bootloaders
- Bare metal peripheral drivers
- Operating systems (Embedded Linux, Android, FreeRTOS, Keil RTX, VxWorks RTOS)
- System interfaces, protocol stacks, development of device drivers
- Hardware dependent code and application code
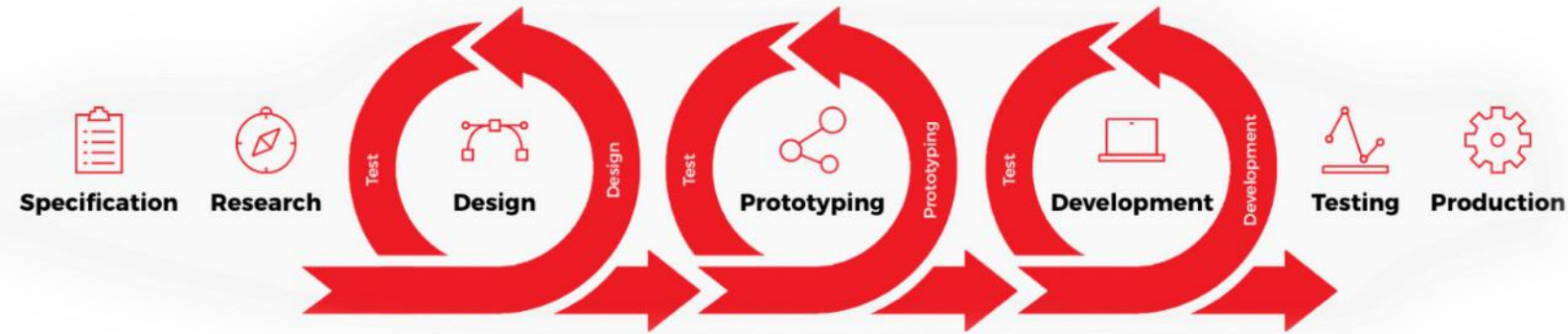
Mixed Signal Design
- Precision analog and digital design with isolation
- FPGA / SoC based data acquisition and streaming
- Zynq UltraScale+ and other SoCs
- High speed digital designs
- USB 3.0, SPI, SDIO, I2S etc
- Custom IP Core development and testing

Hardware design
- Multilayer PCB design
- Analogue design – sensor front ends,
- Audio, power amplifiers, DACs, ADCs
- High speed (Serial ATA, DDR3, DDR4, USB3.0, CSI, DSI)
- Embedded processors (Cortex–A5, A8, A9, A53, A72)
- Microcontroller applications (Cortex–M3, M4, M33)
- SBCs (Raspberry Pi, BeagleBone)
- Low power systems (MSP430, Cortex–M0, nRF52)
- Digital Signal Processing (TMS320C55xx, TMS320C674x)
- Industrial systems with MODBUS, CAN and Ethernet
- Design for EMC

PCB Layout and Analysis : DFM/DFT
- HDI multi layer PCBs Layouts with blind & buried via
- Pre-Post SI simulation
- PI and Thermal simulation
- High Density Interconnect (HDI)
- Flex and Rigid Flex
- PCB Yield improvements
- Support for automated/semi-automated testability
- Test coverage improvements
- Cost Reduction

Industrial IoT
Evaluate your current Product & Service Portfolio
Architect your IoT Solutions
Build & Deploy your IoT Solutions
Build and Integrate Applications, IoT platforms
Integrate, Deploy & Manage Platform & Applications
Manage, Analyze

Software Design
- Operating System and BSP / SSK kit functional testing
- Software functional/non-functional testing
- customize middleware or integrate modules for logic
- Device Driver development for standard peripheral .

Design Engineering

- VPX,VME,CPCI,XMC,PMC Modules Design

- PowerPC/Intel/ SBC, FPGA Based System

- High Speed ADC/DAC Modules, GbE,1553, Arinc429, Modbus.

- Analog, Digital and Discreet IO Modules

- Custom VPX / High Speed Signal Backplane Design

- Power Supply , AC-DC,DC-DC Power Supply Modules

- Microprocessor, Microcontroller, FPGA, DSP Boards

- Device Driver Development and Board Support Package

- Firmware Development and Software Development

- Tools: Cadence, Xilinx Vivado, Visual Studio, Python, SolidWorks

- PCB Design and Signal Integrity Analysis

- Application Software and GUI Development

- Test Jig Development , ATE System

Design Examples
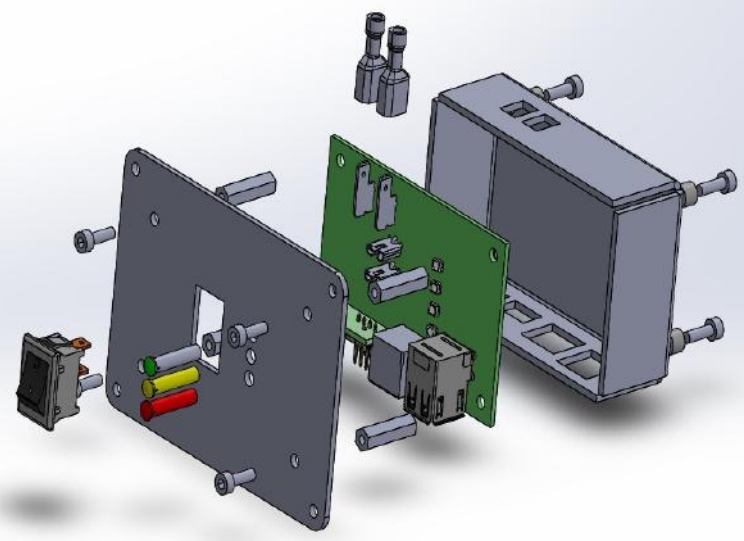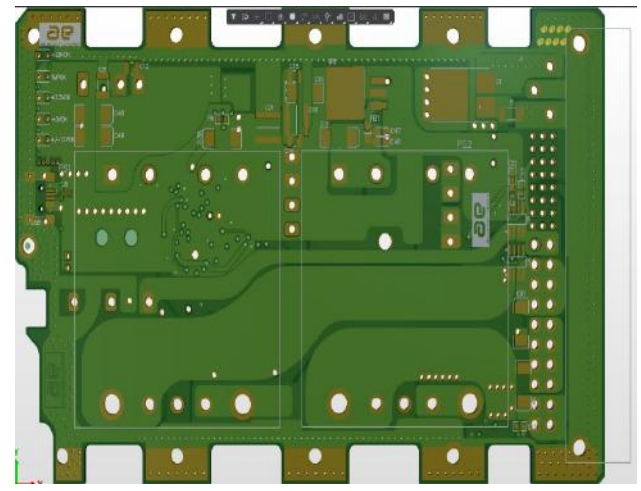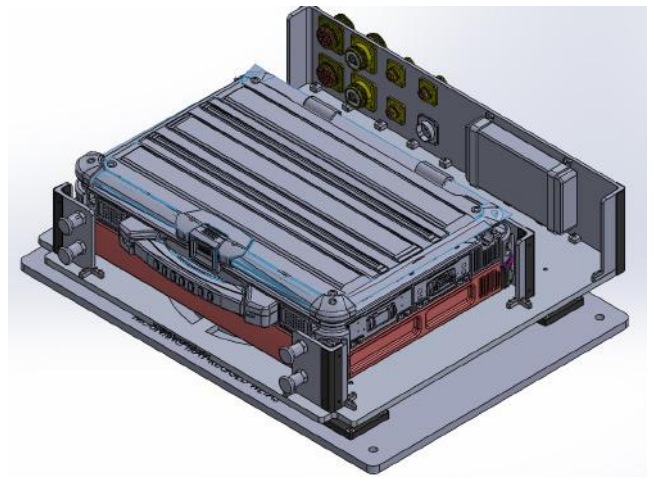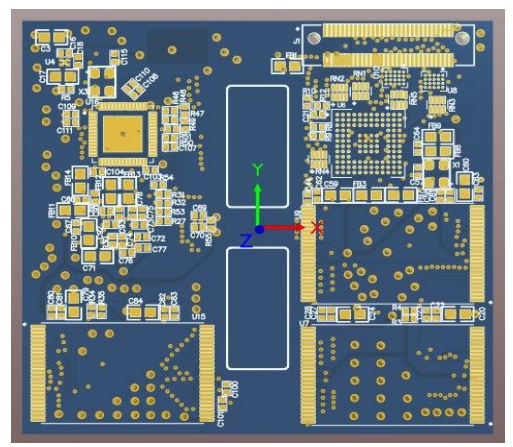
5 Slot Rugged Chassis -Custom
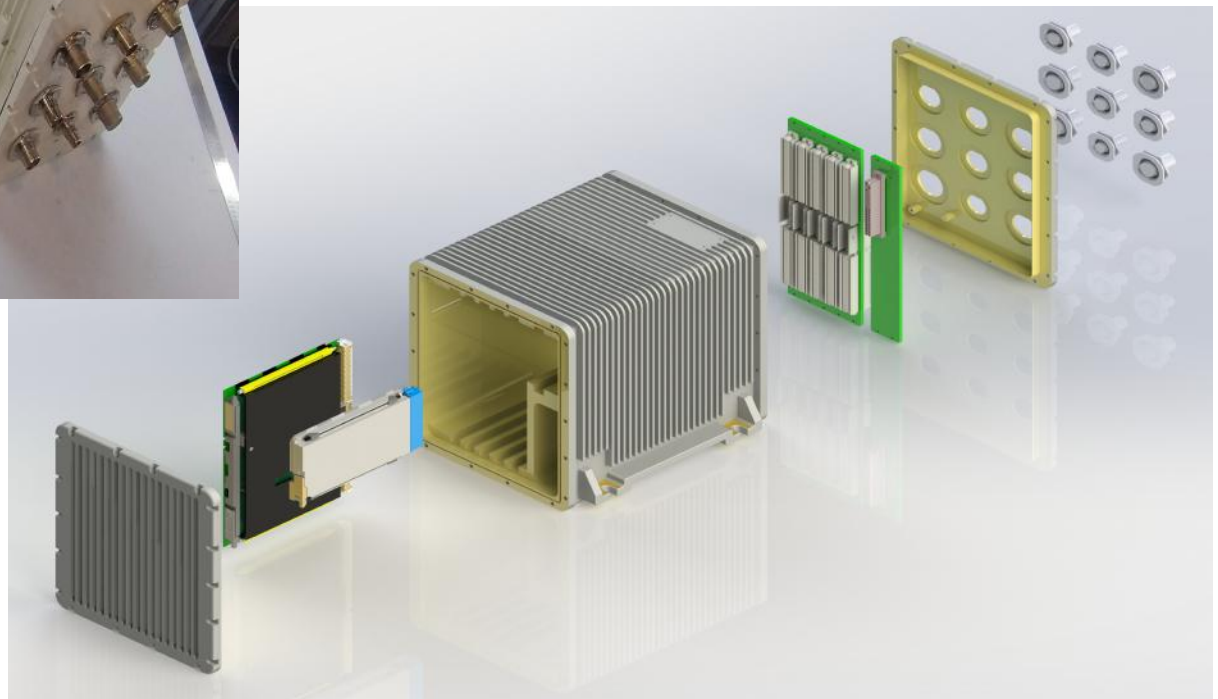
Rugged Custom Form Fit Replacement.

MIL Grade 430Watt 3U VPX Power Supply

Schematic (left):

VIN +28V DC

VIN Fuse protection
VIN Reverse polarity protection
VIN Lightning / Surge Protection
VIN EMI filter
VIN Ripple filters
VIN OV / UV protection

430WATT POWER SUPPLY (3U)

USB — USB_DM, USB_DP
I2C — I2C SDA, I2CSCL, PS_EN

LED INDICATIONS (Front Facia): +/-12VOK, +5VOK, +3.3VOK, VIN OK, TEMP OK

ARM uC 72Mhz

28V VIN: OV measurement / 12bit ADC
28V VIN: UV measurement / 12bit ADC
3.3 VOUT: V&I measurement / 12bit ADC
5 VOUT: V&I measurement / 12bit ADC
+12V VOUT: V&I measurement / 12bit ADC

TEMP: INTERNAL TEMP measurement / 12bit ADC
TEMP: TEC closed loop current measurement / 12bit ADC

Pins: 47, 46, 37, 40, 24, 21, 19, 34, 36, 20, 5-12, 34, 33, 13-18, 5-12, 34, 30, 1-4, 45

V4 PWR Return, V4 (-12V/3.4A), V3 PWR Return, SENSE Return, V3 Sense, V3 (+12V/3.4A), V1&V2 PWR Return, SENSE Return, V2 Sense, V2 (+3.3V/14A), V1&V2 PWR Return, SENSE Return, V1 Sense, V1 (+5V/30A), CHASSIS

LOAD / LOAD / LOAD / LOAD

V4 (-12V/3.4A) — V3 (+12V/3.4A) — V2 (+3.3V/45A) — V1 (+5V/40A)

40W — 40W — 150W — 200W

Mechanical Design & Mechanical Fabrications
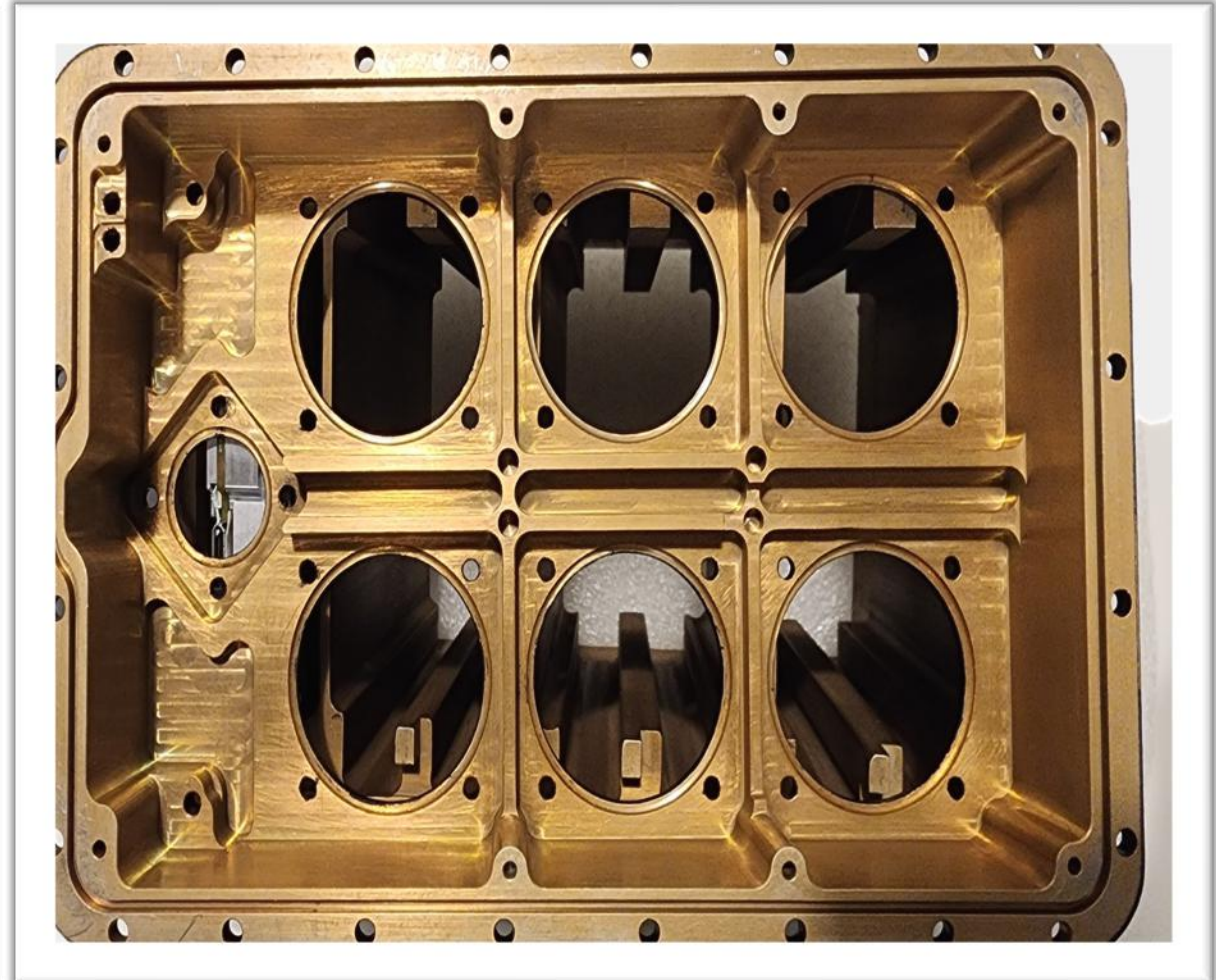
Single Board Computer (SBC) and I/O Module
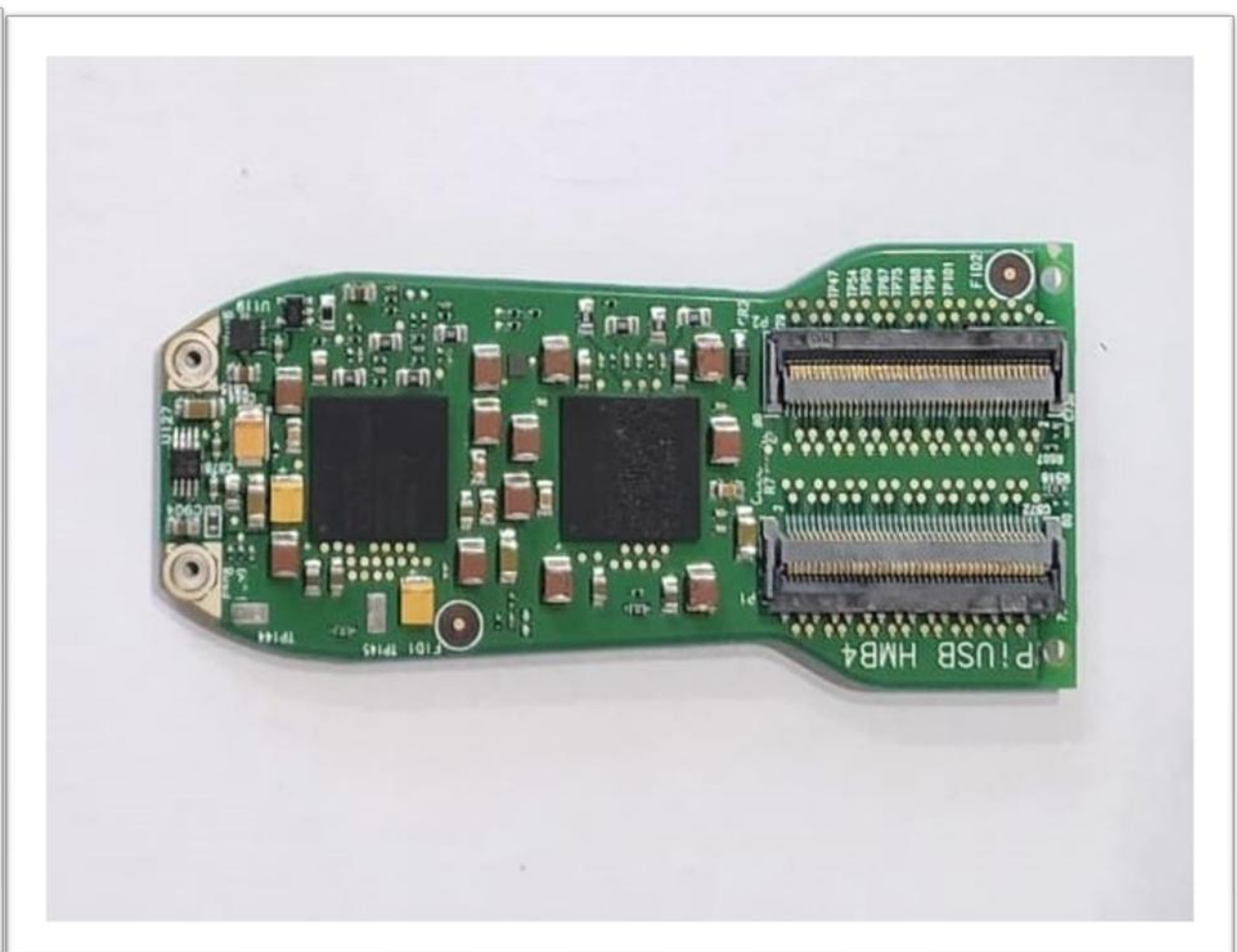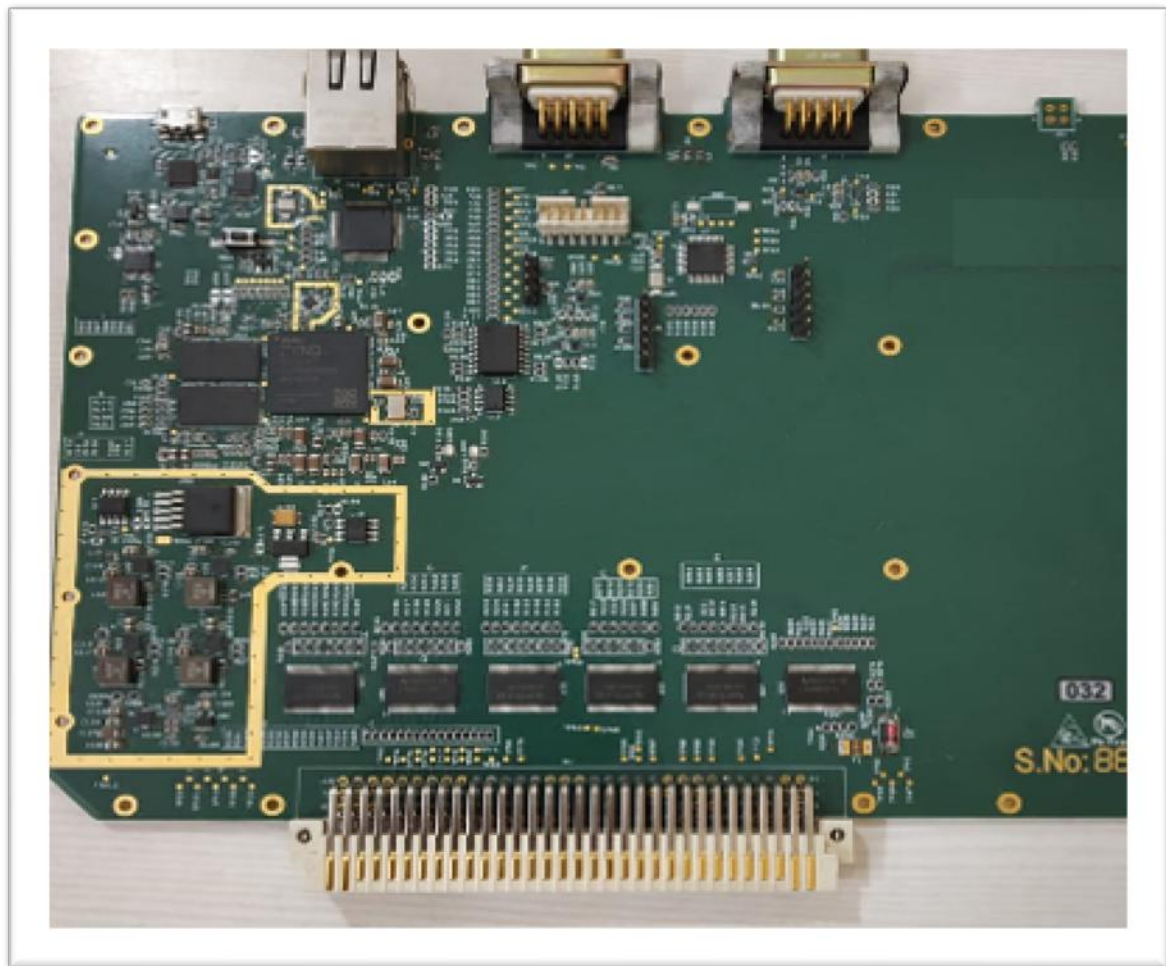
Isolated 4channel RS-422 Gateway with Controller
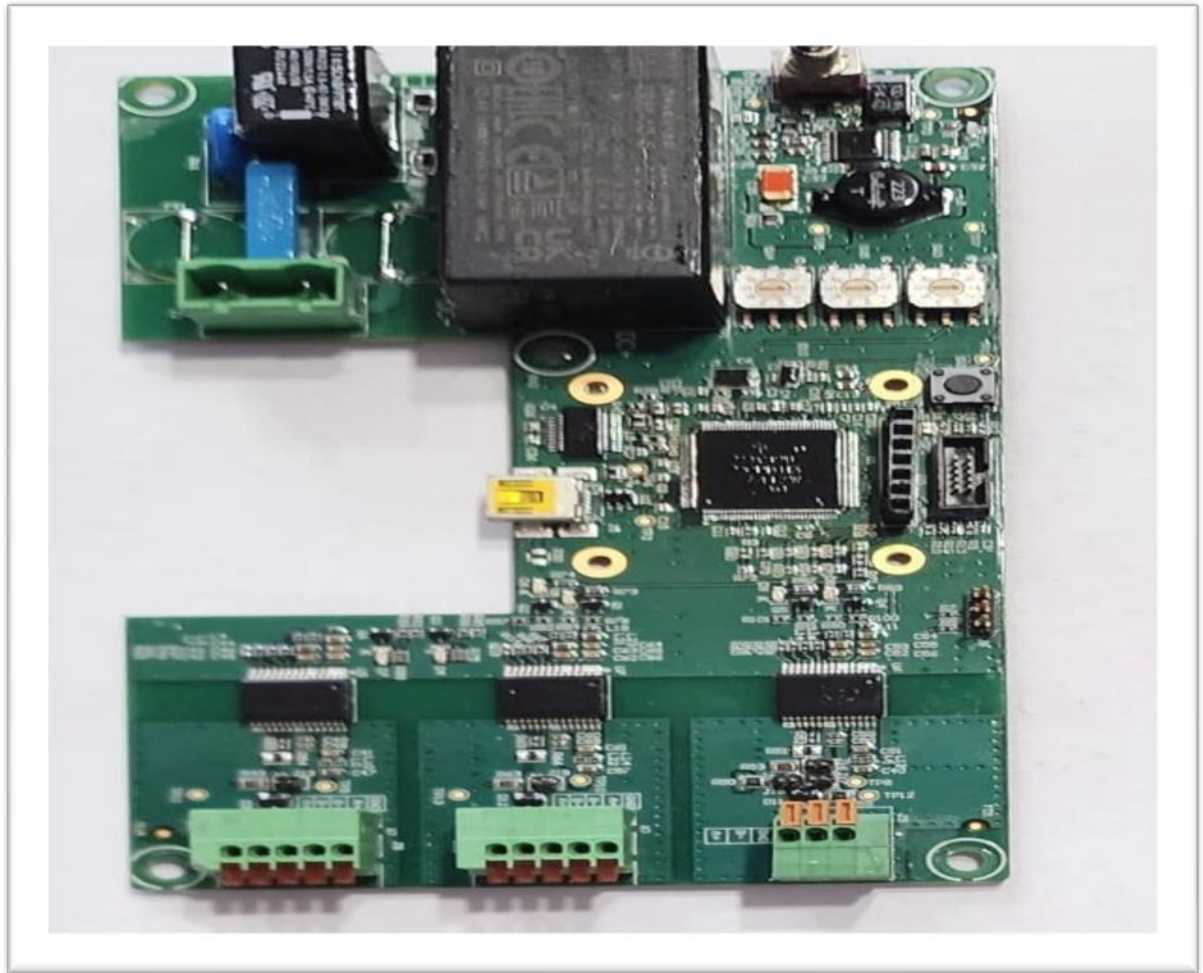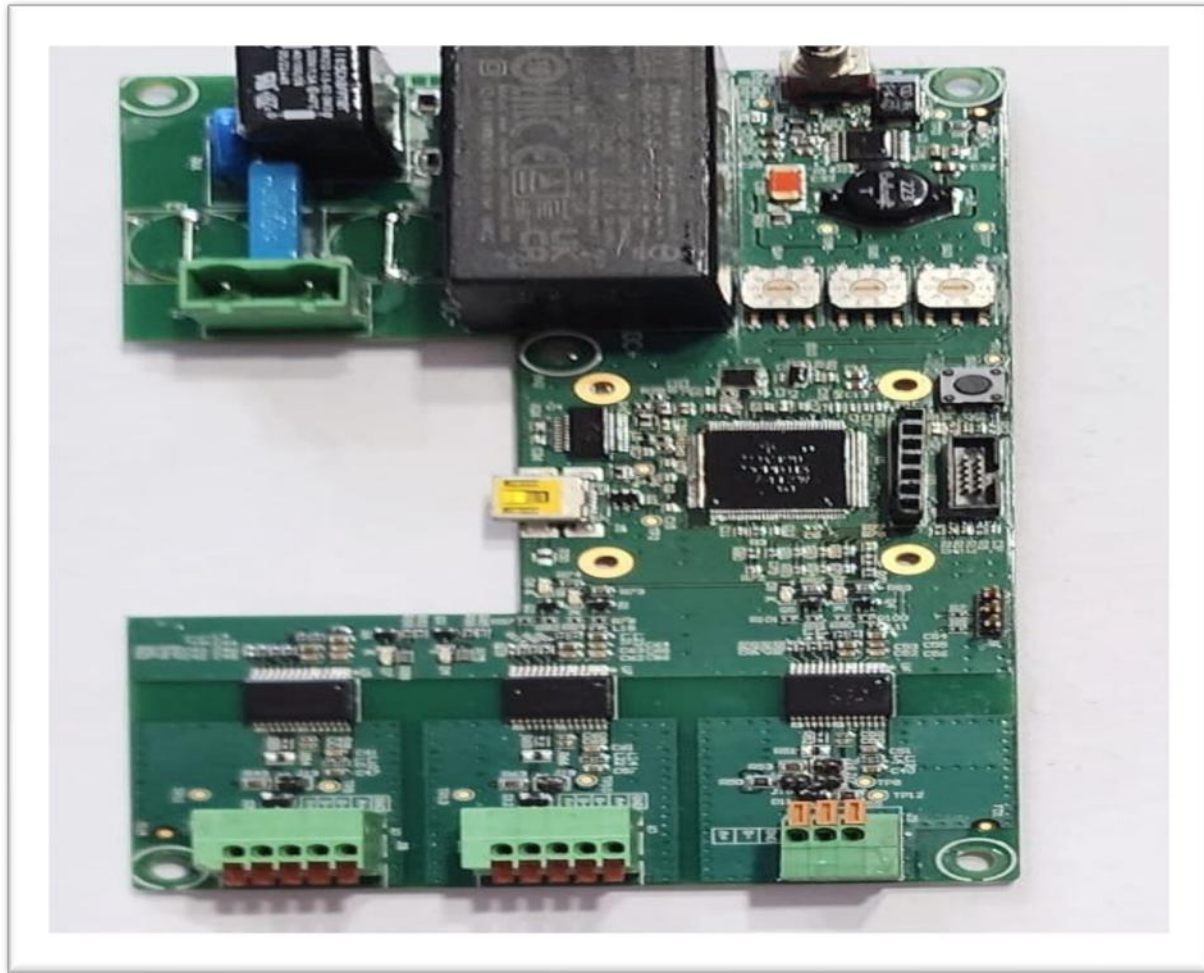
FPGA based 64GB Flight Data Recorder-MIL Avionics
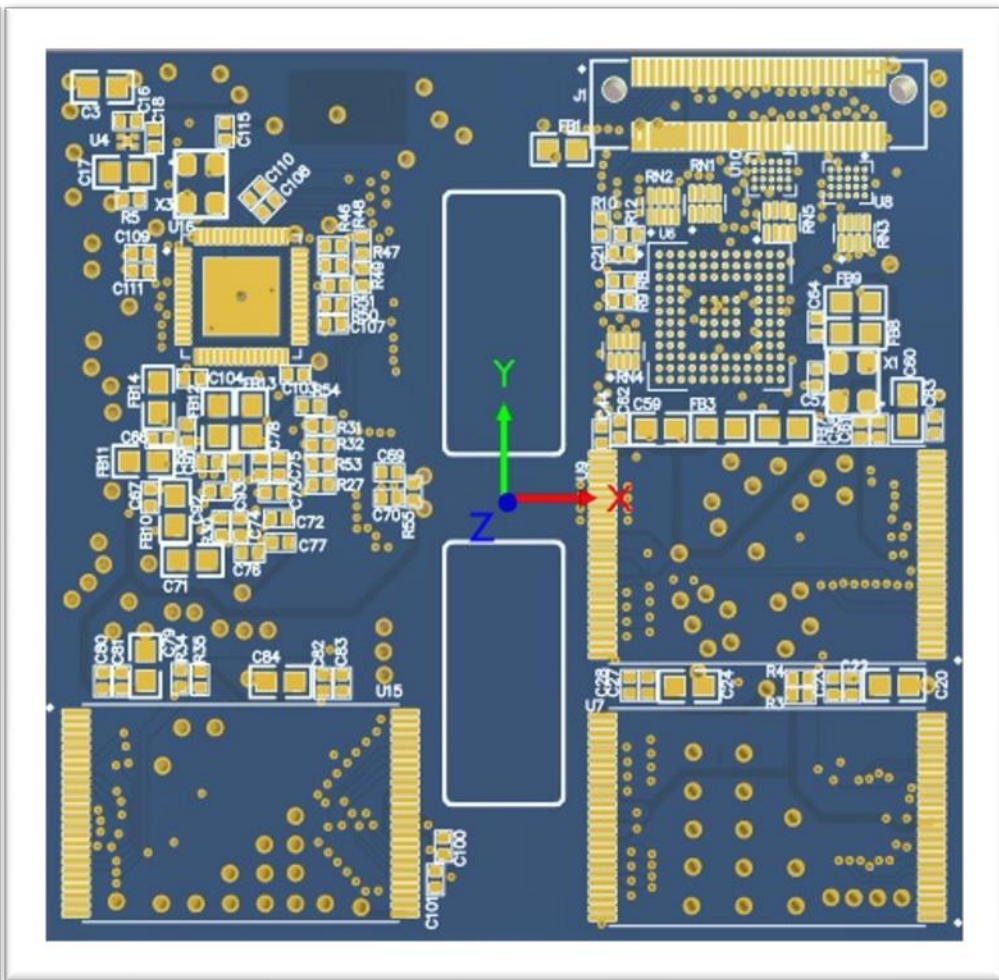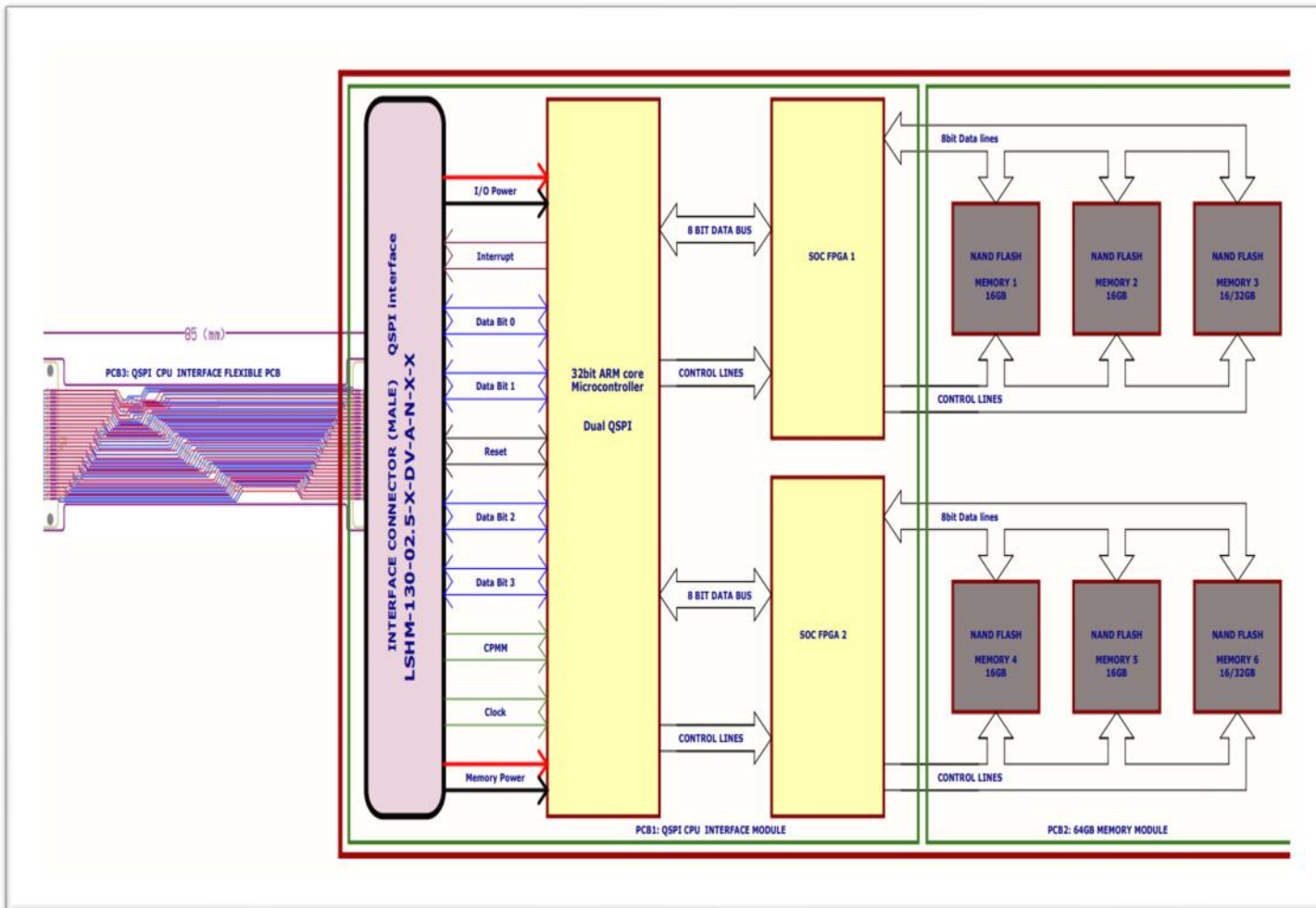
Rugged Video splitter for IR Thermal Camera
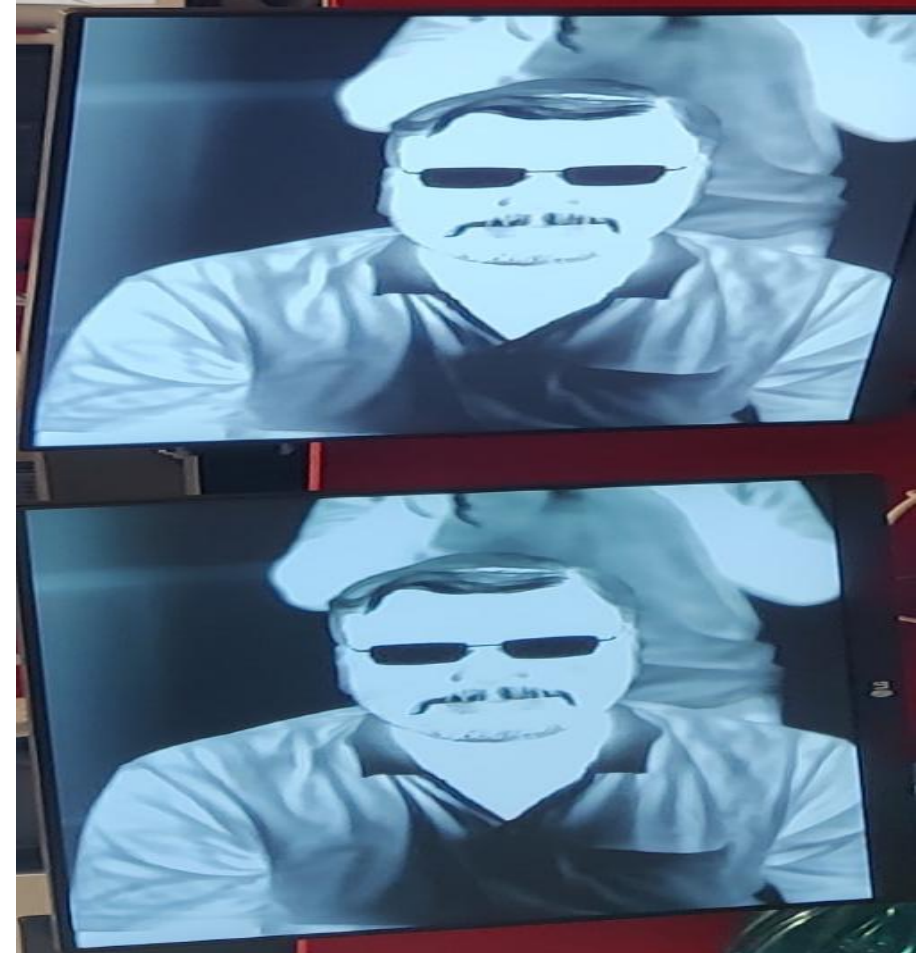
Fan control module (FCM) for enclosure Temp control
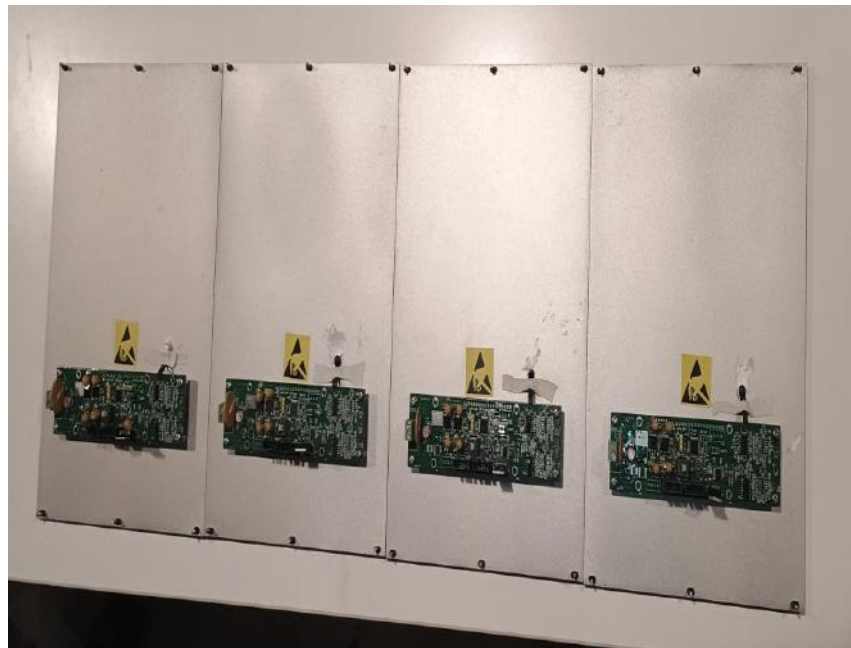
Microcontroller based controller with Temp sensors for driving & Controlling 3 or more Fans simultaneously with Status and Speed Control of Fans

RADAR ATE UPGRADE

Infrastructure

- MECHANICAL ASSEMBLY
- SYSTEM INTEGRATION
- SOFTWARE DEVELOPMENT IMPROVISATION
- CALIBRATION
- ACCEPTANCE TEST PLATFORM
- INSTALLATION
- SMD REPAIR FACILITY

AdvanceTech

Qualified MSME , NSIC,ISO Registrations Udyog Aadhar Registration with MSME

https://www.advancetech.in/contact/

1 800 1212 515

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SERVING INDUSTRIES SINCE 1995

28 Years of Service