



FUTURIS

PRODUCT PORTFOLIO

Futuris designs and manufactures ruggedized electronic systems and monitors for defense applications.

Combining extensive experience in consumer and military electronics with continuous R&D, we deliver reliable, high-quality solutions engineered to meet demanding environmental and operational requirements.

Guided by the Kaizen principle, Futuris is committed to continuous improvement, uncompromising quality, and optimum engineering solutions.



Rugged Image Processing Unit



Data/Video Recorder Unit for Defense Applications



XD104-ETH Multi Input Monitor



GPU & FPGA Image Processing Board



Ethernet Stream Multiplexer With 10GbE



Avionics Grade Data Recorder Unit With 4x10GbE



Next-Gen Laser Spot Tracker (LST) Module



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Rugged Image Processing Unit

Ultimate rugged video solution for a wide variety platforms. High processing power. Very flexible architecture via Nvidia GPU. The capabilities of FT000612 are as follows:

- It can take signals such as SDI, ethernet, analog video streaming from multiple camera sources.
- It can be simultaneously image merge, rotate and crop.
- It can transfer to other devices the created image to another format as SDI, ethernet or analog video signal in the desired.
- It can receive commands and transfer them to other devices via RS422, CANBus or Ethernet communication line.
- It can provide 12 Volt x3 outputs.

I/O Connections

- **Ethernet** – x8 10/100/1000Base-T
- **Video Inputs**
 - 3G-SDI x2
 - Analog Video x8
- **Video Outputs**
 - 3G-SDI x4
 - Analog Video x1
 - HDMI x1
- **Serial** – RS422 x1, CANBus x2

Optional Additional I/O

- Discrete Input x9
- Discrete Output x10
- 12 Volt DC Output (1A) x3





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Rugged Image Processing Unit

EMC

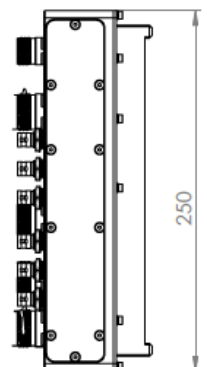
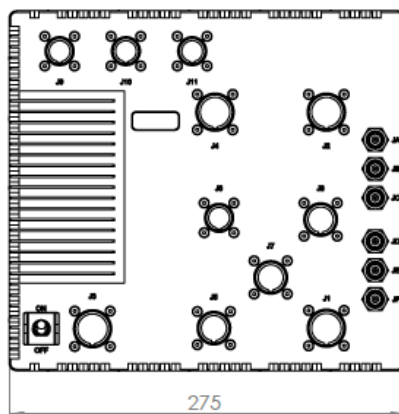
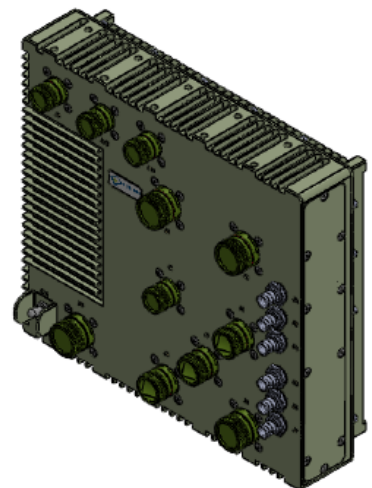
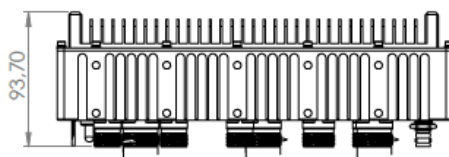
- MIL-STD-461F, CE101 / CE102
- MIL-STD-461F, CS101 / CS114 / CS116
- MIL-STD-461F, RE101 / RE102
- MIL-STD-461F, RS101 / RS103

Qualifications

- MIL-STD-810G, Method 501.5 Procedure I
- MIL-STD-810G, Method 502.5 Procedure I
- MIL-STD-810G, Method 507.5 Procedure I
- MIL-STD-810F, Method 516.5 Procedure I

Enclosure

- Power – DC 28±5 Volt MIL-STD-1275E
- Power Consumption <30W
- Power Consumption (with NVIDIA – Idle) <45W
- Dimensions – 275mm x 250mm x 93mm
- Weight – 4kg





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Data/Video Recorder Unit for Defense Applications

Data/Video Recording Unit is a product that is created by 3 separate Sensor Units in 2 separate bands (MW and LW) and will record infrared (IR) video and target data sent from the ethernet interface to the Removable Memory Module. The FT000695 Data/Video Recording Unit can simultaneously record 6 Panoramic and 5 Magnified Video sources and Track Data or 2 RAW video that is 60 fps, 5 fps detection data and 5 fps track data. Also it can play back recorded video data. The recorded video data can be transferred from the 4TB 3Gbps Removable Memory Module to the computer via Ethernet or USB 3.0 interface.

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Data/Video Recorder Unit for Defense Applications

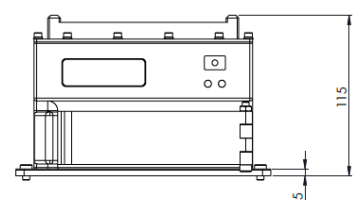
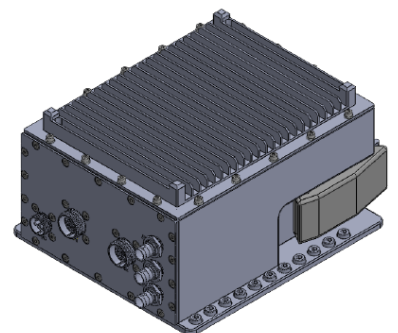
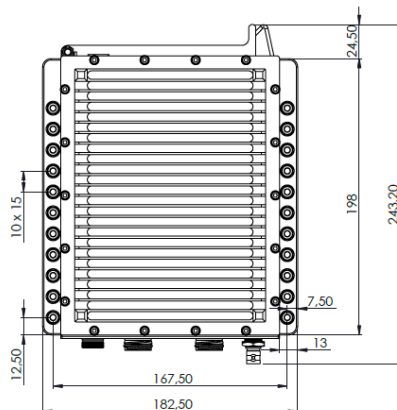
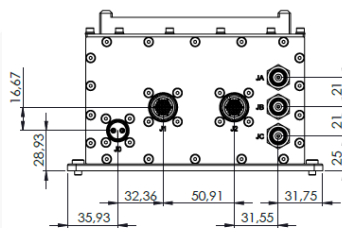
EMC

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- MIL-STD-461F, RE101 / RE102
- MIL-STD-461F, RS101 / RS103



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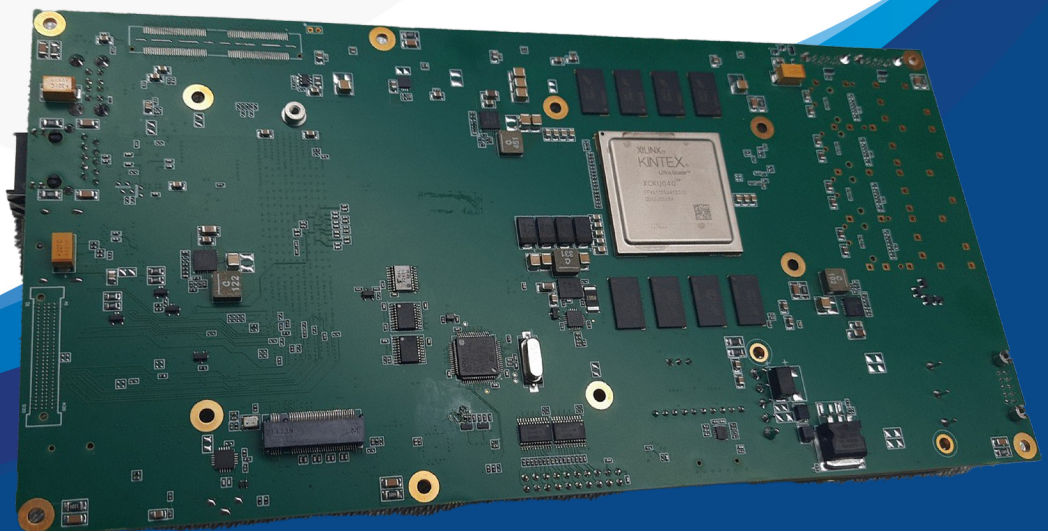
GPU & FPGA Image Processing Board

GPU & FPGA Image Processing Board Nvidia Jetson GPU and AMD Ultrascale FPGA on the same board. Highly capable video/data/signal processing solution for every platform. Flexible architecture via Ultrascale FPGA and Nvidia GPU options.

- Video and image compression on the fly.
 - It can transfer video data to/from FPGA and Orin GPU for various image processing purposes.
 - It has several GPIO and industry standard connector interfaces USB 2.0, USB 3.0, Display Port, Gigabit Ethernet etc.
- 28 Volt DC supply input.

Specs

- Nvidia Jetson Xavier compatible carrier board
- 8-lane PCIE Gen.3 interface between Orin and FPGA
- 4GByte DDR4 RAM for FPGA
- Gigabit Ethernet
- x4 SFP+ connector
- Display Port Output
- x2 USB 3.0
- x2 USB 2.0
- MIPI expansion connector
- GPIO interface connector
- 28VDC supply
- SD Card





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Ethernet Stream Multiplexer With 10G

There are 6 independent Layer 3 ethernet switches (SW1, SW2, SW3, SW4, SW5, SW6) in the AB Switch Unit. Ethernet messages on all ports are in UDP protocol. AB Switch Unit can be connected to 6 internal ethernet switches and 10GBASE-T ethernet port (#7) in the unit and have 1 internal Ethernet Stream Multiplexer (ESM).

I/O Connections

- Ethernet – 15x 1000Base-T
- Ethernet – 1x 10GBASE-T
- DEBUG Ethernet – 1x 10/100
- Serial – 1x RS422, 1x RS485
- 1x Debug UART
- 1X MIL-STD-1553B
- 1X ARINC429

Architecture

- Application Processing Unit – 64-bit Cortex-A53
- Real-Time Processing Unit – 32-bit Cortex-R5
- Graphic Processing Unit – ARM Mali™-400 MP2
- Embedded/External Memory – 256KB On-Chip RAM, DDR4-2400 (64-bit) on PS-Side, DDR4 2400 (16bit) on PL-Side, QSPI, eMMCVideo Codec Unit (VCU) – H.264/H.265

Enclosure

- Power – DC 28±5 Volt MIL-STD-1275E
- Power Consumption <30W
- Dimensions – 200 x 170 x 130 mm

Additional Connections

- JTAG
- Micro SD





FUTURIS

Handheld Control Unit 700

- 7" LCD Display 1280x768 Resolution (60Hz ,1000cd/m2, 1:1000 Contrast Ratio)
- 4x Arm Cortex A9 Processor up to 1.2Ghz Per Core
- Powerful Graphics Acceleration
- Video Decode 1080p 60 h.264
- Video Encode 1080p30 H.264 BP/ Dual 720p encode
- 64 GB Internal eMMC
- Resistive Touch Screen and 11 Buttons
- Headphone Jack with Microphone
- Buzzer
- USB 2.0 Interface
- Gigabit Ethernet Interface
- RS 485 Serial Communication Interface
- Dimensions: 220mm x 146mm x 32mm (WLD)
- -30°C to +50°C Operating Temperature Range





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XD104-ETH Multi Input Monitor

3-input ethernet videos from thermal or day camera sources can be displayed simultaneously using rugged XD104-ETH monitor.

XD104-ETH has superior image quality with 1024x768 resolution and 24-bit color depth LCD display.

Operator can watch up to 3 thermal or day cameras installed on the vehicle real-time, by choosing between different screen layouts. XD104-ETH is the smart choice for situational awareness applications for armoured vehicles. XD104-ETH is mount-compatible as mechanical interface with legacy DVE monitors.

I/O Connections

- Ethernet –10/100/1000Base-T x3
- Serial –RS422 x1, Debug UART x1, CANBus x1
- Analog Video Input x1
- Analog Video Output x1

Qualifications

- MIL-STD-1275D
- MIL-STD-461 EMI/EMC
- MIL-STD-810 Vibration/ Shock/ Low-High Temperature
- IP67 Compatible Mechanical Design
- Compatible with Legacy DVE Standards

Architecture

- Processor Core– Dual-core ARM Cortex-A9 MP-Core™ with CoreSight™, 766 MHz
- Programmable Logic – Artix-7 FPGA
- 2GByte RAM & 64GByte Flash





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XD104-ETH Multi Input Monitor

Display

- 10.4" 1024 x 768 LCD Panel
- 500 Nits
- 1000:1 Contrast Ratio
- Wide Viewing Angle 176° (H) x 176° (V)
- PAL/NTSC/RS-170 Analog Video Input (Optional)

Optional Additional I/O

- Ethernet – 10/100/1000Base-T x1
- VITA 57.1 FMC Connector

Enclosure

- Power – DC 28±5 Volt MIL-STD-1275D
- 15W Power Consumption (Heaters Off)
- 50W Power Consumption (Heaters On)
- 15W DC Power Output for External Cameras
- Dimensions – 267mm x 227mm x 81mm
- Weight – 2,80kg





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Avionics Grade Data Recorder Unit With 4x10GbE

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I/O Connections

- 4x 10 Gb Ethernet interfaces
- RS-422 interface
- USB 2.0
- DC 28V $\pm$ 5V power input (MIL-STD-1275E)

Optional Additional I/O

Interface configuration tailorable to customer-specific requirements

Custom GUI software package for accessing and downloading recorded SSD data via Ethernet

EMC

Qualified to MIL-STD-461G, including:

- CE101, CE102
 - CS101, CS114, CS115, CS116, CS117, CS118
 - RE101, RE102
- RS101, RS103





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- MIL-STD-810F, Method 516.5 Procedure I





FUTURIS

Next-Gen Laser Spot Tracker (LST) Module

Compact. High-Precision. Mission-Ready.

Designed for missile and platform tracking applications, delivering extended acquisition ranges and robust anti-sunlight performance in dynamic operational environments.

Key Features

- **5-Channel Architecture:** Adaptive noise thresholding for maximum sensitivity across all ambient light conditions.
- **Sunlight Immunity:** Integrated anti-blinding protection and over-current circuits across all quadrants.
- **Advanced Logic:** First/last/peak pulse detection with full-duplex RS-422/RS-485 interface (Tri-Service & PIM support).
- **Flexible Gain:** Multi-stage automatic or manual configuration.

Integrated Optical Module Option

A ready-to-use optical assembly engineered for rapid platform integration:

- **Linear FOV:** 40° (High-precision boresight tracking)
- **Non-Linear FOV:** 80° (High-g target acquisition)
- **Optical Filter:** Integrated 1064 nm Bandpass (Solar background rejection)
- **Total Weight:** 435 g (PCB + Optical package)





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Next-Gen Laser Spot Tracker (LST) Module

Integrated Optic Key Specifications al Module Option

Parameter	Specification
Detector Size	14 mm (Custom sizes available)
Dynamic Range	> 100,000:1
Sensitivity	250 nW (typical @ 50% Pd)
Linear Operation	Up to 20 μ W/quadrant @ 1.06 μ m
Power	+6 VDC @ 150 mA / +12 VDC @ 110 mA
Operating Temp	-40°C to +85°C
Dimensions & Weight	60 × 60 × 30 mm 85 g (Board level)

