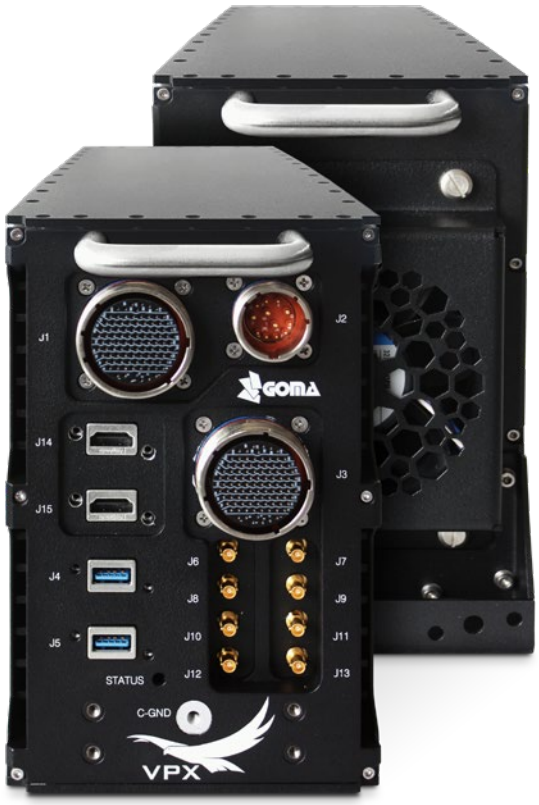
GOMA ELETTRONICA SpA



EKA-HD

VPX BASED ½ ATR
MULTI PROCESSING SYSTEM

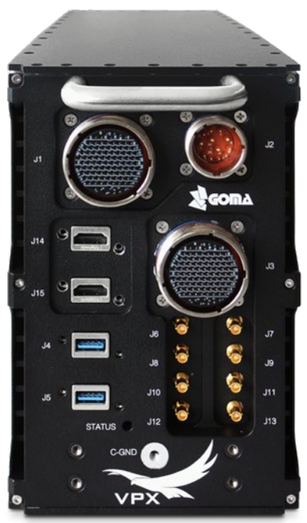
EKA-HD

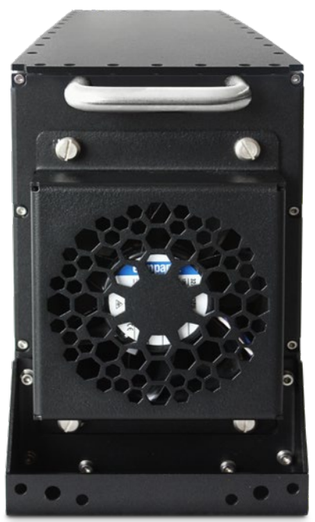
VPX BASED ½ ATR MULTI PROCESSING SYSTEM

EKA-HD is an VPX based high-performance rugged system designed for mission critical compute intensive applications that require multi-I/Os and 3G-SDI (or HD-SDI) data to be processed and displayed. The chassis has a ½ short ATR outline compliant to ARINC 404A and a forced-air conduction cooled design. EKA rugged system features two Single Board Computers featuring 9th Gen Intel® Xeon® E-2254ML processor, 16 GB of DDR4 memories and 64 GB of optional soldered SLC Flash memory. Two additional slim SATA slots are available for storage expansion.
The system includes a large number of I/O such as 2x GbE ports, 2x USB 2.0 ports; 2 x USB 3.0, 2x serial COM (RS232/RS422/RS485) and HDMI. In addition, the Unit is equipped with an high performance Graphic Board with four 3G-SDI Input and four 3G-SDI output channels and an expansion XMC module with four additional GbE ports. EKA-HD has local and remote advanced management capabilities including voltage and thermal monitoring and control, dedicated Built-In-Tests at power-on (PBIT), during operations (CBIT) and on-demand (IBIT) plus internal ETI/event recorder.
EKA-HD mission computer is compliant to MIL-STD-810/ MIL-STD-461 specifications and RTCA/DO-160G.
Because of its VPX based modular architecture EKA-HD has a very scalable design that enables different configurations with a reduced validation/certification time frame.

Product Features

- ½ short ATR - Meets ARINC 404A
- Forced-air conduction cooled design
- Dual SBC with 9th Gen Intel® Xeon® Processors
- 4 Slots 3U VPX architecture
- Nvidia P3000 Graphic Board with GPGPU and a 3G-SDI Video Capture
- Compliant to RTCA/DO-160G - MIL-STD-810 and MIL-STD-461





Technical Specifications

System	
Processor Module (Dual SBC support)	9th Gen Quad Core Intel® Xeon® E2254ML
Memory	16 Gbytes DDR4 ECC DRAM
Video Processing	Nvidia Quadro P3000 w/4 GB GDDR5
Video Ports	2x DisplayPort (HDMI) - Maintenance 4x 3G/HD/SD-SDI video inputs + 4x 3G/HD/SD-SDI video outputs
Front Panel	SBC#1 (with LAN XMC) 1x Gigabit LAN (CPU) - J3 1x UART RS-232/422/485 (CPU) - J3 1x USB 3.0 (CPU) - J5 1x HDMI Output (CPU) - J15 4x Gigabit LAN (XMC) - J3 SBC#2 (XMC slot empty) 1x Gigabit LAN (CPU) - J2 2x UART RS-232/422/485 (CPU) - J2 1x USB 3.0 (CPU) - J4 1x HDMI Output (CPU) - J14 20x spare differntial contacts (XMC expansion) - J2 Graphic Board 4x 3G-SDI inputs (HD-BNC) - J6/J8/J10/J12 4x 3G-SDI outputs (HD-BNC) - J7/J9/J11/J13
Internal Storage Devices	2x Slim-SATA modules up to 512 GB each Optional soldered SLC NAND flash up to 64 GB SATA
Management Features	DC input monitor Internal voltage monitoring Power supply status control Payload boards status control (via IPMI) Thermal management monitoring and control PBIT/CBIT/IBIT: dedicated Built-In-Tests at power-on, during operations and maintenance ETI recorder: internal ETI/event recorder
Software	Windows 10, Linux

Power Section	
Power Input	+28 VDC Extended range (+16 VDC to +36 VDC) Input transients according to MIL-STD-704F

Mechanical Features	
Dimensions (W x D x H)	124 mm x 193,5 mm x 320,5 mm
Weight	9 Kg
Cooling	Tachimetric Fan
Interfaces	3x MIL-DTL-38999 MIL connectors 2x USB 3.0 TYPE A SOCKET 2x HDMI SOCKET 4x BNC HD-SDI IN 4x BNC HD-SDI OU

Environmental Features	
Operating Temperature	-40°C to +71°C (RTCA/DO-160G, Section 2 Category B1)
Storage Temperature	-40°C to +85°C (RTCA/DO-160G, Section 2 Category B1)
Altitude	Operative: Max 25.000 feet (RTCA/DO-160G, Section 2 Category B1)
Humidity	Up to 95%
Shock	6g shock, 11ms
Crash Safety	20g shock, 11ms
Vibrations	Frequency Range: 10 ÷ 2000Hz - PSD 3.89 Grms (RTCA/DO-160G, Section 8, Category U, Curve G)
Environmental Protection	IP65 rated according to EN 60529
Fungus Protection	Fully protected according to RTCA/DO-160G
EMI / Electrical Features	Compliant to MIL-STD-461G (aircraft) and RTCA DO-160G

GOMA ELETTRONICA SpA
Strada Antica di Collegno, 225
10146 Torino - Italia

Tel: +39 011 7725024
Fax: +39 011 712298

www.gomaelettronica.it

All trademarks are the property of their respective owners
GOMA ELETTRONICA SpA • GOEKAHD0620

Designed by GOMA ELETTRONICA SpA

KEEP IN TOUCH