GOMA
RUGGED SOLUTIONS



MAG2A EVO

GRAPHIC & VIDEO CAPTURE
COLD PLATE MISSION COMPUTER

www.gomarugged.com

MAG2A EVO

Graphic & Video Capture Cold Plate Mission Computer

MAG is a family of Rugged Mission Computers OpenVPX based designed for applications in critical environments.
The **MAG2A EVO** is a high-performance Mission Computer with 3G-SDI graphics & video capture capabilities, designed for GPGPU computing, AI processing, deep learning and H.265/H.264 encoding & decoding applications.
At the heart of the unit there is a Quad Core Intel® Xeon® E3-1505M v6 processor, with a 16GB DDR4 and a 64GB Flash memory. The **MAG2A EVO** is powered by a NVIDIA Pascal Quadro P2000 dedicated video processor with a 4GB GDDR5 memory, and a rich video selection of I/O including 2x 3G-SDI outputs, 2x 3G-SDI inputs, 2x VGA independent outputs, RGB sync-on-green input. One VGA output channel from the graphics processor is also buffered to drive two identical sets of video signals. Additionally, a DVI-D single link is brought out to the front panel from the processor for maintenance activities. The graphics processor board is connected to the SBC via PCI Express™.
The connection allows the video inputs to be transferred into the system memory for manipulation and/or to be recorded into the local Solid State Disk.

The **MAG2A EVO** Mission Computer also includes a large number of I/O such as 3x Gigabit Ethernet ports, 4x USB 2.0 ports, 1x USB 3.0 port, 4x serial COM (RS232/RS422/RS485), stereo audio line out and audio in. The **MAG2A EVO** can host an internal 2.5" Serial-ATA III SSD with the capability of triggering a hardware Secure Erase signal. The **MAG2A EVO** Mission Computers employ conduction cooled cards inside a sealed chassis, using baseplate cooling for heat dissipation.

The **MAG2A EVO** Mission Computer is qualified according to RTCA/DO-160G standards, ensuring robust performance in the most extreme conditions.

- **SWaP-C optimized**
- **Cold plate dissipation**
- **7th Gen Intel® Xeon® Processor**
- **2 slots 3U VPX architecture**
- **Multiple Video Formats**
- **RTCA/DO-160G certified**

Member of CISQ Federation RINA CERTIFIED MANAGEMENT SYSTEM EN 9120

Member of CISQ Federation RINA CERTIFIED MANAGEMENT SYSTEM EN 9100





www.gomarugged.com

Technical Specifications

System	
Processor Module	Quad Core Intel® Xeon® E3-1505M v6 (4C @ 3.0 GHz)
Memory	16GB DDR4 ECC DRAM
Video Processing Module	Based on NVIDIA Pascal Quadro P2000 GP107 GPU with 768 CUDA cores and 4GB of DDR5 graphics memory with 128-bit memory width, providing a memory bandwidth of 96GB/s
Video Ports	2x 3G-SDI inputs & 2x 3G-SDI outputs 1x RGB input 2x VGA (1920x1200) independent outputs 1x VGA split output (replica of a VGA channel) 1x service DVI output (from CPU board)
I/O Ports	3x Gigabit LAN (copper) 4x USB 2.0 ports 1x USB 3.0 port 4x serial ports (RS232/RS422/RS485) Audio stereo input/output 2x isolated discrete IN + 2x isolated discrete OUT
Internal Storage Devices	64GB SATA III On-Board SSD Chip Internal 2.5" SATA SSD w/ Secure ERASE option (hardware trigger)
Management Features	Power BIT, continuous BIT Internal temperature monitoring Internal voltage monitoring
Software	Windows 11, Windows 10, Linux
Power Section	
Power Input	+28Vdc standard (+20V to +36V) Extreme operating range: +16V to +50V Compliant to RTCA/DO-160G S16 CAT. Z and MIL-STD-704F
Power Consumption	Power consumption (average) 110W Power peak up to 150W
Voltage Spike	600V (RTCA/DO-160G S17 CAT. A)
Mechanical Features	
Dimensions (W x D x H)	167.0 mm x 219.0 mm x 97.0 mm
Weight	4.0 Kg
Cooling	Fanless design, conduction cooling through baseplate
Interfaces	3x MIL-DTL-38999 military circular connectors 1x USB 3.0 connector
Environmental Features	
Operating Temperature	-40°C to +70°C (RTCA/DO-160G S4 CAT. B2)
Storage Temperature	-50°C to +85°C (RTCA/DO-160G S4 CAT. B2)
Altitude	Operative: Max 25.000 feet (RTCA/DO-160G S4 CAT. B2)
Humidity	Up to 95% (RTCA/DO-160G S6 CAT. CAT. B)
Shock	6g shock, 11ms (RTCA/DO-160G S7 CAT. B)
Crash Safety	20g shock, 11ms and 20g sustained acceleration (RTCA/DO-160G S7 CAT. B)
Vibrations	According to RTCA/DO-160G S8 CAT. U Curve G
Environmental Protection	IP65 rated according to EN 60529
Fungus Protection	According to RTCA/DO-160G S13 CAT. F
Salt Spray	5% NaCl 48 hours (RTCA/DO-160G S14 CAT. S)
Magnetic Effect	Deviation at 0.3m (RTCA/DO-160G S15 CAT. Z)
EMC	Audio frequency conducted susceptibility: RTCA/DO-160G S18 CAT. Z Induced signal susceptibility: RTCA/DO-160G S19 CAT. ZC Radio frequency susceptibility: RTCA/DO-160G S20 CAT. T Emission of radio frequency energy: RTCA/DO-160G S21CAT. M Electrostatic discharge: RTCA/DO-160G S25 CAT. A

GOMA
RUGGED SOLUTIONS

Strada Antica di Collegno, 225
10146 Torino - Italia
Tel. +39 011.7725024

www.gomarugged.com

KEEP IN TOUCH

All trademarks are the property of their respective owners
GOMA ELETTRONICA SpA • MAG2AEVO0325
Designed by GOMA ELETTRONICA SpA