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RUGGED SOLUTIONS



MAG2C
EVO G2

3G-SDI GRAPHICS & VIDEO CAPTURE
AIR-COOLED MISSION COMPUTER

13th GEN. INTEL® CORE™
NVIDIA AMPERE GPU

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MAG2C EVO G2

3G-SDI Graphics & Video Capture Air-Cooled Mission Computer

The **MAG2C EVO G2** is the latest evolution of the MAG2C Mission Computer, featuring the powerful 13th Generation Intel® Core i7 Raptor Lake processor working alongside an NVIDIA RTX A2000 GPU. Designed for critical environments, **MAG** is a family of rugged OpenVPX-based Mission Computers that deliver high performance for mission-critical applications.

At its core, the **MAG2C EVO G2** is powered by the 13th Generation Intel® Core i7 Raptor Lake processor, 64GB DDR5 ECC memory and a 480GB soldered NVMe SSD, ensuring exceptional computational performance and efficiency. The system runs on a dedicated NVIDIA RTX A2000 GPU, based on the Ampere architecture, featuring 2560 CUDA Cores, 80 Tensor Cores for AI acceleration, and 20 RT Cores for real-time ray tracing. The GPU supports hardware-accelerated H.265/H.264 encoding and decoding, enabling real-time video processing and AI-enhanced applications.

The system offers an extensive video I/O selection, including two 3G-SDI outputs, two 3G-SDI inputs, two independent VGA outputs, and an optional RGB sync-on-green input. A VGA output channel is buffered to support two identical video signal sets, while a DVI-D single link connection on the front panel facilitates maintenance operations. The graphics processor board connects to the SBC via PCI Express™, ensuring seamless video input transfer into system memory for processing or local Solid State Disk recording.

Beyond graphics, the **MAG2C EVO G2** extends its functionality with a comprehensive set of I/O options, including three Gigabit Ethernet ports, four USB 2.0 ports, one USB 3.0 port, and four serial COM ports supporting RS232, RS422, and RS485. It also features stereo audio line-in and line-out, providing additional flexibility for integration into various mission systems.

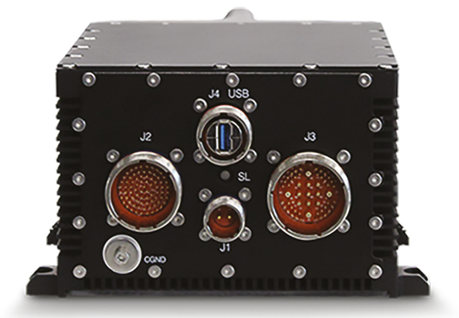
The system supports an internal 2.5" Serial-ATA III SSD with hardware Secure Erase or Destroy capability, depending on the selected configuration. Designed for both aircraft and ground vehicles, it operates on a 28 VDC power input and includes a 50 ms power hold-up capability for enhanced reliability in demanding environments.

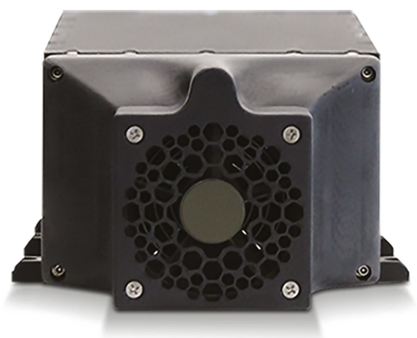
The **MAG2C EVO G2** Mission Computer is compliant to MIL-STD-810/MIL-STD-461 and qualified according to RTCA/DO-160G standard, ensuring robust performance in the most extreme conditions.

- **SWaP-C optimized**
- **Forced air cooling dissipation**
- **13th Gen Intel® Core™ Processor**
- **NVIDIA RTX A2000 GPU**
- **Multiple Input / Output Video Format**
- **RTCA/DO-160G qualified**

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Technical Specifications

System	
Processor Module	14 Cores (6PC + 8EC) 13th Generation Intel® Core i7-1370PRE 1.90GHz
Memory	64GB LPDDR5 SDRAM (dual channel) soldered with ECC
Video Processing Module	Based on NVIDIA® RTX A2000 GPU (Ampere) supporting 8 GB of GDDR6 graphics memory with ECC, 2,560 CUDA® cores, 80 Tensor Cores, and 20 RT Cores
Video Ports	2x 3G-SDI inputs & 2x 3G-SDI outputs 1x RGB input (optional) 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	On board 480GB NVME SSD Internal 2.5" SATA SSD w/ Secure ERASE or Destroy option (hardware trigger)
Management Features	Power BIT, continuous BIT Internal temperature monitoring Internal voltage monitoring Fan monitoring and speed control
Software	Windows 11 IoT Enterprise, Windows 10 IoT Enterprise, Linux
Power Section	
Power Input	+28Vdc standard (+20V to +36V) Extreme operating range: +18V to +40V Compliant to RTCA/DO-160G S16 CAT. Z and MIL-STD-704F 50 msec power hold-up
Voltage Spike	600V (RTCA/DO-160G S17 CAT. A)
Mechanical Features	
Dimensions (W x D x H)	183.0 mm x 322.0 mm x 106.0 mm
Weight	5.9 Kg
Cooling	Forced air cooling via removable fan module
Noise	Max. 78dB [A] with fan operating at 100%
Interfaces	3x MIL-DTL-38999 military circular connectors 1x USB 3.0 type A circular 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 with deviation)
Altitude	Operative: Max 25.000 feet (RTCA/DO-160G S4 CAT. B2)
Humidity	Up to 95% (RTCA/DO-160G S6 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 Power Input: RTCA/DO-160G S16 CAT. Z & MIL-STD-704F (28VDC) Momentary Power Interruption: RTCA/DO-160G S16 CAT. B (50 ms hold up)

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