



AeroComputers, Inc.
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System Overview MMS 8000

MMS 8000 is a fully rugged, multi-mission embedded computer purpose-built for deployment in austere environments for demanding defense and commercial applications. MMS-8000 offers robust IO and system expansion for a true single solution with centralized and converged sensor ingest, processing, networking, storage, controls, and distribution - supporting the mission with reliable tactical processing and communications enabling capabilities. MMS-8000 is ideal for x86-based high performance computing applications with GPU for intensive algorithms that benefit from significant parallel processing with low latency.

Key Features:

- COM Express Type 6 Architecture
- Latest Intel embedded CPU
- Latest NVIDIA mobile GPU
- Memory: up to 64GB DDR4
- Storage: (2) removable Sata 2.5" SSDs up to 4TB each; internal mSATA storage
- Dense IO including multiple GbE, USB, serial, audio, GPIO, DVI
- Significant PCIe-based system expansion capabilities; highly configurable
- Security: supports data at rest (DAR) and data in transit (DIT); onboard TPM 2.0; supports FIPS 140-2 and AES 256 encryption; Intel TXT and SGX
- MIL-SPEC rugged
- -40C to +60C operating temperature
- Engineered with standards-based approach utilizing open architectures and COTS technologies MOSA-aligned.
- GPS location technology, GLONASS, Beidou/compass, Galileo and QZSS, integrated GNSS provides quicker and faster location response.
- Video Capture Formats Support for capture image resolutions up to 2048x2160 pixels Support for capture frame rates up to 144fps (Actual capture frame rate can be limited by PCIe bandwidth. For the resolution of 1280x1024 and higher, the actual frame rate may be limited by the onboard video processing hardware pixel clock. For example, the maximum frame rate of 1920x1080 resolution can be up to 80fps.) Support for 4:2:0 8-bit capture formats: NV12, I420, YV12 Support for 4:2:2 8-bit capture formats: YUY2, YUYV, UYVY Support for 4:4:4 8-bit capture formats: V308, IYU2, V408, BGR24, BGR32



- Video Processing Features Video processing pipelines with ~180Mpixels/s processing bandwidth 10-bit 4:4:4 video processing Video scaling Video de-interlacing Weave Blend top & bottom field Video color format conversion Auto or manual selection of input color format & quantization range Auto or manual selection of capture color format, quantization range & saturation range Support for RGB, YCbCr 601, YCbCr 709, YCbCr 2020 color formats Support for Limited or Full quantization range Support for Limited, Full & 'Extended gamut' saturation range Video frame rate conversion.
- Blue-tooth supports 2.4GHz or 5GHz band to all your devices blazing wireless transmission rate up to 300Mbps, Dual-band Wi-Fi AX with speeds up to 2.4Gbps 5Ghz and up to 574Mbps 2.4Ghz; Supports 80Mhz and 160Mhz channels.
- Optional mesh radio Card.

Chassis: Material: machined aluminum. Finish: black anodized exterior, clear Alodine interior.

Dimensions: 12" (L) X 7" (W) X 5" (HT).

Weight: 13 LBS.

Processing: MMS 8000 cpuModule's represents the latest in high performance PCIe/104 embedded controllers with a Type 2 bus. This design is based on an Intel® Kaby Lake Xeon processor with CM238 Platform Controller Hub. The CMX34KB is offered with either a 2.2Ghz Quad-Core processor or a 3GHz Quad-Core processor.

Base System IO: Ethernet: (2) GbE, USB: (2) USB 3.0, (2) RS422 (485 is built-time option), (3) RS232 RX/TX only Video Output: (1) HDMI/DVI audio: stereo headphone and mic.

Power Supply: Integrated non-isolated 18-36VDC input power, 28VDC nominal EMI input conditioning and filtering system power 200W

System Expansion: Numerous options including GbE switch, CAN, video capture and encode. (Multiple formats and types), LTE, GPS, GPIO, ARINC 429, 1553.

Connectors: (4) SDI in BNC, (2) SDI in, (1) Composite Video In, (1) GPS BNC, (2) USB 3.0, (1) Blue tooth, (1) WI-FI, (1) Mesh radio (optional) (1) Ethernet. (1) Power connector.

Front Panel: green LED power on light, reset button and power restart button.

Software: AeroComputers UltiChart included. (UPGRADEABLE TO MAX CHART)

Warranty: Three-year system warranty. **MADE IN USA**

Order: P/N MMS-8000

