

PROMETHEAN SERIES



Ruggedized Small Form Factor CPU / GPU Systems

Rugged and Reliable Performance

The Promethean series of rugged, compact, and powerful small form factor systems are designed to provide highly flexible and configurable solutions for applications ranging from industrial/commercial, medical, and military. Based on COM Express (Computer-On-Module) architecture, Promethean combines high-end GPUs with latest generation of x86 processors in a ruggedized small form factor package. Promethean systems can be ordered with a variety of different CPU and GPU engines as required for your application. The system can be configured with various complements of high performance I/O as required. The architecture also supports the ability for customer defined memory type and capacities as required.

Compact and Lightweight

The rugged aluminum enclosure has been designed to be lightweight but strong. Deep finning provides for maximum cooling capability. Depending on the requirements, the Promethean system can be mounted from the bottom, or either side surface thus allowing greatest flexibility in placement, mounting, and cable routing. The ruggedness extends beyond the robust physical housing. The Promethean system is designed for operation up to 50,000 feet elevation, and has an operating temperature range of 0°C to +55°C. If a wider temperature range is required, a variant of the Promethean can operate at the extreme temperature range of -40°C to +85°C. Promethean systems also meet MIL-STD-810H for shock and vibration. EMI-EMC considerations were also taken into account during the design of these systems, as the unit is designed to meet MIL-STD-461.

Highly Configurable

Systems can be configured depending on the base CPU and GPU configurations selected. Also depending on hardware configuration, differing operating systems can be supported including Linux®, or Windows®, both of which can be ordered pre-installed. The hardware supports a wide range of I/O, details of which can be specified based on the application requirements.

Wide Range of I/O

The Promethean system supports the latest generation interconnects including: Gigabit Ethernet, USB 3.0 and 2.0, DisplayPort++, VGA, LVDS, SATA III, GPIO, I2C, mSATA, miniPCIe, PCIe/104 as well as SD Card Expansion.



Features and Benefits

- Provides high performance CPUs with the latest generation of Intel Processors
- Order using a building block approach: Mix and match Intel® CPUs with NVIDIA® GPUs
- Highly configurable. Solutions designed to meet customer requirements for all aspects of Size, Weight and Power
- Input and output connectorization can be configured to your requirements
- Based on the latest UEFI Firmware
- Optional extended temperature variants
- Wide range power input +16V to +48V DC
- Compact dimensions
8.25" W x 10.25" D x 4.4" H

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Design Specifications

CPU Module Options

- Intel® Xeon® E3-1505M V6 ("Kaby Lake" 7th Gen, 4 x 3.0 / 4.0 GHz, 8MB cache, 45 W)
- Intel® Xeon® E3-1505L V6 ("Kaby Lake" 7th Gen, 4 x 2.2 / 3.0 GHz, 8MB cache, 25 W)
- Intel® Xeon® E3-1515M V5 ("Skylake" 6th Gen, 4 x 2.8 / 3.7 GHz, 8MB cache, 35 W)
- Intel® Xeon® E3-1505L V5 ("Skylake" 6th Gen, 4 x 2.0 / 2.8 GHz, 8MB cache, 25 W)

GPU Module Options

- NVIDIA® Quadro® P5000 – Pascal, 2048 CUDA Cores, 100W)
- NVIDIA® Quadro® P3000 – (Pascal, 1280 CUDA Cores, 75W)
- NVIDIA® Quadro® M5000 SE – (Maxwell, 2048 CUDA Cores, 150W)
- NVIDIA® Quadro® M3000 SE – (Maxwell, 1024 CUDA Cores, 75W)
- NVIDIA® Tesla® M6 – (Pascal, 1536 CUDA Cores, 100W)

Dimensions

- 8.25" W x 10.25" D x 4.4" H

Weight

- Consult Factory: Based on configuration

Construction/Finish

- Aluminum: 6061-T6
- Paint: Black medium texture

Voltage

- 16 V to 48V DC



DisplayPort/HDMI/DVI	6 total - 2 outputs from CPU, 4 outputs from GPU
VGA Video	1 Analog CRT VGA Port
Gigabit Ethernet	2 x 10/100/1000 Ethernet Ports
USB 2.0	6 USB 2.0 Ports
USB 3.0	4 USB 3.0 Ports
RS-232	3 total - 2 from PCIe UART, 1 to COM Express console port
RS-485	2 Ports
GPIO	8-bits (Buffered 4in/4out, +3.3V or +5V selectable)
Mini PCIe Expansion	2 slots (with PCIe, USB and SATA connections)
PCIe/104 Expansion	4 x PCIe x1 lanes, 2 x SATA III (on PCIe/104 Type-2 Pins)
External SATA	2 external SATA connectors (capable of SATA III)
mSATA	2 mSATA slots (capable of SATA III)
SD Card Slot	1 micro SD Card slot (from USB Host controller, with bootable option)
Input Power	Single wide input range +16V to +48V DC
Operating Temp. Range	0°C to +55°C and -40°C to +85°C options available in some configurations

Consult Factory for Configuration Options and Part Numbering

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