

MXM /GPGPU Graphics Expansion

General Description

The GRIP opens the world of high performance graphics to the PIP Family. It acts as an interposer for MXM graphics cards with state of the art GPUs from NVIDIA or AMD as well as others. GRIP uses the PCI/104-Express interface to support the maximum interface speed available from the host board. Additional to the graphic expansion are up to 4 mPCIe sockets and up to 4 Mini-SIM modules.

Key features are:

- MXM3.1 Type a/b graphic cards / GPGPU cards
- Up to 4 DVI single link connections
- One with CRT support
- Over temperature shutdown to protect graphic card
- Up to 4 Full-Mini Card PCI Express sockets
- All mPCIe sockets with USB2.0 support
- Up to 4 Mini-SIM modules supported
- 1.5V mPCIe socket supply voltage
- Environment temperature -40°C up to +75°C

The GRIP has been designed to withstand harsh environments and extreme temperature conditions without the need of a fan. The special rugged design, combined with the best industrial-grade components, offer high reliability and and long-term performance.

All MPL products are fanless, shock and vibration proof, low power, rugged, and long-term* available. The perfect solution for a system to be used in rugged environments.

* Typically 10 years or more, 20+ years repair-ability



GRIP with MMX / GPGPU graphics module, including 4 additional mPCIe extensions



MIL PIP39 (Quad Core CPU) with GRIP extension and GPGPU (GTX 950M), completely fanless



All MPL products are 100% designed and manufactured in Switzerland.

Technical Features

Board Key Data

MXM Socket	MXM Rev. 3.0 and Rev. 3.1 Type a supported (conductive cooling) Type b up to 80W supported (reduced temperature range, needs additional cooling)
mPCIe Socket	Full-Mini Card Size mini PCI Express socket, USB 2.0 supported According to PCI Express Mini Card Electromechanical Specification Rev. 2.0 PCIe Wake Events, SMBus and LEDs are not supported
Module (SIM) Slot	Either directly at a Mini-SIM slot or at a 6 pin Molex Pico Clasp connector

Power

Input Voltage	10-36VDC
Power Dissipation	Depends on the plugged in modules

Environment

Storage Temperature	-45°C to +85°C (-49°F to +185°F)
Operating Temperature	-40°C to +75°C (-40°F to +167°F)
Relative Humidity	5% to 95% non condensing

Standard Compliance

The GRIP is designed to meet or exceed the most common standards. Particular references are:

EMC	EN 55022, EN 55024, EN 61000, MIL-STD-461E
Shock & Vibration	EN 60068
Environmental & Safety	EN 50155, MIL-STD-810-F, EN 60601, EN 60950
Approval List	CE, IEC 60945, IACS E10

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