

Extremely Rugged Computer Solution

based on Intel® 9th Generation Processor & NVIDIA RTX3000 GPU

MPL AG

Powering industries since 1985:
Unrivalled Quality, Swiss Precision.
MPL - Your Trusted Leader in Rugged,
Fanless Electronics and Embedded
Systems, proudly manufactured and
designed in Switzerland.



General Description

The PIP 46R-GPU3 is a high performance and highly integrated Rugged Embedded Computer with integrated NVIDIA MXM RTX3000 GPU card with 1920 CUDA Cores. This proven fanless Embedded Computer Family is based on the 9th generation Intel processors (PIP40 Family) built into rugged MIL 19" rack enclosure. The D38999 MIL connectors are soldered on special MPL designed rigid-flex PCBs. The total solution meets IP66 and can be operated in an environment of -20°C up to +55°C.

Key Features

- ✓ Core i7-9850HE, 6 Cores
- ✓ 9MB Cache, 4.4GHz
- ✓ 16GB DDR4 up to 64GB
- ✓ NVIDIA MXM RTX3000
- ✓ 1920 CUDA Cores
- ✓ 2.5G Ethernet Controller i226-IT



Interfaces

- | | | |
|---|--|--|
| ✓ 1x Power input connector
MIL-STD 38999 13-4PN | ✓ 1x RS232/485
MIL-STD 38999 III 13-35SB | ✓ 1x GbE & 2x USB 2.0
MIL-STD 38999 III 17-35PA |
| ✓ 1x Activity LED controlled by
Embedded Controller
Activity on peripheral devices
(NVMe / SATA / mPCIe / m.2 WiFi
/ m.2 LTE) | ✓ 1x RS232/485 + 1x USB 2.0
MIL-STD 38999 III 13-35SA | ✓ 1x DVI 1
MIL-STD 38999 III 15-35SN |
| ✓ 4x LAN connector
RJFTV62A1ZN RJ45 Socket | ✓ 2x RS232/485
MIL-STD 38999 III 13-35SN | ✓ 1x DVI 2
MIL-STD 38999 III 15-35SA |

Standard Compliance

The PIP40 Family as well as the housings are 100% engineered & manufactured by MPL AG in Switzerland and meet or exceed the most common standards. Particular references are:

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

Environment

Storage Temperature	Operating Temperature	Relative Humidity
✓ -45°C to +85°C (-49°F to 185°F)	✓ -20°C to +55°C (-4°F to 140°F) at full operation	✓ 5% to 95% none condensing
	✓ -40°C to +70°C optional	



Power

Input Voltage

✓ 28V (18-36V)

Power LED

✓ Green / Power State S0

All internal power supplies are up
and CPU is running

OFF / CPU is off

Power Consumption

✓ 28VDC / 10A

(GPUStress 0.0.9.4, RTX3000

100% max. 250W)

Packaging

Chassis version	length	width	height	weight (kg)	comment
PIP 46R-GPU3	250mm	19"	2u	12 (26.45 lb.)	fully populated with MXM GPU

Didn't find what you are looking for? The system can be customized on request.

