

MPMC-9320-0002

Multi-Platform Mission Computer

2-slot 3U cPCI System

Form Factor

- ◆ 3U CompactPCI (cPCI) backplane

Mechanical

- ◆ Natural convection cooling
- ◆ Volume optimized
- ◆ 9.1" x 5.0" x 5.1"
- ◆ 14.5 lbs (fully populated)

Standard Configuration

- ◆ (1) DCP-124P SBC
 - PowerPC 7448
- ◆ (3) SPMC Serial PMC

Power Supply

- ◆ 28 VDC input
- ◆ MIL-STD-704 compliant

Table 1: Max Power

System Component	Power	Qty	Total
DCP-124P	27 W	1	27 W
SPMC	6 W	3	18 W
Power Supply	7 W	1	7 W
Total Power Required			52 W

The MPMC-9320-0002 provides the highest functional density available in a small package. As a natural convection cooled system, the MPMC-9320-0002 is designed for reliable operation in harsh environments without the need for base plate or forced air cooling.



Packaged in an ultra compact 3U cPCI form factor and equipped with reliable PowerPC™ processing, the MPMC-9320-0002 has all the elements required of modern mission computers in space constrained applications (see Table 3).

Optimal system cooling is ensured via thermal transfer between card edges of its conduction cooled 3U cPCI cards and the side walls of the system enclosure. EMI filters and gaskets are employed for system security and increased reliability (see Table 2).

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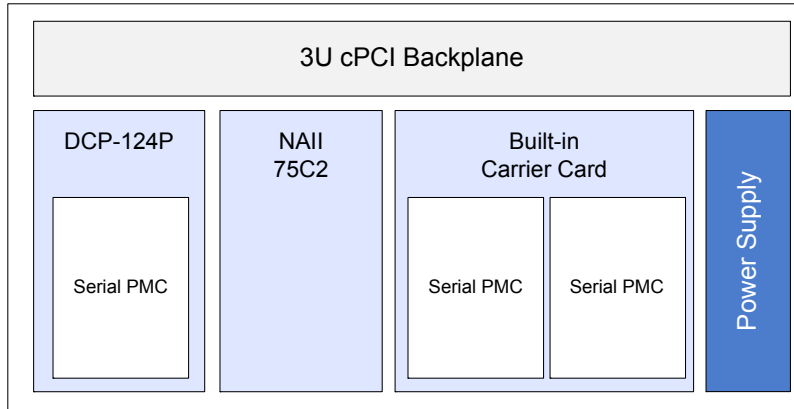
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Standard Configuration

The standard system configuration of the MPMC-9320-0002 is equipped with an integrated 28 VDC power supply unit, one DCP-124P SBC, and three SPMC Serial PMC cards.

Figure 1: MPMC-9320-0002 Block Diagram



Operating System

The MPMC-9320-0002 has been verified to run VxWorks®.

Environmental Qualification

The MPMC-9320-0002 is designed to meet the harsh environments of many military and aerospace computing applications. Table 2 illustrates the environmental qualification standards the MPMC-9320-0002 has been designed to meet or exceed.

Table 2: Environmental Specifications

Environmental Condition	Testing Compliance
Temperature & Altitude	MIL-STD-810F, 501.4 (high temp) MIL-STD-810F, 502.4 (storage temp, operation) MIL-STD-810F, 500.4 (alt extremes)
Temperature Variation	MIL-STD-810F, 503.4 (temperature shock, 60°C/15 seconds (+20 to -40°C))
Operational Shocks & Crash Safety	MIL-STD-810F, 516.5 (shock)
Vibration	MIL-STD-810F, 514.5 (vibration)
Explosion Proofness	MIL-STD-810F 511.4

Table 3: Verified System Interfaces

Tested Interface	Qty	Tested Interface	Qty
Gigabit Ethernet	1	RS-232	2
100Base-T Ethernet	1	RS-422	12
USB	1	TTL I/O	2

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