



MPMC-9320-0007

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
- ◆ (1) NAI1 75C2 Multi-function
- ◆ (2) DPMC-211 CANbus 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 |
| NAI1 75C4 | 7 W | 1 | 7 W |
| DPMC-211 | 7 W | 2 | 14 W |
| Power Supply | 7 W | 1 | 7 W |
| Total Power Required | | | 55 W |



The MPMC-9320-0007 provides the highest functional density available in a small package. As a natural convection cooled system, the MPMC-9320-0007 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-9320-0007 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 3).

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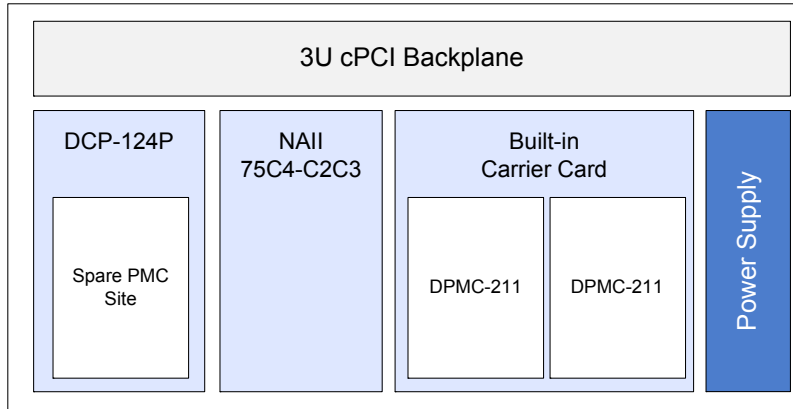
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Standard Configuration

The standard system configuration of the MPMC-9320-0007 is equipped with an integrated 28 VDC power supply unit, one DCP-124P SBC, one NAII 75C4 A/D module, and two DPMC-211 CANbus cards.

Figure 1: MPMC-9320-0007 Block Diagram



Operating System

The MPMC-9320-0007 has been verified to run VxWorks®.

Environmental Qualification

The MPMC-9320-0007 is designed to meet the harsh environments of many military and aerospace computing applications. Table 2 illustrates the environmental qualification standards the MPMC-9320-0007 is 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 | 3 | USB | 1 |
| CANbus | 4 | LVDDIO | 2 |
| TTL I/O | 32 | 10V A/D | 10 |
| RS-232 | 1 | 4-25mA A/D | 10 |
| RS-422 | 1 | | |

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