
Photo courtesy of General Dynamics Land Systems Inc.

Fact Sheet

# MPMC-9341-0001

## Multi-Platform Mission Computer

## 4-slot 3U VPX System


The Multi-Platform Mission Computer 9341-0001 is a leading edge, flexible and rugged processing system which can be readily configured to meet the needs of any military or aerospace requirements, from benign laboratory to harsh deployed ground vehicle environments.

The MPMC-9341-0001 uses advanced packaging techniques to provide the processing power of up to four SBCs in a rugged enclosure that measures a compact 600 cubic inches, yet is able to operate and survive external air temperatures of 55°C using only natural convection. This enables system designers to implement and deploy a highly capable processing system without placing demands on the vehicle such as fans, cold plates, air or liquid.

### Form Factor

- 3U VPX backplane

### Mechanical

- Natural convection cooling
- Volume optimized
- 12.5″ x 5.8″ x 8.3″
- 25.56 lbs (fully populated)

### Standard Configuration

- (4) VPX3-1252 SBC
  - Intel® Core™2 Duo SP9300
- (2) DPMC-650 GbE PMC
- (1) SSD Hard Drive

### Power Supply

- 28 VDC input
- MIL-STD-704 compliant

Table 1: Max Power

| System Component | Power | Qty | Total |
|---|---|---|---|
| VPX3-1252 | 40 W | 4 | 160 W |
| PMC-650 | 5 W | 2 | 5 W |
| SSD | 2 W | 1 | 2 W |
| Power Supply | 25 W | 1 | 25 W |
| **Total Power Required** | | | **197 W** |

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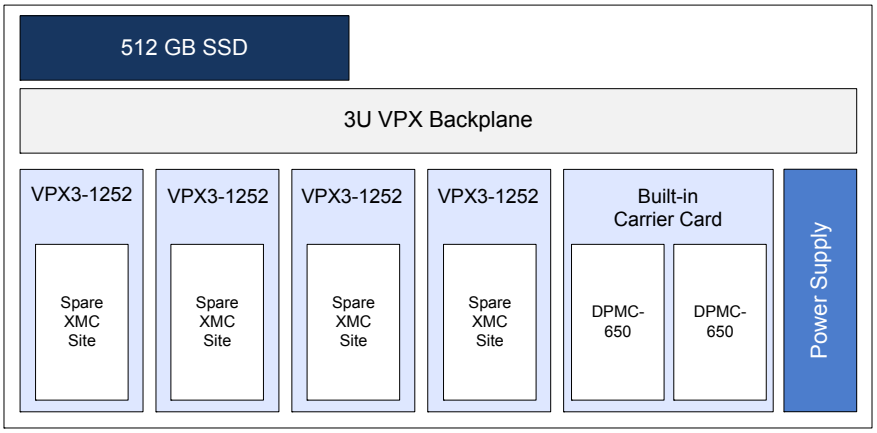
## Standard Configuration

The standard system configuration of the MPMC-9341-0001 is equipped with an integrated 28 VDC power supply unit, four VPX3-1252 SBCs, two DPMC-650 GbE Switches, and one 512 GB SSD.

Figure 1: MPMC-9341-0001 Block Diagram




## Operating System

The MPMC-9341-0001 has been verified to run Red Hat® Enterprise Linux®.

## Environmental Qualification

The MPMC-9341-001 is designed to meet the harsh environments of many military and aerospace computing applications. Table 2 illustrates the environmental qualification standards the MPMC-9341-0001 was designed to meet.

Table 2: Environmental Specifications

| Environmental Condition | Testing Compliance |
|---|---|
| Temperature & Altitude | MIL-STD-810F, 501.4 (high temp)<br>MIL-STD-810F, 502.4 (storage temp, operation)<br>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 |
|---|---|
| GbE (1000BaseT) | 4 |
| RS-232 | 4 |
| RS-422 | 4 |
| USB 2.0 | 4 |

| Tested Interface | Qty |
|---|---|
| VGA | 4 |
| SATA | 4 |
| Audio | 8 |

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