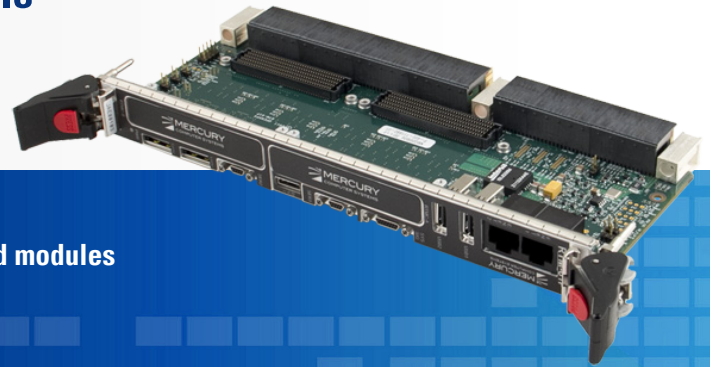


# Ensemble 6000 Series OpenVPX RTM-61P Rear Transition Module

*Bringing I/O to the Ensemble 6000 Series*



- Supports Ensemble® 6000 Series PowerPC® and Intel® payload modules
- Connectors and breakout cables for standard I/O included
- Support for PMC/XMC user I/O via standard connector
- Architected to meet OpenVPX™ design principles

The Ensemble 6000 Series OpenVPX RTM-61P Rear Transition Module from Mercury Systems is designed as a VITA 46 VPX-compliant module in a 6U form factor that is also compatible with OpenVPX™ system architecture design principles. This module is an innovative design intended to support Ensemble 6000 Series 6U VPX payload modules. When integrated with payload modules in the Ensemble 6000 series, such as the HCD6220 or the LDS6521, the RTM-61P brings user I/O from the backplane connectors to industry-standard interfaces.

The RTM-61P utilizes a combination of standard connectors and breakout cables to provide access to serial and Ethernet connections as well as USB, SATA and DVI interfaces. For PMC/XMC user I/O, the RTM-61P implements rear mezzanine sites using standard connectors, providing a flexible interface for any user I/O solution.

## Built-In Standard I/O

The RTM-61P uses innovative mechanical mounting capabilities to bring backplane I/O from payload processing modules to standard connectors. The RTM-61P provides four RS-232/RS-422 serial interfaces via dual Micro-DB9 connectors and included Y-cables.

Two RJ45 Ethernet interfaces are also provided on the RTM-61P. Dual USB 2.0 interfaces and SATA interfaces are brought to standard connectors as well. Finally, a DVI video interface is brought to a standard MicroHDMI connector.

Mercury's commitment to maintaining user I/O pinout across payload processing modules allows the RTM-61P to support all payload processing modules in the Ensemble 6000 series, regardless of processing technology or model.

## PMC/XMC User I/O

Mercury utilizes standard connectors on the RTM-61P that map to the PMC and XMC user I/O connections from the payload module. Although FMC connectors are utilized, the user I/O connectors on the RTM-60P are not FMC compliant. As a result, they are referred to as Rear Transition Mezzanine Card (RTMC) connectors.

There are two major advantages to this design. First, it enables I/O from the Rear Transition Module based on VITA standard connectors, where past designs in the industry are custom. Second, the implementation of the RTM-61P with these standard connectors provides all the necessary design ingredients to support rear I/O solutions for most industry PMC or XMC modules, including sufficient I/O pins for both PMC and XMC user I/O on the same connector.

*Mercury Systems is the better alternative for affordable, secure processing subsystems designed and made in the USA. These capabilities make us the first commercially based defense electronics company built to meet rapidly evolving next-generation defense challenges.*



ACQUIRE



DIGITIZE



PROCESS



STORAGE



EXPLOIT



DISSEMINATE

## Other Capabilities

The RTM-61P contains the necessary interfaces to be managed as an unintelligent Field Replaceable Unit (FRU) by the associated payload module. The RTM-61P can provide FRU information, such as module name, model number and serial number, to the managing 6U OpenVPX payload module.

## Open Standards Means Interoperability and Planning for the Future

The OpenVPX Industry Working Group is an industry initiative launched by defense prime contractors and COTS system developers to proactively solve the interoperability issues associated with the VITA 46 (VPX) family of specifications. The group has created an overarching System Specification that defines VPX system architecture through pinout definitions to establish a limited set of application-specific reference solutions. These OpenVPX standard solutions provide clear design guidance to COTS suppliers and the user community, assuring interoperability across multi-vendor implementations.

## Specifications

### Compliance

Compliant with VITA 46.0, VITA 46.9 and VITA 46.10 standards

### Built-In Standard I/O

Four RS-232/RS-422 serial interfaces

Via dual Micro-DB9 connectors and Y-cables (included)

Two 10/100/1000BASE-T RJ45 Ethernet interfaces

Two eSATA interfaces

One DVI interface via MicroHDMI connector

Two USB 2.0 interfaces

### PMC/XMC User I/O Via Dual RTMC Sites

Available via dual FMC connectors (not VITA 57 compliant)

Backplane interface designed to comply with VITA 46.9 standard

### Environmental

See [Environmental Protections for Operation at the Tactical Edge](#) for specific ruggedness levels and cooling options.

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