

## EnsembleSeries™ RTM-30P

OpenVPX™ Rear Transition Module (RTM)



- Companion RTM for 3U OpenVPX Xeon® D-series processor modules
- Field replacement unit (FRU) capability
- Includes serial port breakout cable

The EnsembleSeries® RTM-30P rear transition module (RTM) is designed as a VITA 46 VPX-compliant module in a 3U form-factor. This module is a companion RTM for the EnsembleSeries LDS3506 and LDS3517, allowing the translation of backplane I/O interfaces to standard connectors. The following features are included on the RTM-30P:

- One USB 2.0/3.0 port (with redriver)
- One eSATA port (with redriver)
- Two external serial (RS-232) interfaces (without flow control) on a single uDB9 connector
- One copper Gigabit 10/100/1000 BASE-T RJ45 Ethernet port
- Power good LED

The following interconnects are provided as topside board accessible connectors:

- 2nd eSATA port (with redriver)
- FPGA test port 26 pin connector
- Discrete connectors
- OpenVPX bussed signal connectors

### Rear-panel Connectors

The rear-panel connectors on the RTM-30P provide access to I/O from the front payload module. The RS-232 Ethernet and FPGA I/O connections are made directly between the front-panel and the backplane. The USB 3.0 and SATA ports are buffered.

### Standard Ethernet and Serial I/O

The EnsembleSeries RTM-30P uses a µDB9 connector and an included breakout cable to provide access to RS-232 serial interfaces. Each RTM-30P provides two serial interfaces via the breakout cable that support the available interfaces provided on Mercury's Ensemble 3000 Series of 3U VPX payload modules. Ethernet connectivity to the Xeon D-series processor is provided by the RTM-30P's RJ45 Ethernet connector.

### Other Capabilities

EnsembleSeries RTM-30P modules have the required interface that enables its associated payload module to manage it as an unintelligent FRU. Each RTM-30P provides its FRU information, including module name, model and serial numbers to the managing payload module.

*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

## Mercury's OpenVPX Ecosystem

Sensor chain awareness is having the technical expertise and resources to design and build capable, interoperable solutions along the whole sensor processor chain. From RF, digital/analog signal manipulation to dense, SWaP optimized processing resources to actionable intelligence dissemination. Mercury's rugged processing subassemblies leverage the best commercial-item technology, enabling prime contractors to win more business. Modern sensor processing subassemblies are customized assemblies of interoperable building blocks built to open standard architectures. Mercury's hardware and software portfolio of building blocks are physically and electrically interoperable as defined by international industrial standards, including OpenVPX.

## Specifications

### Module

Compliant with the VITA 46.0 VPX standard VITA 46.10 RTM standards

### Serial and Ethernet I/O

Two RS-232 available via an included breakout cable

One 10/100/1000BASE-T RJ45 Ethernet interface

### Additional I/O

One rear-panel USB 2.0/3.0 interface

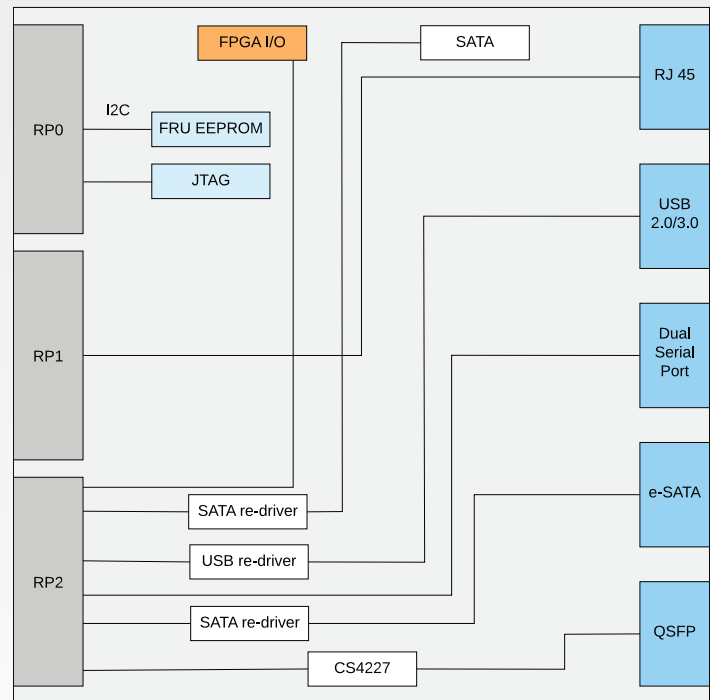
One rear-panel SATA interface

One additional SATA interface available as a topside pin connector

FPGA and GPIO interfaces available as topside pin connectors

### Environmental

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



Ensemble RTM-30P Functional Block Diagram

The Mercury Systems logo is a registered trademark of Mercury Systems, Inc. Other marks used herein may be trademarks or registered trademarks of their respective holders. Mercury products identified in this document conform with the specifications and standards described herein. Conformance to any such standards is based solely on Mercury's internal processes and methods. The information contained in this document is subject to change at any time without notice.

Copyright © 2019 Mercury Systems, Inc.

3137.03E-0419-ds-RTM-30P



INNOVATION THAT MATTERS®

#### CORPORATE HEADQUARTERS

50 Minuteman Road • Andover, MA 01810 USA  
(978) 967-1401 • (866) 627-6951 • Fax (978) 256-3599

#### EUROPE MERCURY SYSTEMS, LTD

Unit 1 - Easter Park, Benyon Road, Silchester, Reading  
RG7 2PQ United Kingdom  
+ 44 0 1189 702050 • Fax + 44 0 1189 702321

