

3U VPX/VPX-REDI Mass Storage Module



APPLICATIONS

The TR MS1/321 mass storage module provides a flexible solution for designers wishing to add a 2.5-inch SATA300 mass storage drive to a 3U VPX or VPX-REDI OpenVPX system. The carrier accommodates either a single 2.5-inch SATA300 hard disk drive or solid-state drive and includes support for a CompactFlash™ Type-I card. The TR MS1/321 is designed to work with a range of 3U VPX systems either air-cooled or conduction-cooled. The module is capable of operating in temperatures

ranging from -40°C to +85°C where it is suitable for a range of applications within the defense, industrial control, telecomms, telemetry and aerospace markets. The conduction cooled TR MS1/321-RCS is a VPX-REDI Type 1 Two Level Maintenance conduction-cooled board and the TR 501/36x-RCT is VPX-REDI Type 2. For non-rugged applications a VPX version, the TR MS1/321, is available.

HIGHLIGHTS

- 3U VPX based Mass Storage Module supports a single 2.5-inch SATA300 mass storage drive as well as a CompactFlash™ site
- 3U VPX-REDI (VITA 48.0) RCx-Series Mass Storage Module:
 - conduction-cooled to VITA 48.2
 - conformally coated
 - -40°C to +85°C operating temperature
 - RCS-Series supports VPX-REDI Type 1 Two Level Maintenance in 3U VPX-REDI 0.85-inch slot
 - RCT-Series supports VPX-REDI Type 2 in 3U VPX-REDI 0.85-inch slot
- 3U VPX (VITA 46.0) N-Series Mass Storage Module:
 - rear plug compatible with the VPX-REDI RCx-Series
 - air-cooled
 - operating temperature, depends on SATA drive fitted
 - use in commercial (non-rugged) applications
 - 3U VPX 0.8 inch slot
 - optional rear transition module available
- P1 VPX interface compatible with OpenVPX module profiles
- Supplied with a 2.5 inch SATA300 mass storage drive:
 - option for a rotating hard disk drive or
 - option for a solid-state drive
- CompactFlash™ Type-I site available
- Supported operating systems depend on the 3U VPX system controller used



Ruggedized 3U VPX Mass Storage Module

- 3U VPX-REDI Mass Storage Module supports:-
 - a single 2.5-inch SATA300 mass storage drive
 - Type-I CompactFlash™ site
- conduction-cooled to VITA 48.2
- conformally coated
- compatible with several OpenVPX module profiles
- air-cooled VPX version also available
- CompactFlash™ Type-I site available:-
 - implemented via SATA to IDE interface connected to VPX P1 wafer 9 or 10

Compatible VPX SBC

- 3U VPX Single Board Computer:-
 - TR 501/36x, Intel® Core™ 2 Duo processor
 - TR A40/30x, Intel® Atom™ processor Z530

Software Support

- supported operating systems depend on the 3U VPX system controller used

VPX Backplane Interface

- P0 and P1 support OpenVPX configuration
- compatible with OpenVPX module (VITA 65) profiles:-
 - MOD3-STO-2U-16.5.1-1
 - MOD3-STO-2U-16.5.1-2

System Management

- System Management interface:-
 - implements the SMO-1 interface
- on-board System Management Controller
- supports 8 Kbytes of non-volatile memory

Electrical Specification

- maximum current figures:-
 - 0.4A @3.3V
 - 1.1A @5V for a hard disk drive
- 0.0A @+12V; 0.0A @-12V

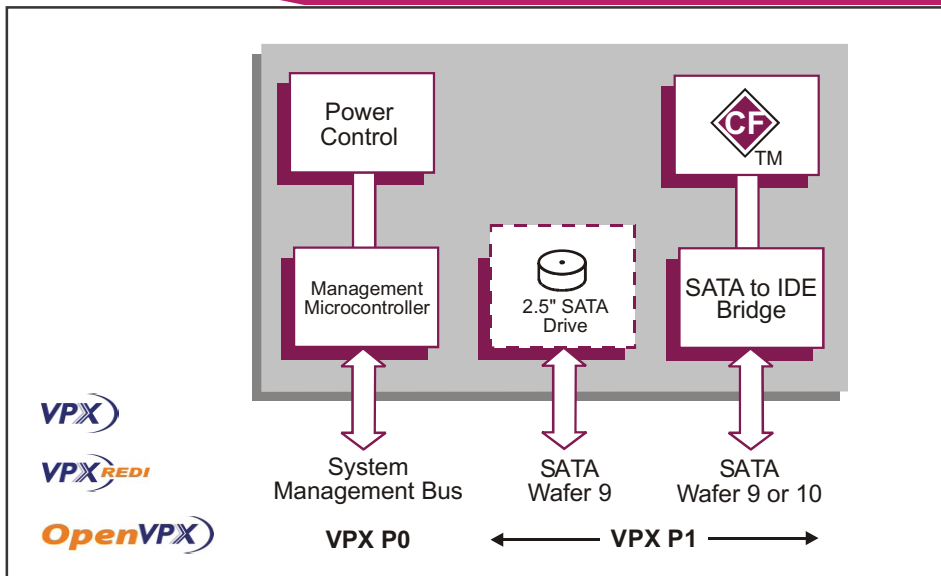
Safety

- PCB (PWB) manufactured with flammability rating of 94V-0

Environmental Specification

- operating temperature, VPX N-Series:-
 - VITA 47 Class AC1
 - useful for bench development
 - air-cooled
- storage temperature, VPX N-Series:-
 - -40°C to +65°C
- operating altitude, VPX N-Series: 0 to 10,000 feet (0 to 3,048 meters)
- operating temperature, VPX-REDI RCx-Series:-
 - VITA 47 Class CC4
 - conduction-cooled (VITA 48.2)
- storage temperature, VPX-REDI RCx-Series:-
 - VITA 47 Class C4
- operating altitude, VPX-REDI RCx-Series: -1,000 to 50,000 feet (-305 to 15,240 meters)
- 10% to 85% Relative Humidity, non condensing (operating/storage for N-Series and RCx-Series)

Note: environmental specifications for mass storage drives may vary depending on the size and the type. Please contact local sales office for further details



Mechanical Specification

- 3U VPX form-factor (VITA 46.0, VITA 48.0): 3.9 inches x 6.3 inches (100mm x 160mm)
- slot widths, N-Series and RCx-Series:-
 - 0.8 inches VPX N-Series (VITA 46.0)
 - 0.85 inches VPX-REDI Type 2, RCT-Series (VITA 48.0)
 - 0.85 inches VPX-REDI Type 1, RCS-Series (VITA 48.0). Where REDI Type 1 is Two Level Maintenance (VITA 48.2)
- connectors to VITA 46.0 for P0, P1 and P2
- operating mechanical, VPX N-Series:-
 - shock - VITA 47 Class OS1
 - vibration - drive dependent, contact local sales office
- operating mechanical, VPX-REDI RCx-Series:-
 - shock - VITA 47 Class OS2
 - vibration - VITA 47 Class V3



3U VPX Mass Storage Module with CompactFlash site (air-cooled version, 2.5-inch drive omitted for clarity)

ORDERING INFORMATION

Order Number Product Description (Hardware)

TR MS1/321-z1	3U VPX SATA Mass Storage Module, including 2.5-inch SATA300 solid-state drive or hard disk drive, air cooled
TR MS1/321-z1RCS	3U VPX-REDI SATA Mass Storage Module, 2.5-inch SATA300 solid-state drive, conduction cooled, with 2 Level Maintenance covers (Type 1)
TR MS1/321-z1RCT	3U VPX-REDI SATA Mass Storage Module, 2.5-inch SATA300 solid-state drive, conduction cooled, without 2 Level Maintenance covers (Type 2)

For drive type and capacity (option z) please contact local sales office