3U VPX-REDI Mass Storage Module

APPLICATIONS

The TR MS1/321-RCx mass storage module provides a flexible solution for designers wishing to add a 2.5-inch SATA300 mass storage drive to a 3U VPX-REDI system. The carrier accommodates a single 2.5-inch SATA300 solid-state drive and includes support for a CompactFlash™ Type-I card. The TR MS1/321-RCx is designed to work with a range of 3U conduction-cooled VPX-REDI systems. 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 TR MS1/321-RCS is a VPX-REDI Type 1 Two Level Maintenance conduction-cooled board and the TR MS1/321-RCT is VPX-REDI Type 2. For non-rugged applications a VPX version, the TR MS1/321, is available.

HIGHLIGHTS

- 3U VPX-REDI based Mass Storage Module supports a single 2.5-inch SATA300 solid-state 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 0.8-inch slot
- P1 VPX interface compatible with OpenVPX module profiles

- Supplied with a 2.5 inch SATA300 solid-state drive
- CompactFlash™ Type-I site available
- Non-ruggedized air-cooled VPX versions (N-Series):
  - rear plug compatible with the ruggedized versions
  - useful for bench development
- Concurrent Technologies also provide a range of 3U VPX-REDI single board computers supporting Intel® Core™ i7, Intel® Core™ 2 Duo and Intel® Atom™ processors

VPX-REDI Mass Storage Module
- 3U VPX-REDI Mass Storage Module supports:
  → a single 2.5-inch SATA300 solid-state drive (SSD)
  → Type-I CompactFlash® site
- conduction-cooled to VITA 48.2
- conformally coated
- compatible with several OpenVPX module profiles
- for non-ruggedized VPX (N-Series) versions:
  → commercial air-cooled
  → front panel interface aperture
  → see TR MS1/321 datasheet

CompactFlash Site
- CompactFlash Type-I site available:
  → implemented via SATA to EIDE interface connected to VPX P1 wafer 9 or 10

Compatible VPX-REDI System SBC
- 3U VPX Single Board Computer (SBC) examples:
  → TR 80x/39x-RCx, Intel® Core™ i7 processor
  → TR 501/36x-RCx, Intel® Core™ 2 Duo processor
  → TR A40/30x-RCx, Intel® Atom™ processor Z530
- contact your local sales office for the latest range of boards supported
- supported operating systems depend on the 3U VPX-REDI system controller SBC used

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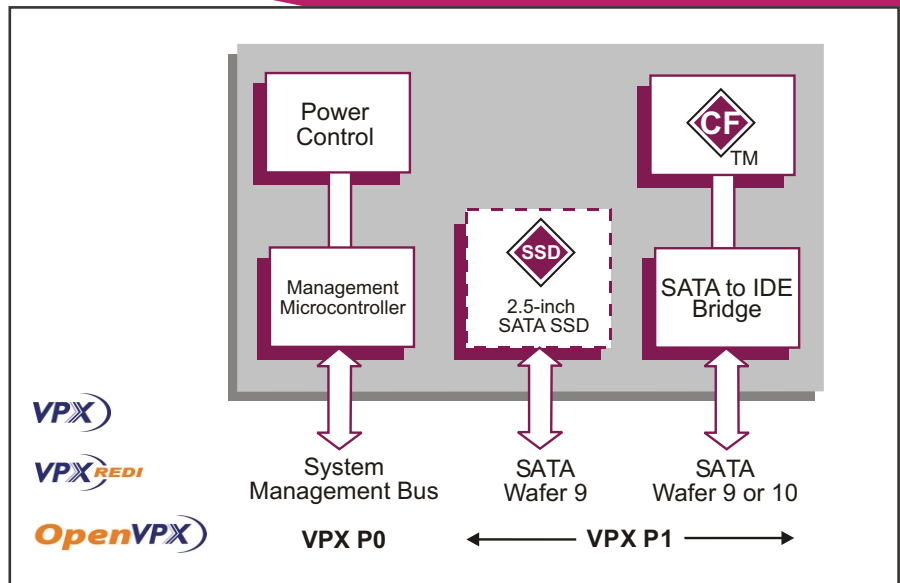 → MOD3-STO-2U-16.5.1-2

System Management
- System Management interface:
  → implements the SM0-1 interface
- on-board System Management Controller
- supports 8 Kbytes of non-volatile memory

Electrical Specification
- maximum current figures (including SSD)
- +5V VS3 @ 1.0A, voltage +5% / -2.5%
- +3.3V VS2 @ 0.2A, voltage +5% / -2%
- +3.3V AUX @ 0.2A, voltage +5% / -5%
- +12V AUX and -12V AUX are not required

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

Environmental Specification
- operating temperature (at card edge):
  → VITA 47 Class CC4, -40°C to +85°C
  → conduction-cooled (VITA 48.2)
- storage temperature:
  → VITA 47 Class C4, -55°C to +105°C
- operating altitude:
  → -1,000 to 50,000 feet (-305 to 15,240 meters)
- 5% to 95% Relative Humidity, non condensing (operating/storage)

Mechanical Specification
- 3U VPX form-factor (VITA 46.0, VITA 48.0): 3.9 inches x 6.3 inches (100mm x 160mm)
- slot widths (VITA 48.0):
  → 0.8 inches VPX-REDI Type 2, RCT-Series
  → 0.85 inches VPX-REDI Type 1, RCS-Series, Type 1 Two Level Maintenance (VITA 48.2)
- connectors to VITA 46.0 for P0, P1 and P2
- operating mechanical:
  → shock - VITA 47 Class OS2, 40g
  → random vibration - VITA 47 Class V3, 0.1g²/Hz

ORDERING INFORMATION

Order Number Product Description (Hardware)

For the order number suffix (-yzRCx) options please contact your local sales office: where -yzRCx = drive type/capacity and VPX-REDI Type 1 or Type 2

TR MS1/321-yzRCx   3U VPX-REDI SATA Mass Storage Module, conduction-cooled, RCS or RCT-Series

For drive type and capacity please contact local sales office
For further information on the VPX (N-Series) and VPX-REDI (RCx-Series) boards please contact your local sales office.