# DS MS1/0xx N, E, K - Series

# Multi-drive Mass Storage Module



# **APPLICATIONS**

The DS MS1/0xx VME Mass Storage Module supports up to three 2.5 inch SATA300 mass storage drives or a CD/DVD RW drive and one 2.5 inch drive. There is also support for a CompactFlash™ drive. The DS MS1/0xx is designed to work with one or more Concurrent Technologies VME or VXS single board computers simultaneously. The board 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, scientific and aerospace markets. In harsh environments, or ruggedized versions, Solid State Flash drives or ruggedized rotating drives are required and the CD/DVD RW drive is not supported.

# **HIGHLIGHTS**

- VME Mass Storage Module:
  - operates with one or more Concurrent Technologies VME or VXS single board computers (SBCs) simultaneously
  - interfaces to the SBCs' SATA and USB ports
- Various configurations available:
  - one, two or three 2.5 inch SATA300 drives
  - or one 2.5 inch SATA300 drive and a CD/DVD RW
- Supports a CompactFlash site (Type-I) in any configuration
- Two direct USB port connections from the VME P2 connector are routed directly to the front panel

- Extended temperature options also available:
  - -25°C to +70°C (E-Series)
  - -40°C to +85°C (K-Series, includes humidity sealant)
  - specialized drives are required
- Ruggedized versions:
  - -40°C to +75°C (RA-Series)
  - -40°C to +85°C (RC-Series)
  - conformally coated
  - Solid State (Flash) drives are required
- In harsh environments the CD/DVD RW drive configuration is not supported
- Optional rear transition module provides connection from the SBCs to the Mass Storage Module



# **Specification**

# Mass Storage Module

- DS MS1/0xx Mass Storage Module:
  - operates with one or more Concurrent Technologies VME or VXS single board computers (SBCs) simultaneously
  - → interfaces to the SBCs' SATA and USB ports
  - → SATA150 or SATA300 supported
  - → USB 1.1 and USB 2.0 supported
- various configurations available:
  - → one, two or three 2.5 inch SATA300 drives
  - → or one 2.5 inch SATA300 drive and a SATA CD/DVD RW
- supports a CompactFlash site (Type-I) in any configuration

## Compatible VME/VXS SBCs

- VME or VXS Single Board Computer (SBC):
  - commercial versions
  - > some versions ruggedized
- VP 717/08x, Intel® Core™ i7 processor
- VP A45/01x, Intel® Atom processor
- VX 541/06x, Intel® Core™ 2 Duo processor
- VX 511/06x, Intel® Core™ 2 Duo processor
- VX 407/04x, Intel® Core™ 2 Duo processor contact your local sales office for the latest range of boards supported

#### SATA and USB Interfaces

- one or more SBC SATA/USB connections can be made from the SBC to the DS MS1/0xx Mass Storage Module
- 3 x SBC SATA drive interfaces via P2:-
  - → 1 x SBC SATA interface connects to either a SATA drive or the SATA CD/DVD RW
  - → 2 x SBC SATA interfaces connect to 2 x SATA drives
- 4 x SBC USB ports via P2:-
  - → 1 x SBC USB port connects to the EIDE CompactFlash™ site
  - → 1 x SBC USB port connects to either a SATA drive or the SATA CD/DVD RW (N-Series only)
  - → 2 x USB port connections from the VME P2 connector are routed directly to the front
- the CB MSS/30p cable interface kit provides:-
  - → connection to the SATA and USB ports on P2
  - → SATA and USB interface cables
  - → rear transition module for the DS MS1/0xx

#### **Software Support**

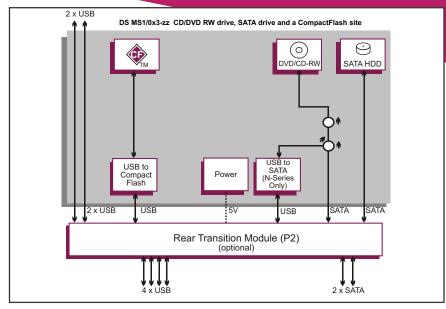
supported operating systems depend on the VME or VXS single board computer used

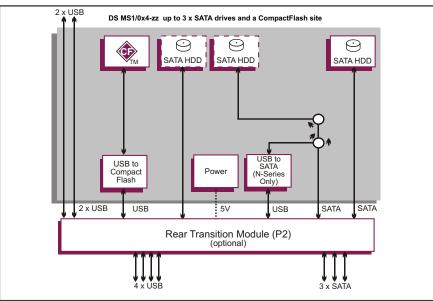
## Safety

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

### **Environmental Specification**

- in harsh environments specialized Solid State Flash drives are required:-
  - → CD/DVD RW drive is not supported
- operating temperatures:-
- → 0°C to +55°C (N-Series)
- → -25°C to +70°C (E-Series)
- → -40°C to +85°C (K-Series)
- → K-Series includes humidity sealant
- ruggedized versions:-
  - → rear plug compatible
  - → air-cooled: see DS MS1/0x4-RA datasheet
  - → conduction-cooled: see DS MS1/034-RC datasheet





## **Electrical Specification**

- requires 5V supply, typical current 0.2A
  - → maximum 1.1A per hard disk @ 5V
  - → maximum 1.5A CD/DVD RW @ 5V
- 3.3V, +12V and -12V supplies are not required

## **Mechanical Specification**

- 6U form-factor
- single slot, front panel width 0.8 inch (20.3mm)
- utilizes 160-way connectors for P1 and P2
  - → compatible with 96-way connectors



### ORDERING INFORMATION

Order Number **Product Description (Hardware)**  Replace the order number parameters with selections from the following: Where x = type of front panel handles Where zz = drive type/size/quantity

DS MS1/0x3-zz CD/DVD RW, SATA drive and a CompactFlash site DS MS1/0x4-zz up to 3 x SATA drives and a CompactFlash site

0 - VME handles 1 - VME64 handles zz - contact local sales office

CB MSS/30p-10 Cable Interface Kit: VME P2 rear transition module including 3 x SATA cables and 4 x USB cables

For cable interface kit 'p' options please contact local sales office For extended temperature and ruggedized versions please contact your local sales office