VL-EPHs-S1

SUMIT-micro™ SATA Adapter

- Supports two SATA drives
- Standard and RAID modes
- Full industrial temperature operation
- MIL-STD-202G shock/vibe

Highlights

SUMIT-micro Form Factor
Small footprint board expands any SUMIT™-based system.

SATA Interface
Supports two SATA drives and includes RAID 0 (Fast) and RAID 1 (Safe) operation.

Industrial Temperature
-40° to +85°C operation for harsh environments.

MIL-STD-202G
Qualified for high shock/vibration environments.

Overview

The VL-EPHs-S1 expansion module provides SATA interface capabilities for any SUMIT-based embedded system. With a small footprint, simplified interface, and extensive ruggedization, the VL-EPHs-S1 is an ideal solution for all SUMIT systems that require SATA capabilities.

The VL-EPHs-S1 is designed to support OEM applications where high reliability and long-term availability are required. From application design-in support, to the 5+ year production life guarantee, the VL-EPHs-S1 provides a rugged embedded computer solution with an excellent cost of ownership. The VL-EPHs-S1 is manufactured and tested to the highest quality standards and is fully RoHS compliant. Customization is available, even in low OEM quantities.

Details

The VL-EPHs-S1 expansion module is a 90 mm x 32 mm (3.54" x 1.26") mezzanine "SUMIT-micro" card that provides SATA signals via the PCIe lane of the SUMIT-A connector. It mounts to the top of the SUMIT stack using two hardware standoffs. The on-board SATA controller supports two SATA drives in normal, RAID 0 (Fast), or RAID 1 (Safe) configuration. The two standard latching SATA connectors are compatible with traditional rotating drives, as well as solid-state SATA drives. An EEPROM BIOS extension enables booting from a SATA device.

Designed for full industrial (-40° to +85°C) temperature operation; the VL-EPHs-S1 meets MIL-STD-202G specifications for mechanical shock and vibration for use in harsh environments.

The VL-EPHs-S1 is compatible with a variety of popular operating systems including Windows, Windows Embedded, Linux, VxWorks, and QNX.

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VL-EPHs-S1

SUMIT-micro SATA Adapter

Ordering Information

Model	SATA Ports	Operating Temp.	Stackable Bus
VL-EPHs-S1E	2	-40° to +85°C	SUMIT

Accessories

Part Number	Description
Cables	
VL-CBR-0701	19.75" SATA cable
VL-CBR-0702	19.75" SATA cable, latching
Drives	
VL-HDS35-xxx	3.5" hard drive (SATA)
Mounting Hardware	
VL-HDW-105	0.6" standoff package (metric thread)
VL-HDW-106	0.6" standoff package (English thread)
Miscellaneous	
VL-HDW-201	Board extraction tool

SUMIT Resources		
Form Factor: SUMIT-micro		
	SUMIT-A	SUMIT-B
PCIe x1	1	
PCIe x4		
USB	–	
ExpressCard	–	
LPC	–	
SPI/µWire	–	
SMBus/I²C	–	
+12V	–	
+5V	✓	
$+5V_{sb}$	–	
+3.3V	–	

SPECIFICATIONS

General	Board Size	SUMIT-micro: 32 mm x 90 mm (1.26" x 3.54")
	Power Requirements*	+5V@0.21A (1W) typ. (via SUMIT connector)
	Stackable Bus	SUMIT (top of stack only)
	Manufacturing Standards	IPC-A-610 Class 2 compliant
	RoHS	RoHS (2002/95/CE) compliant
Environmental	Operating Temperature	-40° to +85°C
	Storage Temperature	-40° to +85°C
	Airflow Requirements	Free air from -40° to +85°C
	Thermal Shock	5°C/min. over operating temperature
	Humidity	Less than 95%, noncondensing
	Vibration, Sinusoidal Sweep	MIL-STD-202G, Method 204, Modified Condition A: 2g constant acceleration from 5 to 500 Hz, 20 minutes per axis
	Vibration, Random	MIL-STD-202G, Method 214A, Condition A: 5.35g rms, 5 minutes per axis
	Mechanical Shock	MIL-STD-202G, Method 213B, Condition G: 20g half-sine, 11 ms duration per axis
Mass Storage	SATA Interface	Two SATA (Revision 2.0) ports. Bootable via BIOS extension. Latching right angle SATA connectors. Support for RAID 0 (Fast) and RAID 1 (Safe).
Software	BIOS	EEPROM BIOS extension to enable booting from a SATA device
	Operating Systems	Compatible with most x86 operating systems including Windows, Windows Embedded, Linux, VxWorks, and QNX

** Power specifications represent typical power draw at +25°C with +5V supply running Windows XP*

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