

XceedUltra2 SCSI Installation Manual

Introduction

The XceedUltra2 SCSI flash drives offer durable flash storage in an industry-standard 3.5" form factor and is RoHS-compliant. Available in 68-pin or 80-pin configurations, these drives provide a drop-in replacement for rotating hard disk drives. This document provides instructions for installing the XceedUltra2 SCSI drive in a host system.

ESD Caution



Static electricity may be discharged through the drive. In extreme cases, this may temporarily interrupt the drive operation or damage components.

Touch a grounded device, such as a computer case, prior to handling the drive.

Pre-Installation

Before beginning the installation, turn OFF the computer power and make sure you are properly grounded.

Jumper Sets

Both the 68-pin and 80-pin drives contain a 20-pin jumper area (J1). The 68-pin drives also include a 12-pin jumper area (JP1). These pins are used for setting the SCSI ID, write protect, and other functions. See Figure 1 and Figure 2 for locations and settings.

SCSI ID

Jumpers on pins 1-8 of J1 and JP1 determine the SCSI ID (no jumpers indicate ID 0). Refer to the Figure 5 for the jumper settings.

SCSI Termination

Because the XceedUltra2 SCSI drive does not contain any on-board termination circuits, Adtron recommends properly terminating each end of the bus in accordance with the SCSI Parallel Interface (SPI) specification.

Write Protect

By default, Write Protect is disabled. To enable Write Protect, place a jumper across pins 11 and 12 on J1 or pins 9 and 10 on JP1.

Parity

The XceedUltra2 SCSI SSD uses a parity bit to check for data errors. By default, parity checking is enabled. To disable parity, place a jumper across pins 13 and 14 on J1.

Interface	SCSI-3 interface
Size	101.7 mm [4.0"] W x 146.6 mm [5.8"] D x 25.5 mm [1.0"] H (max)
Weight	522.0 g [1.2 lbs] for 64 GByte drive (typ)
Power	5 V +/- 5% @ 2.0 A (max)

Table 1: Specifications

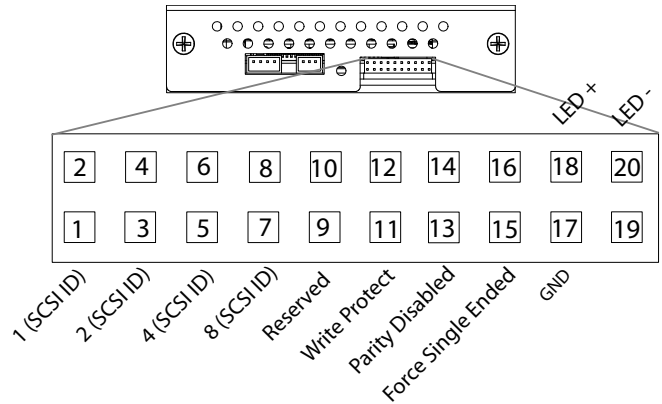


Figure 1. J1 Location and Settings

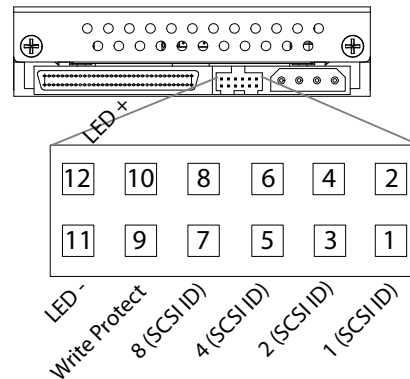


Figure 2. JP1 Location and Settings (68-Pin Drives Only)

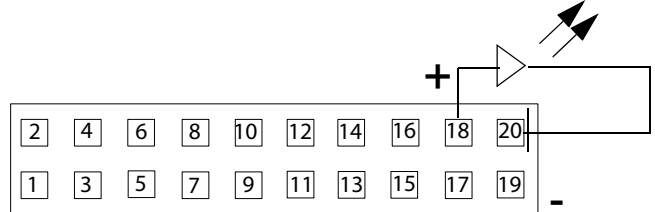


Figure 3. J1 Remote LED Connection

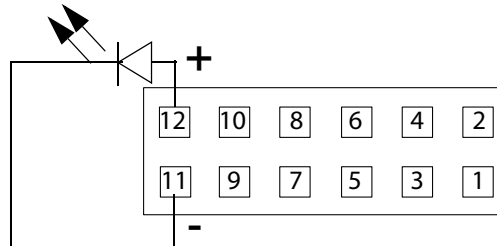


Figure 4. JP1 Remote LED Connection (68-Pin Drives Only)

Single-Ended (SE) and Low Voltage Differential (LVD)

All SCSI buses require a termination network at each end to function properly. Bus termination differs depending on the type of SCSI devices present on the bus, such as SE or LVD devices. The XceedUltra2 SCSI supports multi-mode active termination applications with SE and LVD SCSI devices on the same bus. The SCSI bus DIFFSENS signal determines the appropriate termination.

Placing a jumper across J1 pins 15 and 16 forces the XceedUltra2 SCSI SSD drive to operate in SE mode only. If left open, the drive operates as either SE or LVD, depending on the configuration mode. All configuration modes comply with the SCSI Parallel Interface-2 (SPI-2) specification.

Remote LED

J1 pins 18 and 20 and JP1 Pins 11 and 12 support the connection of a remote light emitting diode (LED). The output is active high and includes on-board, current-limiting resistance of 200 ohms.

To install the LED on J1, connect the positive lead to pin 18 and the negative to pin 20 (see Figure 3). To install the LED on JP1, connect the positive lead to pin 11 and the negative to pin 12 (see Figure 4). When installed, the LED indicates drive activity.

Installation

To install the XceedUltra2 SCSI drive, slide the drive into any standard 3.5" hard disk drive bay. Before securing the drive, consider the length of the provided screws (3/16") and the thickness of the mounting surface. DO NOT exceed the maximum insertion depth of 3.8 mm [.15"] from the drive edge (see Figure 6) or exceed the maximum torque of 3.0 to 3.5 kg-cm [2.6 to 3.0 lb-in].

Connecting the Cables

The 68-pin XceedUltra2 SCSI drive contains a 4-pin power connection (see Table 2 for pinout information). The 80-pin drive receives power through the SCSI connection.

Installing an Operating System

You can use a disk formatting and partitioning utility to format the drive like any standard hard disk drive. Once formatted, you can install any operating system that is compatible with SCSI devices. Because the method for installing a specific operating system may vary, Adtron recommends you consult the operating system or SCSI controller documentation for instructions.

	1	2	4	8		1	2	4	8	
SCSI ID 0	2	4	6	8		SCSI ID 8	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 1	2	4	6	8		SCSI ID 9	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 2	2	4	6	8		SCSI ID 10	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 3	2	4	6	8		SCSI ID 11	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 4	2	4	6	8		SCSI ID 12	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 5	2	4	6	8		SCSI ID 13	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 6	2	4	6	8		SCSI ID 14	2	4	6	8
	1	3	5	7			1	3	5	7
SCSI ID 7	2	4	6	8		SCSI ID 15	2	4	6	8
	1	3	5	7			1	3	5	7

Figure 5. SCSI ID Settings

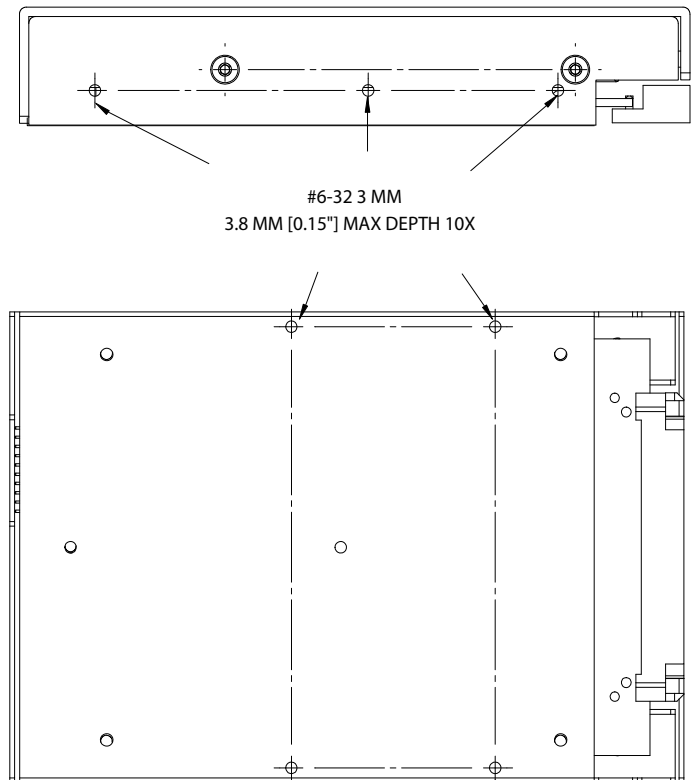


Figure 6. Mounting Hole Locations

Troubleshooting

Table 3 lists some common problems and possible solutions. For more information, visit the Adtron web site at www.adtron.com/support, send an e-mail to techsupport@adtron.com, or contact technical support at 602-735-0300 in the U.S.

Warranty

Adtron warrants this product to be free from defects in materials and workmanship for the duration of the warranty period. If this product fails within the warranty period due to such a defect, Adtron will repair or replace this product.

This warranty does not apply if this product has been damaged by abuse, accident, disaster, misuse or incorrect installation. There are no user-serviceable components within the XceedUltra2 SCSI drive.

Notice

This manual describes the features of the XceedUltra2 SCSI drive. Adtron reserves the right to modify, amend, or in any way change the contents and/or products described herein, at any time, without notification.

The information contained in this document is provided for reference only. Adtron Corporation does not assume any liability arising out of the application or use of the products described herein. This document may contain or reference information or products protected by copyrights or patents and does not convey any license under the patent rights of Adtron Corporation, nor the rights of others.

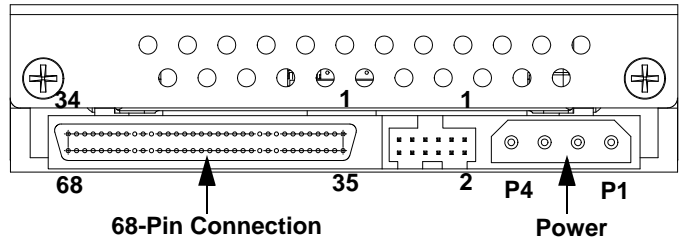


Figure 7. 68-Pin Connections

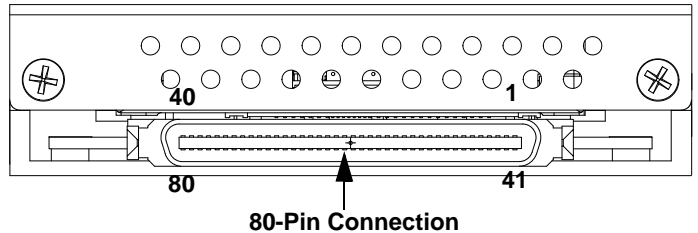


Figure 8. 80-Pin Connection

Pin	Description
P1	Not Connected (12 V Not Needed)
P2	Ground
P3	Ground
P4	+5 V

Table 2: Power Pinout (68-Pin Drives Only)

Problem	Possible Solution
The SCSI bus does not recognize the drive during the boot process.	1. Make sure the SCSI ID does not conflict with other SCSI devices. 2. Check for proper SCSI termination on each cable end.
The system hangs while booting.	
The drive has an external LED, and the light blinks even though the host is not accessing the drive.	Cycle power on the drive or on the entire system. If this does not resolve the issue, contact Adtron Technical Support.
The drive does not report the correct SCSI ID based on the jumper settings.	Make sure to use only one location to set the SCSI ID. Because the SCSI ID pins run parallel, setting the SCSI ID at multiple locations may alter the SCSI ID. For example, if J1 is set to SCSI ID 1 and JP1 or the backplane is set to SCSI ID 2, the drive will report SCSI ID 3.

Table 3: Troubleshooting



Adtron Corporation
 4415 E. Cotton Center Blvd.
 Phoenix, AZ 85040
 Tel: U.S. 602-735-0300
 Fax: U.S. 602-735-0349
<http://www.adtron.com>