


XceedSecure2 SATA Installation Manual

Introduction

The XceedSecure2 2.5" SATA flash drive with the Array-Pro™ performance engine delivers all the advantages of solid state flash disk technology with the advances of the Serial ATA (SATA) interface in an industry-standard 2.5-inch form factor. This document provides instructions for installing the XceedSecure2 SATA drive in a host system.

ESD Caution

 Static electricity may be discharged through the XceedSecure2 drive. In extreme cases, this may temporarily interrupt the operation or damage components. Touch a grounded device, such as a computer case, prior to handling the XceedSecure2 drive.

Pre-Installation

Before beginning the installation, turn OFF the computer power and make sure you are properly grounded. The XceedSecure2 drive metal casing is isolated and is not tied to DC (signal) ground.

J1 and JP1

The XceedSecure2 SATA drive contains two jumper areas: J1 and JP1. The J1 pins are used for configuring spread spectrum/fixed frequency. The JP1 pins are used for enabling Write Protect and installing an external secure erase trigger. See [Figure 1](#) and [Figure 2](#) for locations and settings.

Spread Spectrum Setting (J1)

By default, the XceedSecure2 SATA drive is set to spread spectrum frequency. To enable fixed frequency, install a jumper on J1 pins 3 and 4 (see [Figure 1](#)).

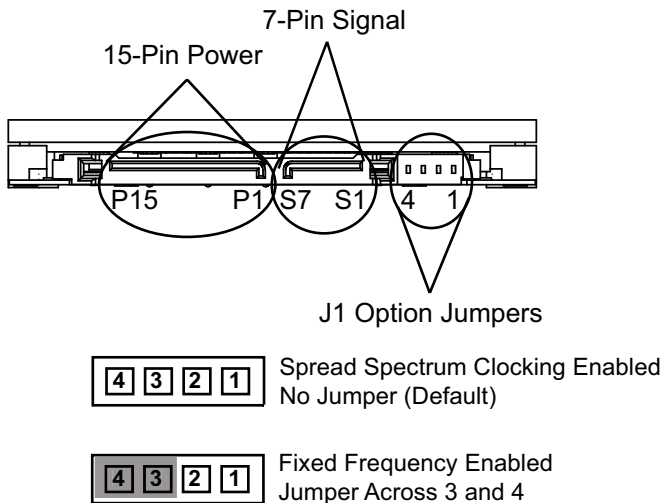


Figure 1: SATA Connections and J1 Locations and Settings

Indicators	One bi-colored (orange/green) LED
Interface	SATA 3.0 Gbps interface
Size	69.9 mm [2.75"] W x 101.6 mm [4.00"] D x 9.5 mm [.375"] H (max)
Weight	104.8 g [3.696 oz] for 128 GByte drive (typ)
Power	5 V +/- 5% @ 1.0 A for typical operation 5 V +/- 5% @ 1.7 A for Fast Clear and Initialize

Table 1: Specifications

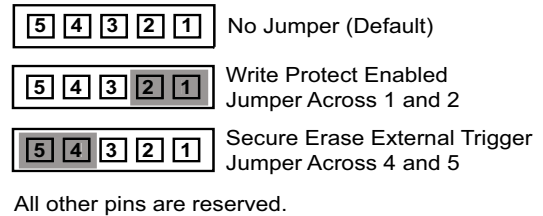
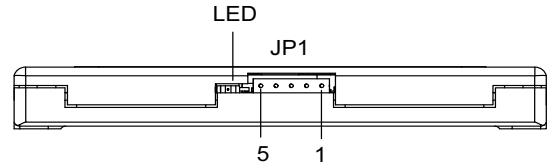


Figure 2: JP1 Locations and Settings

Pin	Signal
P1	Not Used (3.3 V)
P2	ERASE (3.3 V)
P3	Reserved (3.3 V)
P4	ERASE_RTN (GND)
P5	Ground
P6	Ground
P7	5 V
P8	5 V
P9	5 V
P10	Ground
P11	EXTERNAL_LED
P12	Ground
P13	Not Used (12 V)
P14	Not Used (12 V)
P15	Not Used (12 V)

Table 2: 15-Pin Power Segment

Pin	Signal
S1	Ground
S2	Dev Rx +
S3	Dev Rx -
S4	Ground
S5	Dev Tx -
S6	Dev Tx +
S7	Ground

Table 3: 7-Pin Signal Segment

Write Protect Setting (JP1)

The XceedSecure2 SATA drive provides a jumper option for enabling Write Protect. By default, Write Protect is disabled. To enable Write Protect, place a jumper across pins 1 and 2 on JP1 (see [Figure 3](#)).

Secure Erase Triggers

The XceedSecure2 drive supports two options for initiating a secure erase operation externally. One option uses the pins on JP1, and the other uses pins on the power segment. To use either trigger, you must first enable the feature as described in the *Adtron EraSure® Programmer's Guide*. Please contact Adtron Sales or Technical Support to request this guide for a complete secure erase reference.

Secure Erase External Trigger (JP1)

JP1 contains pins for installing a secure erase external trigger. To trigger the operation, make sure the feature is enabled, then short pins 4 and 5 on JP1 (see [Figure 2](#)).

Secure Erase with Host Connection

The drive also supports the initiation of secure erase operations through the host connection. To configure a trigger with the cable, make sure the feature is enabled, then either apply current directly to the ERASE pin (P2) or install a switch.

To use secure erase operations without a switch, provide a minimum of 10 mA at +3.0 V to +40 V through pin P2 on the power segment and a return on pin P4. The operation is initiated whenever the required current flows through these pins (see [Figure 3](#)). Because some standard SATA power connectors provide 3.0 V on the ERASE pin, verify the voltage on pin P2 before you use this configuration.

If installing a switch, connect the ERASE_RTN pin (P4) and a ground pin (P5) to a switch (see [Figure 4](#)). Then connect the ERASE pin (P2) to a 5 V pin (P8). When the switch is pressed, the return pin is grounded, initiating the secure erase operation. The minimum current is 10 mA at +3.0 V to +40 V.

External LED

Pin P11 on the power segment supports an external LED to a +3.3 or +5 V connector (see [Figure 5](#)). If using a remote LED, select a series resistor to limit the current to 10 mA or less. When connected, the remote LED indicates activity. See the *XceedSecure2 2.5" SATA Product Specification* for more details.

LED Indicators

The drive uses a bi-colored (orange/green) onboard LED to indicate the drive status. This LED is located next to JP1, as shown in [Figure 2](#). When power is first applied, the LED flashes green-orange while the drive performs a self-test. After the self-test, the LED remains green unless the host is accessing the drive or an error condition is encountered (see [Table 4](#)).

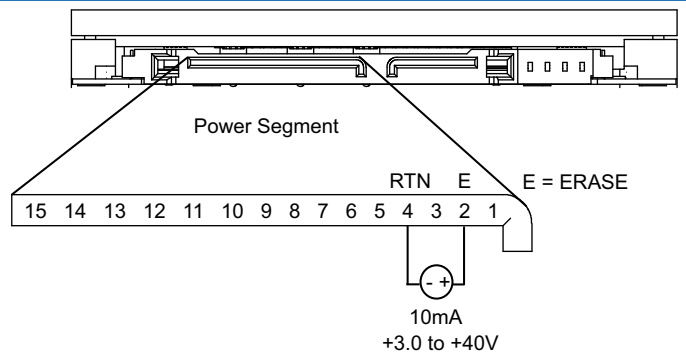


Figure 3: Secure Erase Trigger Through Power Cable w/External Drive Circuit

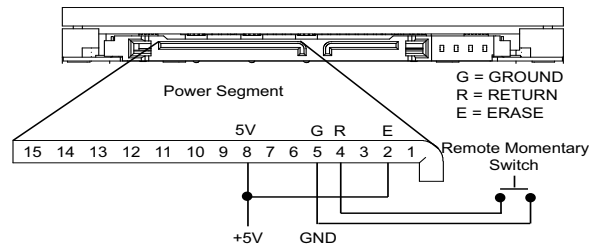


Figure 4: Secure Erase Trigger Through Power Cable Using Drive Power

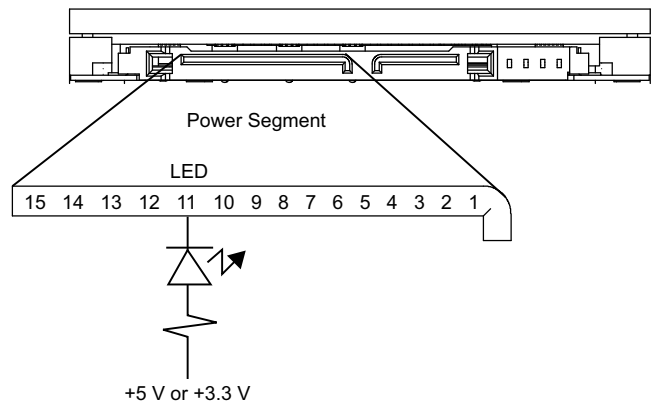


Figure 5: External LED

LED	Indicates
Solid green	Power is ON.
Orange	The host is accessing the drive.
Flashing in a pattern	A secure erase operation is in progress, the host does not recognize the drive, or an error occurred.

Table 4: LED Indicators

Installing the XceedSecure2 SATA Drive

The XceedSecure2 drive mounts from the side or the bottom into a standard 2.5" hard disk drive bay. Before securing the drive, consider the length of the provided screws (M3 x 0.5 x 4 mm) and the thickness of the mounting surface. DO NOT exceed the maximum insertion depth of 3 mm [0.118"] 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 Cable

Using a SATA cable, connect the XceedSecure2 drive to the SATA interface. The SATA cable provides +5 V power through the 15-pin power segment as shown in Figure 2. The XceedSecure2 SATA drive does not require 3.3 V or 12 V. Refer to Tables 2 and 3 for pins and signals for the SATA interface. Do NOT fold or crease the SATA signal cable. Doing so may cause the loss of data or data errors.

Installing an Operating System

You can use a disk formatting and partitioning utility to format the XceedSecure2 SATA drive like any standard hard disk drive. Once formatted, you can install any operating system that is compatible with SATA devices. Because the method for installing a specific operating system may vary, Adtron recommends you consult the operating system or SATA controller documentation for instructions.

Troubleshooting

Table 5 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 XceedSecure2 SATA drive.

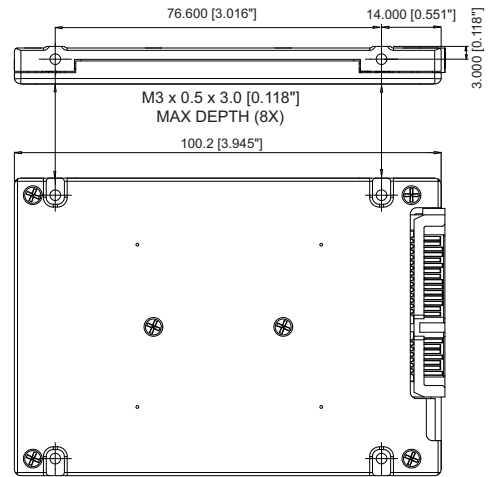


Figure 6: Mounting Holes

Problem	Possible Solution
The host computer does not recognize the XceedSecure2 SATA drive.	Make sure the SATA cables are seated and in good condition.
	Check the system BIOS settings for SATA devices. See the manufacturer's manual for information on BIOS settings.
The LED is lit, but the host reports a No Connect, and the system does not detect the XceedSecure2 drive.	Verify the SATA controller (host controller) clocking settings match the drive settings. By default, the XceedSecure2 is set to spread spectrum. Call Adtron Technical Support for additional information and instructions.
The operating system does not recognize the XceedSecure2 drive.	Check the host controller drivers. A SATA host controller and an appropriate software configuration are required for communicating with the XceedSecure2 drive.

Table 5: Troubleshooting

Notice

This manual describes the features of the XceedSecure2 SATA 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.

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