Adtron Flashpak® A25FB SATA Flash Disk Installation Manual

Introduction

Congratulations on your purchase of the Adtron Flashpak® A25FB flash disk with the Adtron ArrayPro™ performance engine! The A25FB 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.

Indicators	One bi-colored (red/green LED)
Interface	SATA interface
Size	69.9mm [2.75”] W x 101.6mm [4.00”] D Height: 9.5mm [.375”] to 22.5mm [.888”] (based on capacity)
Weight	Based on capacity
Power	5V +/- 5% @ 1.25 (max) (varies based on capacity)

Table 1 Specifications

ESD Caution

Static electricity may be discharged through the A25FB. 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 A25FB.

Pre-Installation

Before installing the A25FB, turn OFF the computer’s power and make sure you are properly grounded. Note that because the chassis ground and the DC ground are not tied together, the A25FB metal casing is isolated and is not grounded.

J1 and JP1

The A25FB contains two jumper areas: J1 and JP1. The J1 pins are used for configuring spread spectrum/fixed frequency. The JP1 pins provide an option for using an external secure erase trigger. See Figure 1 and Figure 2 for locations and settings.

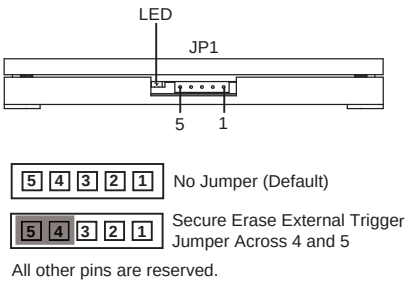

Figure 1 JP1 Locations and Settings

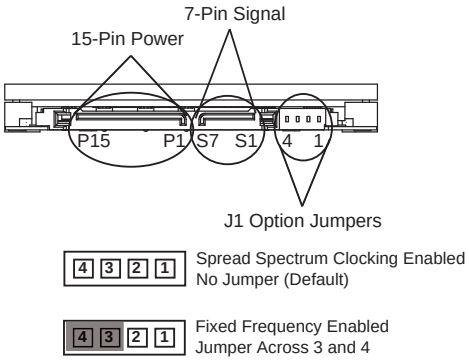

Figure 2 SATA Connections and J1 Configuration

Spread Spectrum Setting (J1)

By default, the A25FB is a set to spread spectrum frequency. To enable fixed frequency, install a jumper on J1 pins 3 and 4 (see Figure 2).

Secure Erase External Trigger (JP1)

JP1 contains pins for a secure erase external trigger. Shorting pins 4 and 5 on JP1 triggers the secure erase operation (see Figure 1). To use the external trigger, you must 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 reference of operations and methods.

Secure Erase with Host Connection

The A25FB supports the initiation of secure erase operations through the host connection. To configure a trigger with the cable, 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 10mA at +3.0V to +40V 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). It is important to note that some standard SATA power connectors provide 3.0V on the ERASE pin. Before you use this configuration, verify the voltage on pin P2.

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

Values in parentheses indicate the SATA specification.

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

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 5V pin (P8). When the switch is pressed, the return pin is grounded, initiating the secure erase operation. The minimum current is 10mA at +3.0V to +40V.

To use the connector trigger, you must 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 reference of operations and methods.

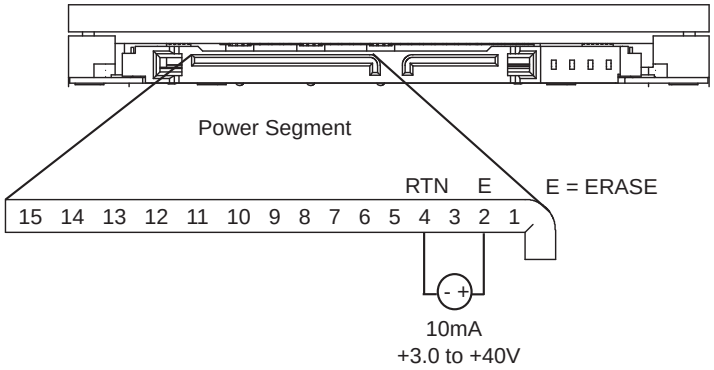

Figure 3 Secure Erase Trigger Through Power Cable w/External Drive Circuit

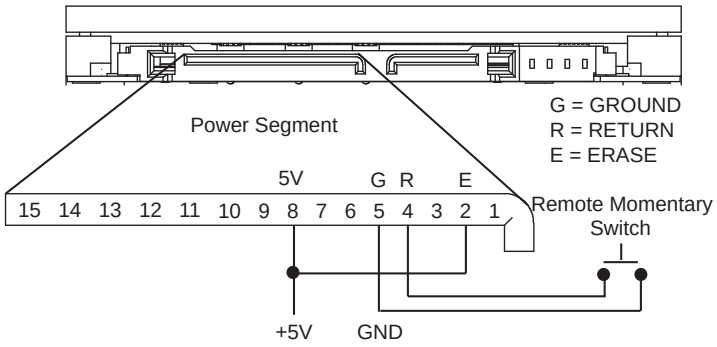

Figure 4 Secure Erase Trigger Through Power Cable Using Drive Power

External LED

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

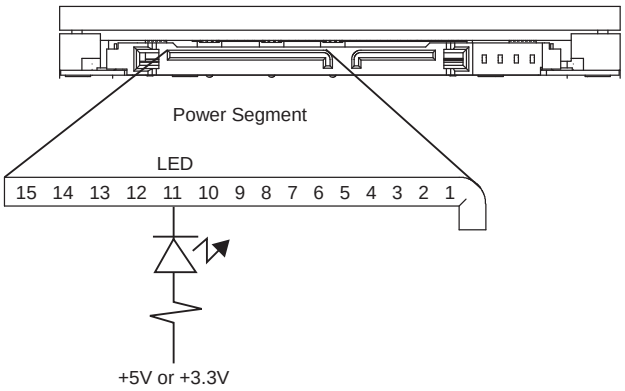

Figure 5 External LED

LED Indicators

The A25FB uses a bi-colored (green/red) onboard LED to indicate status. This LED is located next to JP1. When power is first applied, the LED flashes green-red while the A25FB 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 Figure 1 and Table 4).

LED	Indicates
Solid Green	Power is ON.
Red	Host is accessing the drive.
Flashing in Pattern	There is an error.

Table 4 LED Indications

Installing the A25FB

The A25FB mounts into a standard 2.5" hard disk drive bay and is mountable from the side or the bottom. Before securing the drive, consider the length of the provided screws (4mm) and the thickness of the mounting surface. **DO NOT** exceed the maximum insertion depth of 3mm [0.118"] from the drive edge (see Figure 6).

Connecting the Cable

Using a SATA cable, connect the A25FB to the SATA interface. The SATA cable provides +5V power through the 15-pin power segment as shown in Figure 2. The A25FB does not require 3.3V or 12V. Refer to Tables 2 and 3 for pins and signals for the SATA interface. **DO NOT** fold the SATA cable in a 90-degree angle. Doing so may cause the loss of data or data errors.

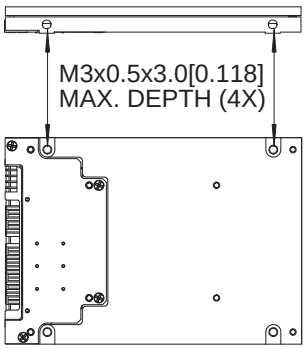

Figure 6 Mounting Holes

Installing an Operating System

You can use a disk formatting and partitioning utility to format the A25FB 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, it is recommeded 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 A25FB.

Notice

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Problem	Possible Solution
The host computer does not recognize the A25FB.	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 A25FB.	Verify the SATA controller (host controller) clocking settings match the drive settings. By default, the A25FB is set to spread spectrum. Call Adtron Technical Support for additional information and instructions.
The operating system does not recognize the A25FB.	Check the host controller drivers. A SATA host controller and an appropriate software configuration are required for communicating with the A25FB.

Table 5 Troubleshooting