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# **PCIe Adapter Kit (Part #: F-ADP-PCIE-T-KT) for the following Logicube products**

- **EchoPlus-NG (F-ECHOPLUS-NG)**
- **PCIe Bridge (F-ADP-PCIE-BRDG)**
- **SuperSonix-NG PCIe (F-SUPERSONIX-NG-P)**
- **Talon Ultimate-P (F-TALON-U-P)**
- **WriteProtect BAY (F-WP-BAY-P)**
- **WriteProtect DESKTOP (F-WP-DESKTOP-P)**
- **WriteProtect PORTABLE (F-WP-PORTABLE)**
- **ZXi-10G (F-ZXI-10G) with PCIe Expansion Module**

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# Application Note

## 1.0 Requirements & Logicube Device Compatibility

The PCIe Kit (part # F-ADP-T-PCIE-KT) is supported with the following products:

- EchoPlus-NG (F-ECHOPLUS-NG)
- PCIe Bridge (F-ADP-PCIE-BRDG)
- SuperSonix-NG PCIe (F-SUPERSONIX-NG-P)
- Talon Ultimate with the PCIe port (F-TALON-U-P)
- WriteProtect-BAY with the PCIe port (F-WP-BAY-P)
- WriteProtect-DESKTOP with the PCIe port (F-WP-DESKTOP-P)
- WriteProtect-Portable (F-WP-PORTABLE)
- ZXI-10G (F-ZXI-10G) with PCIe Expansion Module



If your SuperSonix-NG, Talon Ultimate or WriteProtect does not have the PCIe port, there are two options:

- You can use M.2 SSD Adapters for SATA and AHCI SSDs (click this [Application Note](#) for details). These adapters only support M.2 SSD Adapters for SATA and AHCI SSDs and do not support M.2 NVMe SSDs.
- Contact [sales@logicube.com](mailto:sales@logicube.com) for a product upgrade to add PCIe support.

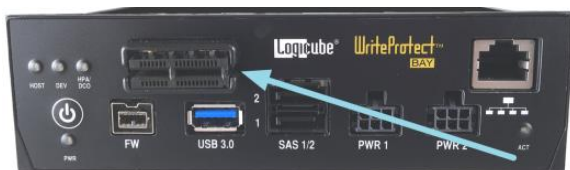
**SuperSonix with the PCIe port  
(F-SUPERSONIX-NG-P)**



**Talon Ultimate with the PCIe port  
(F-TALON-U-P)**



**WriteProtect-BAY with the PCIe port  
(F-WP-BAY-P)**



**WriteProtect-DESKTOP with the PCIe port  
(F-WP-DESKTOP-P)**



# Application Note

## 2.0 What's in the Box?

The following are included with the F-ADP-T-PCIE-KT:

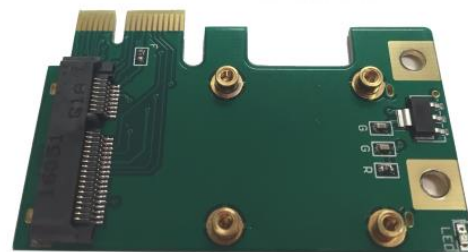
- QTY 1: M.2 to PCIe Adapter (F-ADP-M.2-PCIE) – For M.2 PCIe AHCI or NVMe SSDs.
- QTY 1: Mini PCIe (mPCIe) to PCIe Adapter (F-ADP-MINI-PCIE) – For Mini PCIe SSDs.
- QTY 1: M.2 to SATA Adapter (F-ADP-M.2-SATA) – For M.2 SATA SSDs.
- QTY 1: mSATA to SATA Adapter (F-ADP-Z-MSATA) – For mSATA SSDs.

## 3.0 Pictures (for Reference)

**F-ADP-M.2-PCIE**



**F-ADP-MINI-PCIE**



**F-ADP-M.2-SATA**



**F-ADP-Z-MSATA**



## 4.0 Understanding mini PCIe, mSATA, and M.2 SSDs

**mSATA and Mini PCIe (mPCIe)** – These SSDs have similar connectors. The mSATA SSD is Serial-ATA based, while the Mini PCIe is PCIe based. These two types of SSDs are not interchangeable.

**M.2 Solid State Drives (SSDs)** come with one of two types of physical layers (PHY) and three types of controllers:

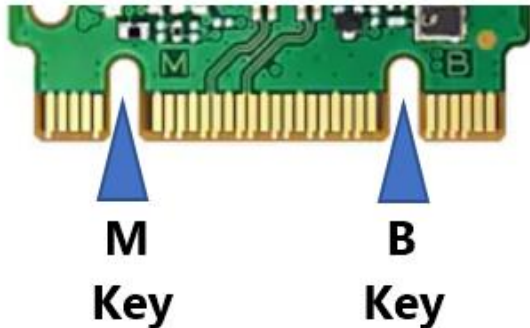
- **SATA physical layer** – SATA M.2 SSDs utilize the SATA controller.

# Application Note

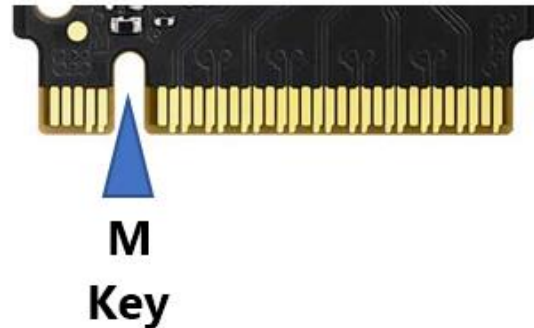
- **PCIe physical layer** – There are two controllers for PCIe M.2 SSDs: AHCI Controller or NVMe Controller

Typically, SATA M.2 SSDs have the “B & M key” while PCIe NVMe or PCIe AHCI SSDs may have the “M key” or the “B & M key”.

## SATA or PCIe NVMe SSD



## PCIe NVMe or AHCI SSD



Although the examples above are typical, Logicube recommends contacting the SSD manufacturer to determine whether the SSD has a SATA interface or a PCIe interface.

## 5.0 Connecting and Using the Adapters

There are four types of SSDs supported by the PCIe Kit (F-ADP-T-PCIE-KT):

- M.2 PCIe AHCI or NVMe based SSDs
- Mini PCIe (mPCIe) SSDs
- M.2 SATA based SSDs
- mSATA SSDs

### 5.1 M.2 PCIe AHCI or NVMe Based SSDs

M.2 PCIe AHCI or NVMe based SSDs require the M.2 to PCIe Adapter (F-ADP-M.2-PCIE) connected to the PCIe port. For NVMe SSDs that have both the M and B keys, the SSD should still fit into the M.2 to PCIe Adapter by connecting the M key portion of the connector to the M key slot of the adapter.



**The PCIe port is not hot-swappable. Always turn the Logicube device off when connecting or disconnecting drives through the PCIe port.**

# Application Note

1. Turn the Logicube device off.
2. Connect the SSD to the M.2 to PCIe Adapter (F-ADP-M.2-PCIE).
3. Connect the M.2 to PCIe Adapter to the PCIe port.
4. Turn the Logicube device on.



The images below are from a Talon Ultimate. Connecting the adapters to most other supported Logicube Products with the PCIe port is similar to these images:



The image below shows how the adapter should connect to a ZXI-10G PCIe Module.



## 5.2 Mini PCIe (mPCIe) SSDs

Mini PCIe (mPCIe) SSDs require the Mini PCIe to PCIe Adapter (F-ADP-MINI-PCIE) connected to the PCIe port.

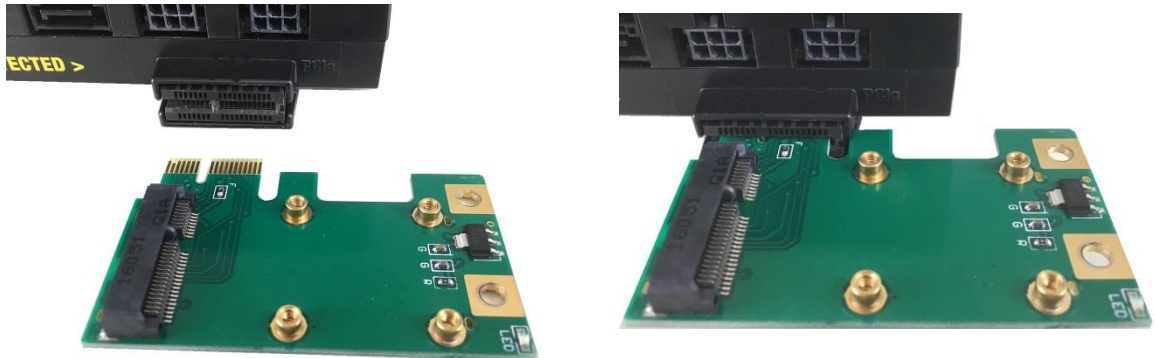


**The PCIe port is not hot-swappable. Always turn the Logicube device off when connecting or disconnecting drives through the PCIe port.**

1. Turn the Logicube device off.
2. Connect the SSD to the Mini PCIe to PCIe Adapter (F-ADP-MINI-PCIE).
3. Connect the Mini PCIe to PCIe Adapter to the PCIe port.
4. Turn the Logicube device on.



The images below are from a Talon Ultimate. Connecting the adapters to other supported Logicube Products with the PCIe port is similar to these images:



## 5.3 M.2 SATA based SSDs

M.2 SATA based SSDs require the M.2 to SATA Adapter (F-ADP-M.2-SATA) which connects directly to any of the SAS/SATA cables supplied with the Logicube device.

1. Connect the SSD to the M.2 to SATA Adapter (F-ADP-M.2-SATA).
2. Connect M.2 to SATA Adapter to the cable that is connected to the desired SAS/SATA port on the Logicube device (or connect the adapter to the cable, then the cable to the Logicube device).

## 5.4 mSATA SSDs

mSATA SSDs require the mSATA to SATA Adapter (F-ADP-Z-MSATA) which connects directly to any of the SAS/SATA cables supplied with the Logicube device.

1. Connect the SSD to the mSATA to SATA Adapter (F-ADP-Z-MSATA).
2. Connect mSATA to SATA Adapter to the cable that is connected to the desired SAS/SATA port on the Logicube device (or connect the adapter to the cable, then the cable to the Logicube device).