

PCIe Kit for the Forensic Falcon™-NEO (Part #: F-ADP-PCI-FN-KT)

Table of Contents

1.0 Requirements & Logicube Device Compatibility	1
2.0 What's in the Box?.....	1
3.0 Pictures (for Reference)	2
4.0 Understanding Mini PCIe and M.2 SSDs.....	2
5.0 Connecting and Using the Adapters.....	3
5.1 M.2 PCIe (NVMe or AHCI) SSDs.....	3
5.2 M.2 SATA based SSDs	4
5.3 Mini PCIe (mPCIe) SSDs.....	4
5.4 HHHL (half height, half length) and FHHL (full height, half length) PCIe SSDs.....	5
6.0 Imaging with the Forensic Falcon-NEO	5

1.0 Requirements & Logicube Device Compatibility

The PCIe Kit (part # F-ADP-PCI-FN-KIT) is only supported on the Forensic Falcon-NEO. There is no other additional hardware or software required aside from the Forensic Falcon-NEO to use this PCIe Kit.

2.0 What's in the Box?

The following are included with the PCIe Kit:

- QTY 1: M.2 to PCIe Adapter (F-ADP-M2-PCIE3)
- QTY 1: Mini PCIe (mPCIe) to PCIe Adapter (F-ADP-MINI-PCIE)
- QTY 1: M.2 to SATA Adapter (F-ADP-M.2-SATA)
- QTY 1: PCIe to PCIe extender cable (F-ADP-PCIE-CBL)

Application Note

3.0 Pictures (for Reference)

F-ADP-M2-PCIE3



F-ADP-MINI-PCIE



F-ADP-PCIE-CBL



F-ADP-M.2-SATA



4.0 Understanding Mini PCIe and M.2 SSDs

Mini PCIe (mPCIe) – Mini PCIe SSDs have similar connectors as an mSATA SSD. The Mini PCIe is PCIe based while the mSATA SSD is Serial-ATA based. These two types of SSDs are not interchangeable. Only use Mini PCIe SSDs with the Mini PCIe adapter.

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

The M.2 specification¹ has three types of connectors. As seen below, the B, M (and B & M) key connectors (based on the specifications) can be either SATA or PCIe.

¹ Sources:

Wikipedia: M.2

Storage Networking Industry Association (SNIA): Intro to M.2 SSDs

Application Note



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

5.0 Connecting and Using the Adapters

There are three types of SSDs supported by this PCIe Kit:

- M.2 PCIe NVMe or AHCI SSDs
- M.2 SATA SSDs
- Mini PCIe (mPCIe) SSDs
- HHHL (half height, half length) and FHHL (full height, half length) PCIe SSDs

5.1 M.2 PCIe (NVMe or AHCI) SSDs

M.2 PCIe (NVMe or AHCI) SSDs require the M.2 to PCIe Adapter (F-ADP-M2-PCIE3) connected to either the Source or Destination PCIe port.



The Source and Destination PCIe ports on the Falcon-NEO support hot swapping with M.2 SSDs. The Falcon-NEO does not need to be turned off to connect or disconnect M.2 SSDs on the Source or Destination PCIe ports.



Application Note

5.2 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 Falcon-NEO and can be connected to any SAS/SATA port (SAS_S1, SAS_S2, SAS_D1, SAS_D2, SATA_D3, SATA_D4).



5.3 Mini PCIe (mPCIe) SSDs

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



The Source and Destination PCIe ports on the Falcon-NEO support hot swapping with mPCIe SSDs. The Falcon-NEO does not need to be turned off to connect or disconnect mPCIe SSDs on the Source or Destination PCIe ports.



Application Note

5.4 HHHL (half height, half length) and FHHL (full height, half length) PCIe SSDs

HHHL and FHHL PCIe SSDs should be connected using the PCIe to PCIe extender cable (F-ADP-PCIE-CBL) connected to either the Source or Destination PCIe port.



The Source and Destination PCIe ports on the Falcon-NEO support hot swapping with PCIe SSDs. The Falcon-NEO does not need to be turned off to connect or disconnect PCIe SSDs on the Source or Destination PCIe ports.



6.0 Imaging with the Forensic Falcon-NEO

Once the SSD and the adapter(s) are connected to the Falcon-NEO, the SSD should appear either as a Source, Destination, or both depending on where the drive(s) are connected. When a drive appears as a Source, it can be used in an Image (as a Source) or Hash task. When a drive appears as a Destination, it can be used in an Image (as a Destination/Repository), Hash, or Wipe task.

For complete details on Image, Hash, or Wipe tasks, please refer to the Forensic Falcon-NEO User's manual which can be found on the Forensic Falcon-NEO product support page at:

<https://www.logicube.com/knowledge/forensic-falcon-neo>.

