

# Keysight Technologies M9021A PCIe Cable Interface

## Product Fact Sheet

### Industries and Applications

- Aerospace and defense
- Communications
- Electronics test
- Semiconductor testing

### Product Description

The M9021A PCIe® cable interface provides a link between the M9018A PXIe chassis and an external host computer. It can also be used to link multiple M9018A together or to link an AXIe chassis to the M9018A. Once installed in the chassis and connected to the computer via a standard PCIe cable, the M9021A provides a very high bandwidth serial link between the devices. This link is transparent to computer applications and allows direct control of PXI and PXIe modules. The M9021A utilizes special features built into the M9018A PXIe chassis and is not compatible with the PXIe system slot in other PXIe chassis.

### Main Features and Benefits

| Product features                                | Your benefit   |
|---|--|
| Gen 2 speeds and x8 PCIe links                  | Large data rate supports high-performance applications                         |
| Standard PCIe over cable                        | Use with any computer with an x8 PCIe interface                                |
| Transparent operation with application software | Provides ease of installation  |
| Target and Host modes                           | Enables large PXIe systems or mixed PXIe-AXIe systems with a single controller |

Connector compatibility: M9018A



### Characteristics

| Hardware                        |   |
|---------------------------------|---|
| Size                            | 1-slot 3U   |
| PCIe link configuration         | Gen 2 x8 link to primary M9018A<br>Gen 1 x8 link to secondary M9018A or M9502A/M9505A in multi-chassis configurations         |
| Data bandwidth (max)            | 4 GB/s to external controller<br>4 GB/s to primary M9018A backplane<br>2 GB/s between chassis in multi-chassis configurations |
| Front panel connector           | x8 PCIe cable connector   |
| Front panel indicators          | LEDs for PCIe lane status   |
| Power consumption               | 5 W (typical)   |
| Cable length                    | Up to a 2 meter passive cable supported   |
| Output states                   | Driven high, driven low, or off   |
| Low-side driver output voltage  | 0.3V @ Isink = 0.5A   |
| High-side driver output voltage | Vext – 1.5 V @ Isource = 0.4 A  |

## Typical Product Configuration

| Model  | Description             |
|--------|-------------------------|
| M9021A | PCIe cable interface    |
| M9048A | PCIe desktop PC adapter |
| Y1202A | 2m PCIe cable           |

## Multi-Chassis Configuration

The M9021A can be used with the M9018A PXIe Chassis to build multi-chassis systems. Up to four chassis can be connected together depending on the controller and operating system used. Many different topologies are possible including cascade and star. Two examples are shown below.

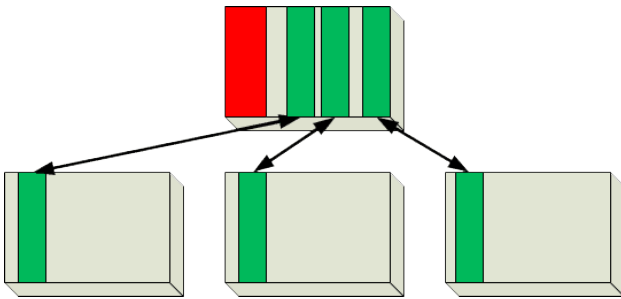


Figure 1. Star configuration with M9036A Embedded Controller and M9021A PCIe interface

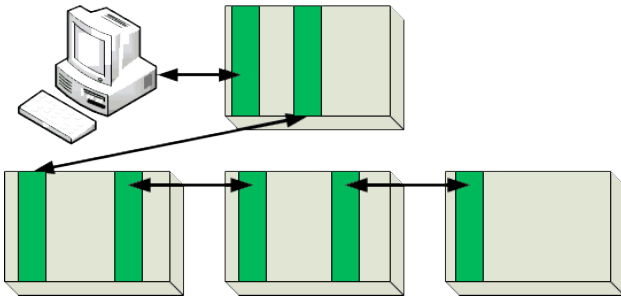


Figure 2. Cascade configuration with External Controller and M9021A PCIe interface

The M9502A/M9505A AXIe Chassis can be linked to a M9018A PXIe Chassis in a star configuration or as the last chassis in a cascade configuration. For more detailed configuration information, see: [www.keysight.com/find/pxie-multichassis](http://www.keysight.com/find/pxie-multichassis)

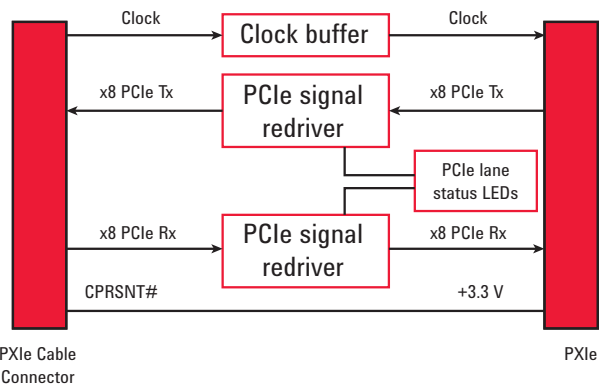


Figure 3. M9021A diagram

## Ordering Information

| Model                   | Description                                   |
|-------------------------|---|
| M9021A                  | PCIe cable interface: Gen 2, x8               |
| <b>Related products</b> |   |
| M9018A                  | PXIe chassis: 18-slot, 3U, 8GB/s              |
| M9045B                  | PCIe ExpressCard adaptor: Gen 1               |
| Y1200B                  | PCIe cable: x1 to x8, 2.0m (used with M9045B) |
| M9048A                  | PCIe desktop PC adapter: Gen 2, x8            |
| Y1202A                  | PCIe cable: x8, 2.0 m (used with M9048A)      |

### Advantage Services: Calibration and Warranty

Keysight Advantage Services is committed to your success throughout your equipment's lifetime.

|          |                                       |
|----------|---------------------------------------|
| Standard | Return to Keysight Warranty - 3 years |
|----------|---------------------------------------|

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