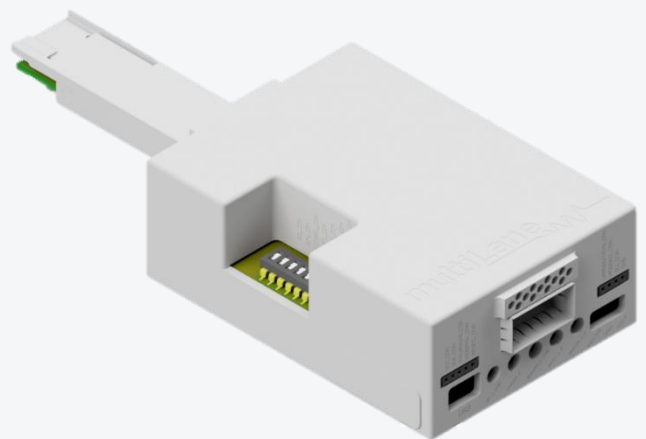


# Nexus Hardware QSFP-DD

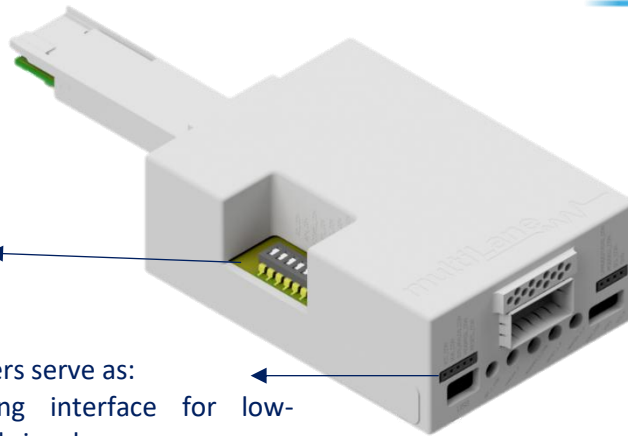
Technical Product Sheet

Nexus HW is the basic hardware package which provides 800G SI paths between host and module, with diagnostic probing interface for low-speed signals.



# Nexus Hardware QSFP-DD

The DIP switch enables selecting the connection between the plug side and the connector side.



- Pin headers serve as:
- Probing interface for low-speed signals
  - Connecting to external driver in the case of external signal mode

## Front Shell Overview of Nexus QSFP-DD:

The front of the Nexus QSFP hardware has a port for module insertion and a probing interface for low-speed signal access. Additionally, the other openings are reserved for the Nexus PRO version, which includes a USB port, LED indicators, and a switch.

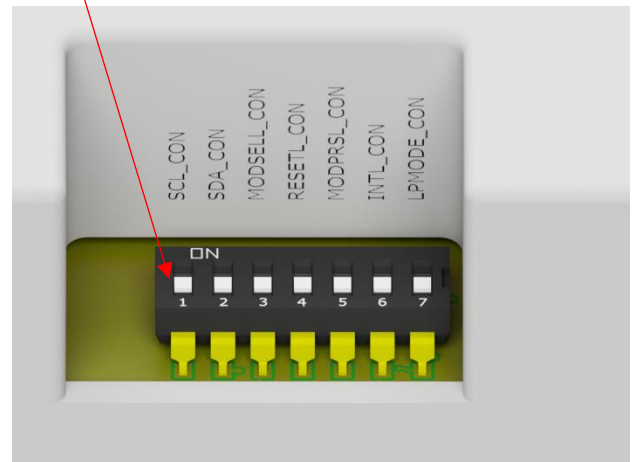
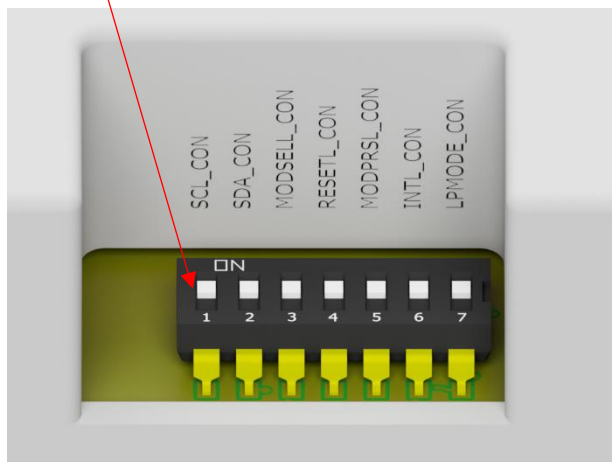


## Dip switch of Nexus QSFP-DD:

The DIP switch on the interface can be turned ON or OFF based on their position:

**ON Position:** Move the switch towards the outer side (away from the numbers on the switch).

**OFF Position:** Move the switch towards the inner side (closer to the numbers on the switch).

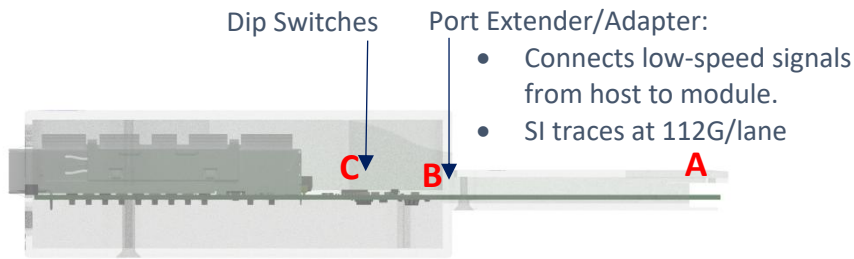


## Nexus Adapter has the following Features:

- SI traces and connector support 112G rates
- Support up to 30W modules
- Probing interface for Vcc and GND pins – only used for probing and cannot be used to provide power
- Probing interface for low-speed signals
- Monitor and Control I2C externally
- Available in CMIS form factor

When using Nexus Hardware (ML4066-NX-HW-QSFP-DD), ensure that all DIP switches are set to ON to establish a connection between the plug side and the connector side, enabling control and communication between the host and the module.

QSFP-DD		
Low-speed signals	Dip switch ON	Dip switch OFF
	Plug connected to Connector	Plug disconnected to Connector
<b>SCL</b>	I2C will be working if also SDA (Switch #2), and MODSEL (Switch #3, also must be in logic low from the host)—need to be ON.	Signal <b>cannot</b> be reached from the host INTERFACE to the module – no impact over the probing interface – no I2C working
<b>SDA</b>	I2C will be working if also SCL (Switch #1), and MODSEL (Switch #3, also must be in logic low from the host)—need to be ON	
<b>MODESELL</b>	Signal can be controlled from the host INTERFACE and tested over the probing interface	
<b>INTL</b>	Signal can be read over the host INTERFACE and tested over the probing interface	Signal <b>cannot</b> be reached from the host INTERFACE to the module – no impact over the probing interface
<b>LPMODE</b>	Signal can be controlled from the host INTERFACE and tested over the probing interface	
<b>MODPRSL</b>	Signal can be read over the host INTERFACE and tested over the probing interface	
<b>RESETL</b>	Signal can be controlled from the host INTERFACE and tested over the probing interface	

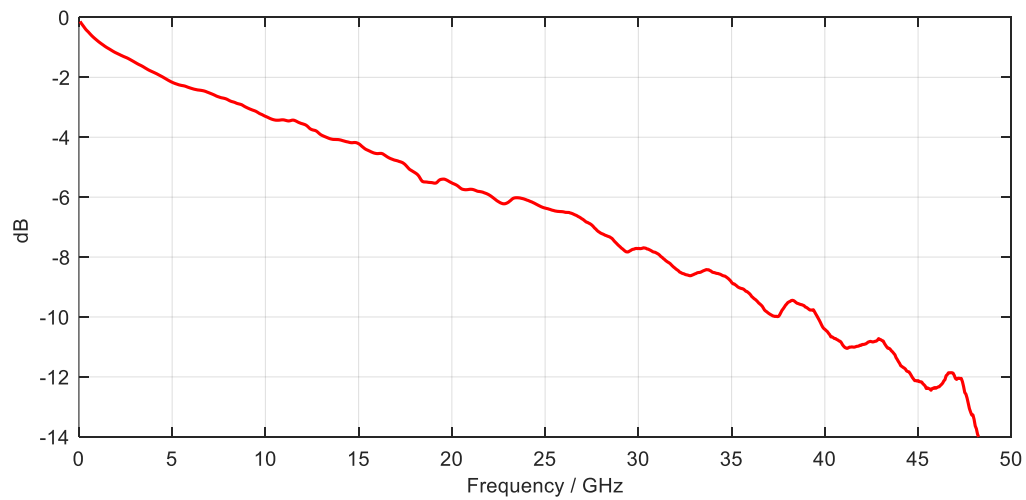


**A:** Signals from host side at NX-HW plug

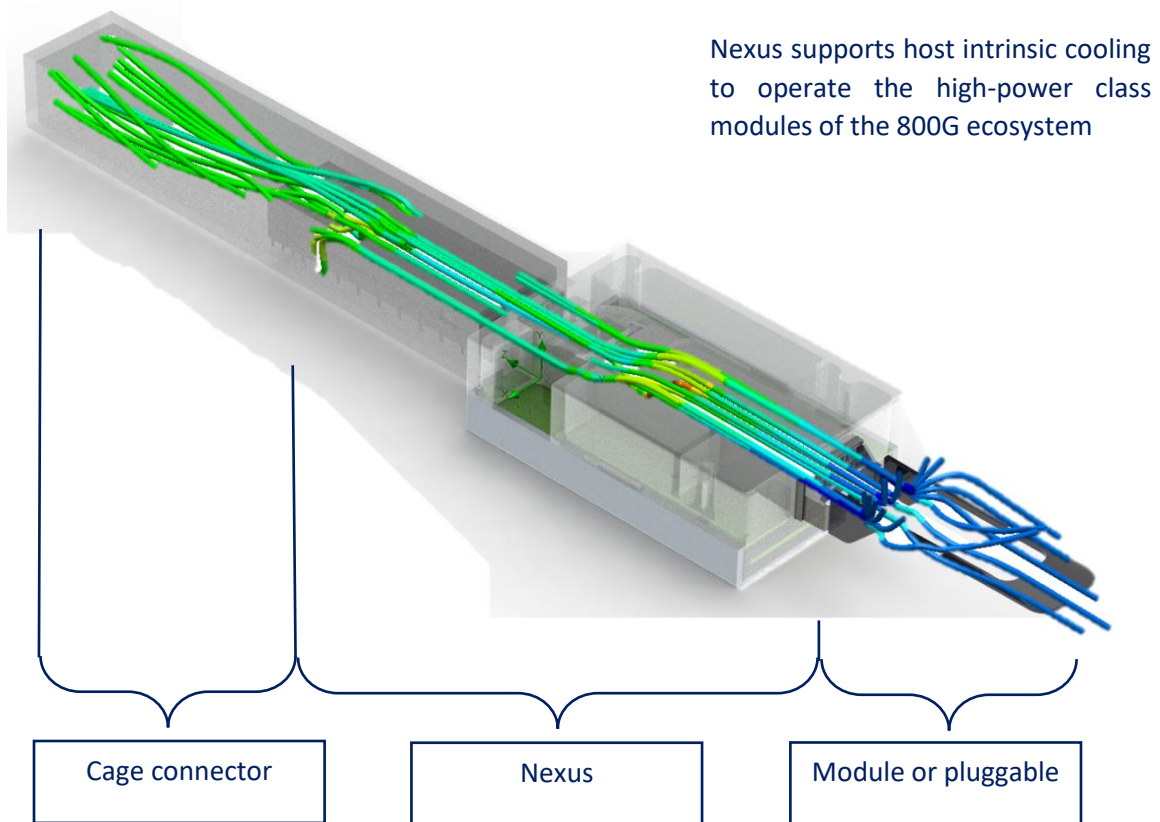
**B:** Signals to NX-HW connector inside Nexus, going to the dip switches

**C:** If the switches are on the signals will be delivered to the module

### Measured Insertion Loss data of 800G QSFP-DD Adapter:

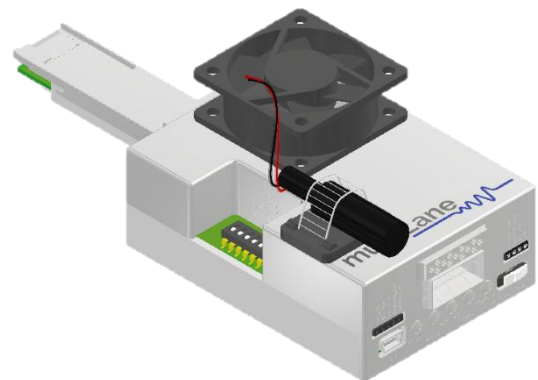


### Host Intrinsic Cooling:



### External Cooling:

As a second cooling option, Nexus HW is also available with a mounted fan fixture, requiring a separate voltage supply of 12V to operate. This works independently of host cooling.



## Ordering Options

Ordering Options	Description
ML4066-NX-HW-OSFP	Nexus HW is the basic hardware package only which provides 800G SI paths between host and module, with diagnostic probing interface for low-speed signals. <b>Host intrinsic cooling</b>
OR ML4066-NX-HW-OSFP-F	<b>OR Fan option</b>
ML4066-NX-Pro-OSFP	Nexus Pro includes the hardware package and the software license. It enables all Nexus INTERFACE features including all CMIS updates. <b>Host intrinsic cooling.</b>
OR ML4066-NX-Pro-OSFP-F	<b>OR Fan option</b>
ML4066-NX-HW-QDD	Nexus HW is the basic hardware package only which provides 800G SI paths between host and module, with diagnostic probing interface for low-speed signals <b>Host intrinsic cooling.</b>
OR ML4066-NX-HW-QDD-F	<b>OR Fan option</b>
ML4066-NX-Pro-QDD	Nexus Pro includes the hardware package and the software license. It enables all Nexus INTERFACE features including all CMIS updates. <b>Host intrinsic cooling.</b>
OR ML4066-NX-Pro-QDD-F	<b>OR Fan option</b>
ML4066-NX-HW-QSFP	Nexus HW is the basic hardware package only which provides 800G SI paths between host and module, with diagnostic probing interface for low-speed signals <b>Host intrinsic cooling.</b>
ML4066-NX-Pro-QSFP	Nexus Pro includes the hardware package and the software license. It enables all Nexus INTERFACE features including all CMIS/SFF updates. <b>Host intrinsic cooling.</b>



### North America

48521 Warm Springs Blvd.  
Suite 310  
Fremont, CA 94539, USA  
+1 510 573 6388

### Worldwide

Houmal Technology Park  
Askarieh Main Road  
Houmal, Lebanon  
+961 81 794 455

### Asia

7th Floor-2, No. 156  
Sec. 2, Dongda Road, North District,  
Hsinchu City 300, Taiwan (R.O.C.)  
+886 3 5744 591

### UAE

Building 4WA, Office 420  
Dubai Airport Freezone Authority,  
Dubai, UAE  
+971 4 548 7 547