

# Nexus Hardware OSFP

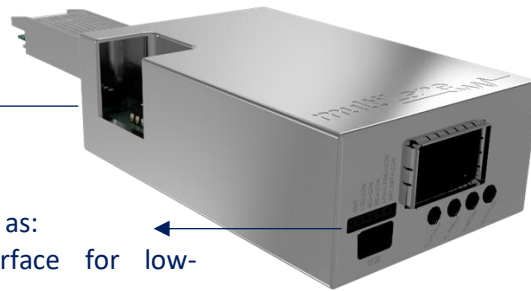
Technical Product Sheet

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 OSFP

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

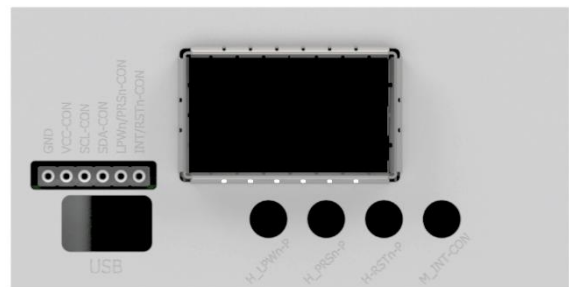


Pin headers serve as:

- Probing interface for low-speed signals
- Connecting to external driver in the case of external signal mode

## Front Shell Overview of Nexus OSFP:

The front of the Nexus OSFP 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 and LED indicators.

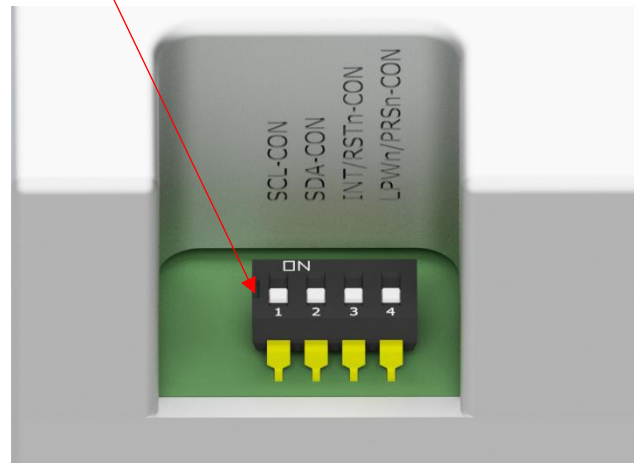
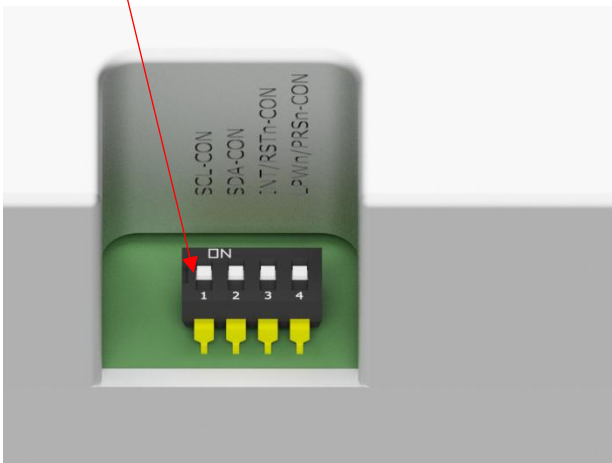


## Dip switch of Nexus OSFP:

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).



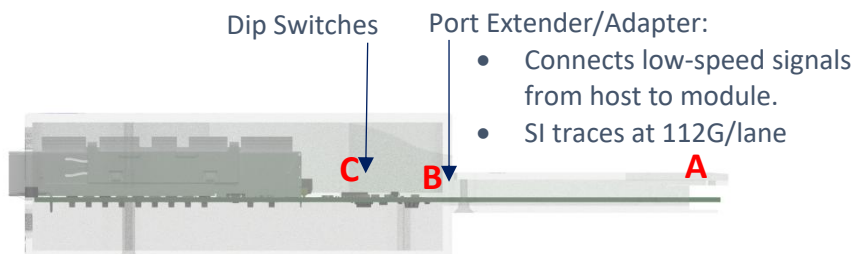
## Nexus Adapter has the following Features:

- 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-OSFP), 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.

To have a working I2C, both—SCL (Switch #1), SDA (Switch #2)—need to be turned ON.

OSFP		
Low-speed signals	Dip switch ON	Dip switch OFF
	Plug connected to Connector	Plug disconnected to Connector
SCL	I2C will be working if also SDA (switch #2) is ON	Signal <b>cannot</b> be reached from the host INTERFACE to the module – no impact over the probing interface – no I2C working
SDA	I2C will be working if also SCL (switch #1) is ON	
INT/RSTn	Signal is connected from host to module side and provide RSTn control and INT read	Signal <b>cannot</b> be reached from the host INTERFACE to the module – no impact over the probing interface
LPWn/PRSn	Signal is connected from host to module side and provide LPWn control and PRSn read	

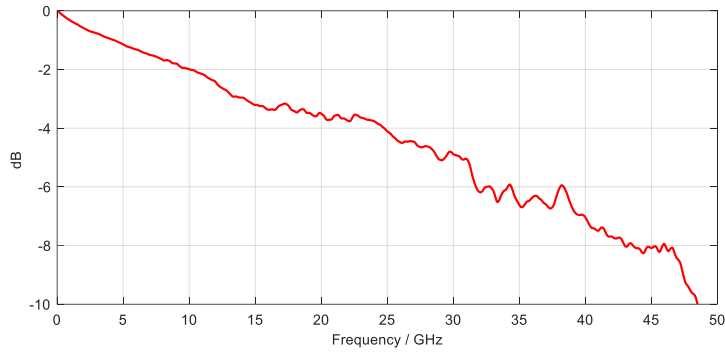


**A:** Signals from host side at NX-HW plug

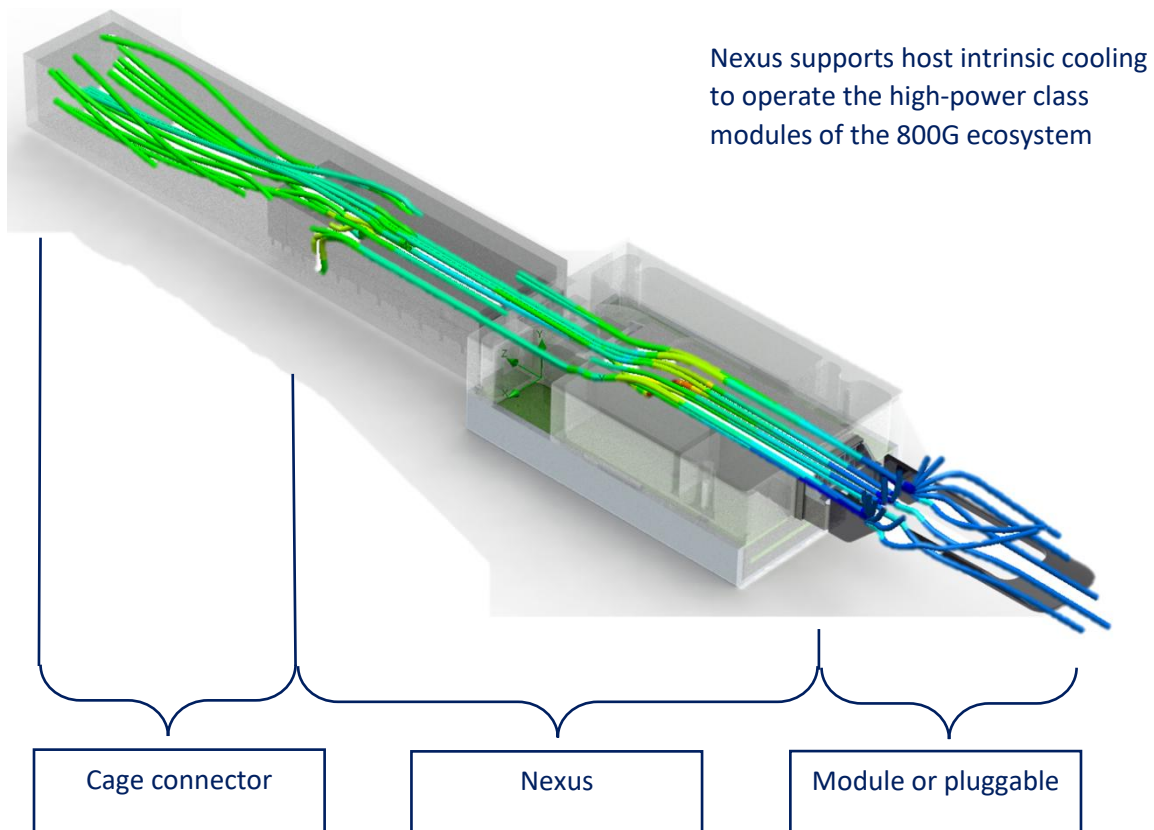
**B:** Signals to NX-HW connector inside Nexus, going to the dip switches

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

### Measured Insertion Loss data of 800G OSFP 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>

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