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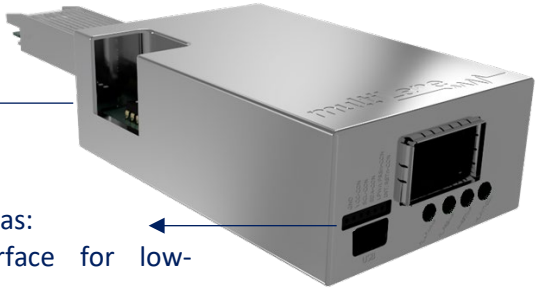
# Nexus Hardware OSFP

**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.



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

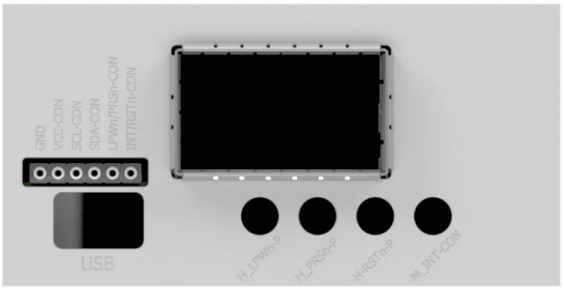


Pin headers serve as:

- 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.

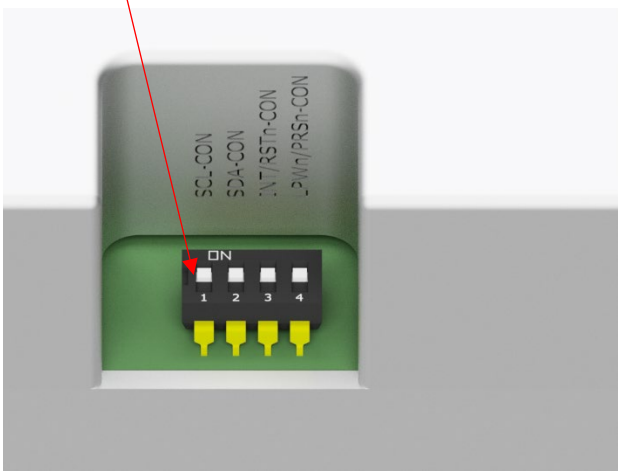


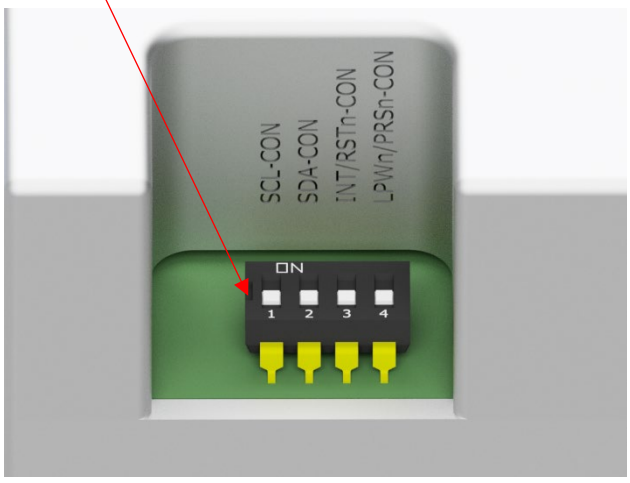

## Dip switch of Nexus OSFP:

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).



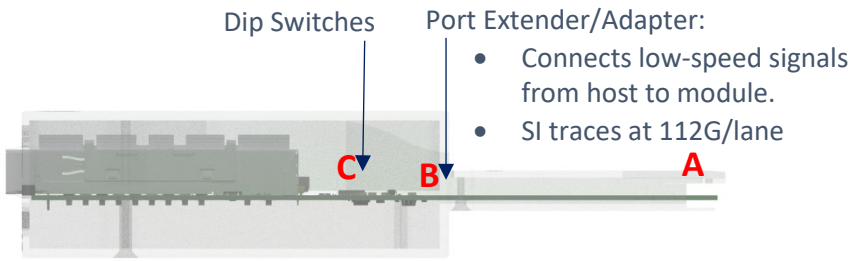



## Nexus Adapter has the following Features:

- 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 **cannot** 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 **cannot** 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 | |

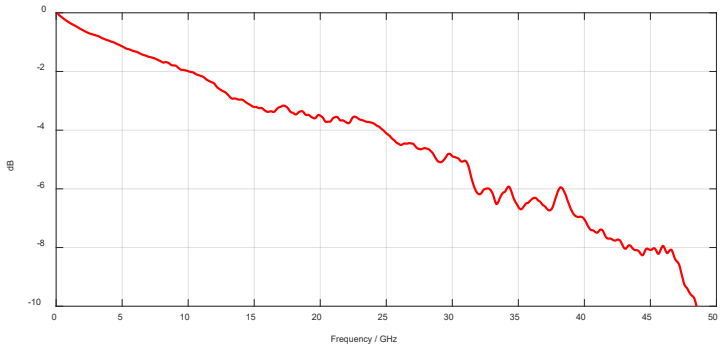



**A:** Signals from host side at NX-HW plug

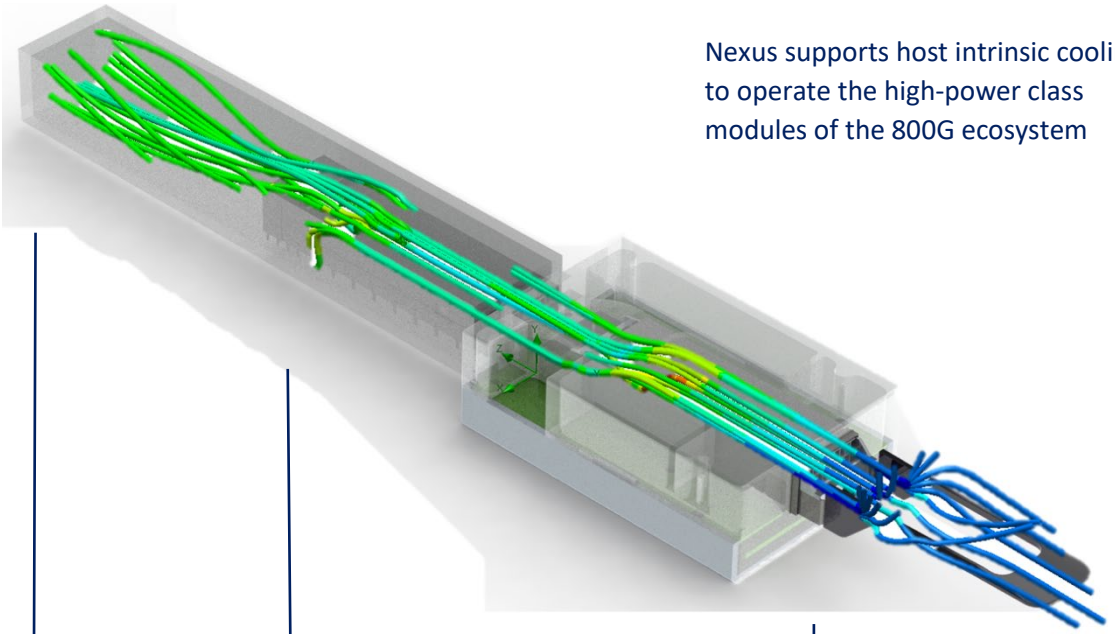
**B:** Signals to NX-HW connector inside Nexus, going to the dip switches

**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:



Nexus supports host intrinsic cooling to operate the high-power class modules of the 800G ecosystem

Cage connector

Nexus

Module or pluggable

## 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<br><br>OR ML4066-NX-HW-OSFP-F | 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.<br>**Host intrinsic cooling.**<br>**OR Fan option** |
| ML4066-NX-Pro-OSFP<br><br>OR ML4066-NX-Pro-OSFP-F | Nexus Pro includes the hardware package and the software license. It enables all Nexus INTERFACE features including all CMIS updates.<br>**Host intrinsic cooling.**<br>**OR Fan option** |
| ML4066-NX-HW-QDD<br><br>OR ML4066-NX-HW-QDD-F | 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<br>**Host intrinsic cooling.**<br>**OR Fan option** |
| ML4066-NX-Pro-QDD<br><br>OR ML4066-NX-Pro-QDD-F | Nexus Pro includes the hardware package and the software license. It enables all Nexus INTERFACE features including all CMIS updates.<br>**Host intrinsic cooling.**<br>**OR Fan option** |
| 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<br>**Host intrinsic cooling.** |
| 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.<br>**Host intrinsic cooling.** |