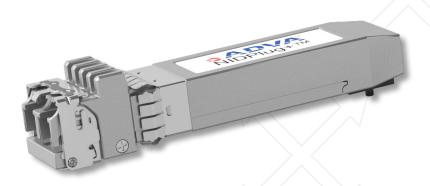# NIDPlug+™

10G small form factor pluggable (SFP+) network interface device (NID)

The ever-increasing demand for bandwidth means that communication service providers and mobile operators need to deliver high-speed Carrier Ethernet in environments where standalone demarcation solutions can't be deployed. With its low-power consumption, our NIDPlug+™ offers a highly cost-effective route to getting more from existing infrastructure . Now, operators can easily plug this technology into an existing switch, router or other customer premises device that requires network connectivity. The NIDPlug+™ empowers operators to scale up their network capabilities while ensuring lower cost per bit and reducing the expense of ongoing operations.

Our NIDPlug+™ extends the applicability of our market-leading FSP 150 packet edge family with a 10Gbit/s NID in an SFP form factor. It's the ideal solution for creating demarcation points in space-restricted locations – a key requirement for the rollout of 5G connectivity and IoT technologies. Needing no additional real estate, the SFP+ device uses less than 2.5 watts and is powered directly from customer premises equipment. It offers sophisticated OAM capabilities as well as stringent synchronization requirements. What's more, the ADVA NIDPlug+™ is managed by ADVA's Ensemble Controller and Ensemble Packet Director. This gives operations teams intuitive and comprehensive network control, ensuring the highest levels of service quality and first-class customer experience. The NIDPlug+ supports a comprehensive set of Carrier Ethernet and Layer 2 connectivity services, building on our widely deployed MEF 3.0 -certified Carrier Ethernet products. It has remote IP management via an inband data communications network (DCN) interface that supports SNMP traps. What's more, our NIDPlug+ offers digital diagnostics monitoring (DDM) that provides the capability to monitor real-time parameters such as optical output power, optical input power and temperature.

Your benefits

10G demarcation
Carrier Ethernet and Layer 2 demarcation device for space-constrained installations

Service layer monitoring
Monitors real-time traffic and supports end-to-end service level loopback to troubleshoot services and supports OAM service monitoring

Extensive temperature range
Operates in extended operating temperature range

Management
Support for remote IP management over fiber for data communication network for SNMP traps, Syslog, Network Time Protocol (NTP) and DDM to check health status of services

Small and compact design
Small size and compact design make the NIDPlug+™ a powerful demarcation device for 10Gbit/s services
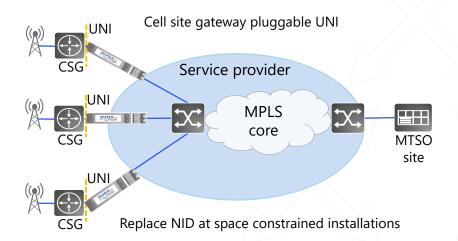
Operating power consumption
Industry's lowest power consumption on 10Gbit/s interfaces

High-level specifications

Parameters	Values
Module type	SFP+
Transmitter fiber type	8/125 µm SM
Receiver fiber Type	8/125 µm SM
Connector	Duplex LC
Temperature range	-40 to +70° C (-40 to 158°F)
Environmental standards compliance	Telcordia SR-3580 Level 3 (NEBS) compliant IEC 60529 IP20, indoor office FCC 15 subpart Class B
OPR/OPT accuracy	+/- 2dB
OPR measurement range	-22 to +2 dBm
Maximum power penalty at dispersion	3.5dB
Bit error ratio	$<10^{-12}$
Maximum link distance	10 km

Parameters	Minimum	Maximum
Transmitter operating wavelengths	1260nm	1335nm
Optical output power	-8.2dBm	0.5dB
Extinction ratio		3.5dB
Transmitter dispersion penalty		3.2dB
Side-mode suppression ratio	30dB	
Relative intensity noise		-128dB/Hz
Transmitter output eye mask	I EEE802.3-2008 Clause 52.9.7	
Maximum receive power (damage)		4dbm
Receiver operating wavelengths	1260nm	1335nm
Receiver sensitivity(max)in OMA (average)		-12.6dBm
Average received Power	-14.4dBm	0.5dBm
Receiver reflectance		-12dBm
Operating case temperature	-40°C	70°C
Power supply / power consumption	3.2 to 3.4VDC; 3.3VDC nominal / <2.5W	
Management	2-wire interface for Digital Diagnostic Monitoring (DDM) compliance	
Environmental sustainability	RoHS and REACH compliant	

Applications in your network

Cell site gateway pluggable UNI

UNI
CSG

Service provider

MPLS core

MTSO site

Replace NID at space constrained installations

- MEF 10.3 token-share BWP
- DSCP/PCP classification
- VLAN tag stacking
- Service tag COS remark
- Scale for active/standby EVCs
- TWAMP-lite monitoring
- Loop back diagnostics

ADVA™