Nokia 100G ZR Coherent Module

Nokia's 100G ZR coherent module (QDCO1) provides the capacity and optical reach of coherent optics in flexible, small-sized QSFP28 modules. Supporting 100G capacity, the Nokia QDCO1 modules are ideal for metro and access applications.

The advancements in coherent optics and digital signal processors has enabled 100G ZR coherent line optics in small QSFP28 sized pluggable optics. The QSFP28 is ideal for carriers who want to install coherent line optics in transponder card client ports for general purpose access and metro applications, or directly integrated into router line cards for data center interconnect (DCI) applications.

Benefits

- Compact size, cost-optimized coherent WDM line interface
- Extend 100G ZR coherent wavelengths from metro node transponder client ports
- Simplified integration of coherent WDM interfaces into routing interface cards
- Modular: can be installed and deployed as needed for the ultimate plug-and-play
- Efficient, cost-effective 100G coherent line optics.

Applications

- Up to 300 Km amplified extended reach 100G for access, metro, regional networks
- Support a wide range of transport, router, PON, DCI, and broadband access applications
- Line interface for n x 10G service aggregation on access systems
- Supports both 100GE or OTU4 interfaces

Product description

The Nokia QDCO01 module provides 100G coherent WDM line interface in a compact, QSFP28 pluggable module.

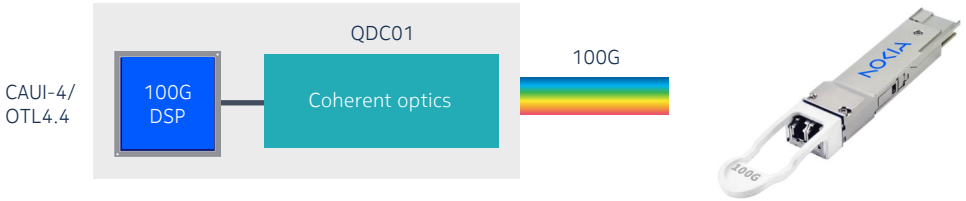
The 100G ZR modules enable extended reach 100G transport for access and metro applications, including a wide range of access aggregation, transport, router, PON, and DCI applications. The 100G ZR can also be installed in client ports of select Nokia 1830 transponders, providing extended reach 100G services to remote access aggregation nodes or routers.

Integration of coherent digital signal processors (DSPs) into optical modules has long been an industry objective, but only recently become viable with the introduction of low-power sub-7nm CMOS technology.

The small size and lower power consumption of 100G ZR modules enable a wide array of applications, including coherent router DCI applications. Coupling with Nokia 1830 WDM line systems and ILA nodes provides an efficient, seamless network, all managed by Nokia WaveSuite network management and controller platforms.

The Nokia QDCO1 module supports up to 80 Km (un-amplified) and up to 300 Km (amplified) WDM networks. The QDCO1 is compliant to IEEE 100GBase-ZR and OTN specifications.

Figure 1.Nokia QDCO1 module



100ZR	Part number	Description
QDC01	3AL82265AB	100ZR coherent module, 100G QSFP28

Technical specifications

Specifications	QDC01
Application	100G ZR
Line port	1 x QSFP28 WDM line port 100G QPSK 28 Gbaud
Tx power	-12 to -8 dBm (provisioned)
Wavelength tunable range	191.3 THz – 196.1 THz, 50/100 GHz grid
Supported clients	100 GbE OTU4
FEC options	SC-FEC/RS-FEC
Management interface	CMIS 5.2 and C-CMIS 1.3
Standards compliance	IEEE Std. 802.3-2022 100GBase-ZR & OTN ITU-T G.709.2
Power consumption	< 6 W
Case temp	Normal -20°C to 85°C Humidity 5% to 85%
Size	QSFP28

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

Nokia OYJ
Karakaari 7
02610 Espoo
Finland
Tel. +358 (0) 10 44 88 000

Document code: (March) CID213940