

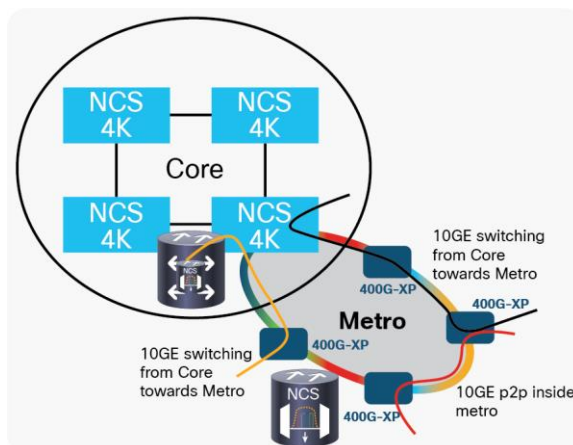
## Cisco NCS 2000 Software Release 10.8

The Cisco® Network Convergence System (NCS) Family of products delivers an Evolved Programmable Network (EPN) that lets you simplify network operations, reduce network costs, and make your network more dynamic and profitable. The Cisco Network Convergence System 2000 Series (NCS 2000 Series) delivers agility, programmability, and massive scale across ultra-long-haul, metro, and enterprise optical networks.

Cisco NCS 2000 Software Release 10.8 introduces a list of enhancements to the portfolio with the introduction of a new Erbium Doped Fiber Amplifier(EDFA-35) support on the optical layer as well as OTN Xconnect functionality on NCS 2000 400G Xponder DWDM line module. The Cisco NCS 2000 platform addresses the application of OTN cross connection functionality of 10GE clients at ODU2 level of granularity with the new enhancements. The 400G Xponder DWDM line module is also enhanced to equip a new QSFP+ Pluggable for 16G FC Client interfaces for Storage Area Networking application.

### New hardware features

Cisco NCS 2000 platform introduces EDFA-35 Amplifier module which is equipped with variable gain mode of operation including both Pre and Bst units in single slot. EDFA-35 can be equipped in NCS 2015, NCS 2006 Chassis along with the ROADMs, Transponders and Muxponders.



The following new software features are available in Release 10.8 on Cisco NCS 2000 Series.

- **OTN Xconnect functionalities on 400G Line card**

OTN Xconnect functionality on 400G-XP enables 10GE client switching across the network with 100G/200G trunk wavelengths between the Add/Drop locations.

10GE clients can be protected using the SNC/I where in each 10GE client can be protected internally between the two trunks on the 400G-XP card enabled with 100G/200G DWDM Line interfaces.

- **16G FC Single mode QSFP Pluggable**

In Release 10.8 NCS 2000 400G Xponder supports 16 GFC Single mode version QSFP+ client interface (ONS-QC-16GFC-LW=) that can provide via 4x16G FC breakout to support SAN interconnection for high speed optical transport.

- **OTDR enhancements on NCS2K-TNCS-O module**

In Release 10.8 TNCS-O receives an update with respect to the

1. Preparation phase support
2. Optimizing ORL Calculation
3. Zone Stitching
4. Detecting the Fiber end on each span

- **Trunk protection on 400G-XP with PSM**

In Release 10.8 10GE, ODU2 and 16G FC clients can be protected through Trunks with PSM module to protect services against fiber cuts in the network between two sites.

NCS 2000 SW Release 10.8 Upgrade paths are provided here:

- 9.6.13 -> 10.8 (MSTP -> NCS, MSTP -> MSTP)
- 10.5.24 -> 10.8 (MSTP -> NCS, MSTP -> MSTP, NCS -> NCS, NCS Flex -> NCS Flex)
- 10.5.27 -> 10.8 (MSTP -> NCS, MSTP -> MSTP, NCS -> NCS, NCS Flex -> NCS Flex)
- 10.6.1 -> 10.8 (MSTP -> NCS, MSTP -> MSTP, NCS -> NCS, NCS Flex -> NCS Flex)
- 10.6.2 -> 10.8 (MSTP -> NCS, MSTP -> MSTP, NCS -> NCS, NCS Flex -> NCS Flex)
- 10.7->10.8 (MSTP -> NCS, MSTP -> MSTP, NCS -> NCS, NCS Flex -> NCS Flex)

## Ordering information

Refer to the below table containing the list of Product Identifiers and respective descriptions for the software packages and the HW modules introduced in Release 10.8.

### NCS2K-400G-XP OTN Xconnect License - Ordering details

Product Name	Description
L-NCS2K-XP-LIC=	OTN Xponder License

### NCS2000 SW Release 10.8 – Ordering details

Product Name	Description
SF15454M-R1080K9	MSTP R10.8 Preloaded SW, TCC3, TNCE, TSCE, TNCS/O - NO WSON
SF15454MC-R1080K9	MSTP R10.8 Preloaded SW, TCC3, TNCE, TSCE, TNCS/O - WSON CP
SF-NCS2K-R1080K9	NCS 2K/MSTP - R10.8 SW, TNCE, TSCE, TNCS/O – WSON CP
SF-NCS2K-R1080FSK9	NCS 2K/MSTP - R10.8 SW, TNCE, TSCE, TNCS/O - FlexSpectrum
SF-NCS2K-R1080SSK9	NCS 2K/MSTP - R10.8 SW, TNCE, TSCE, TNCS/O - SSON

Product Name	Description
<b>Software RTU License</b>	
NCS2K-L-R1080FSK9	NCS 2K/MSTP - R10.8 SW, Upgrade SW RTU - FlexSpectrum
NCS2K-L-R1080SSK9	NCS 2K/MSTP - R10.8 SW, Upgrade SW RTU - SSON
NCS2K-L-R1080K9	NCS 2K/MSTP - R10.8 SW, Upgrade SW RTU - WSON CP
15454M-LIC-1080K9	MSTP - ANSI & ETSI, R10.8 - Upgrade License RTU - NO WSON
<b>Software DVDs</b>	
NCS2K-M-R1080FSK9=	NCS 2K/MSTP - R10.8 SW, Media (DVD) SW RTU - FlexSpectrum
NCS2K-M-R1080FSK9	NCS 2K/MSTP - R10.8 SW, Media (DVD) SW RTU - FlexSpectrum
NCS2K-M-R1080SSK9=	NCS 2K/MSTP - R10.8 SW, Media (DVD) SW RTU - SSON
NCS2K-M-R1080SSK9	NCS 2K/MSTP - R10.8 SW, Media (DVD) SW RTU - SSON
NCS2K-M-R1080K9=	NCS 2K/MSTP - R10.8 SW, Media (DVD) SW RTU - WSON CP
NCS2K-M-R1080K9	NCS 2K/MSTP - R10.8 SW, Media (DVD) SW RTU - WSON CP
15454M-R1080SWK9=	MSTP - ANSI & ETSI, R10.8 - RTU LIC DVD, NO WSON
15454M-R1080SWK9	MSTP - ANSI & ETSI, R10.8 - RTU LIC DVD, NO WSON
<b>E-delivery</b>	
E-NCS2K-R1080FSK9=	NCS 2K/MSTP - R10.8 E-Del-OS SW, SW RTU - FlexSpectrum
E-NCS2K-R1080SSK9=	NCS 2K/MSTP - R10.8 E-Del-OS SW, SW RTU - SSON
E-NCS2K-M-R1080K9=	NCS 2K/MSTP - R10.8 E-Del-OS SW RTU - WSON CP
E-15454-R1080SWK9=	MSTP - ANSI & ETSI, R10.8 - E-Del-OS SW RTU LIC, NO WSON

### EDFA-35 Ordering details

Product Name	Description
NCS2K-OPT-EDFA-35=	NCS 2000 - Optical Amplifier - C-band - 35dB Gain

### 16G FC Single Mode Pluggable

Product Name	Description
ONS-QC-16GFC-LW=	4 X 16G/8G Fiber Channel QSFP+, SM, C Temp

### Cisco Services

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### For more information

For more information regarding NCS 2000, visit:

<https://www.cisco.com/c/en/us/products/optical-networking/network-convergence-system-2000-series/index.html>.




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