



# Coexistence Specification Guide

Singlemode Devices

COMMScope®

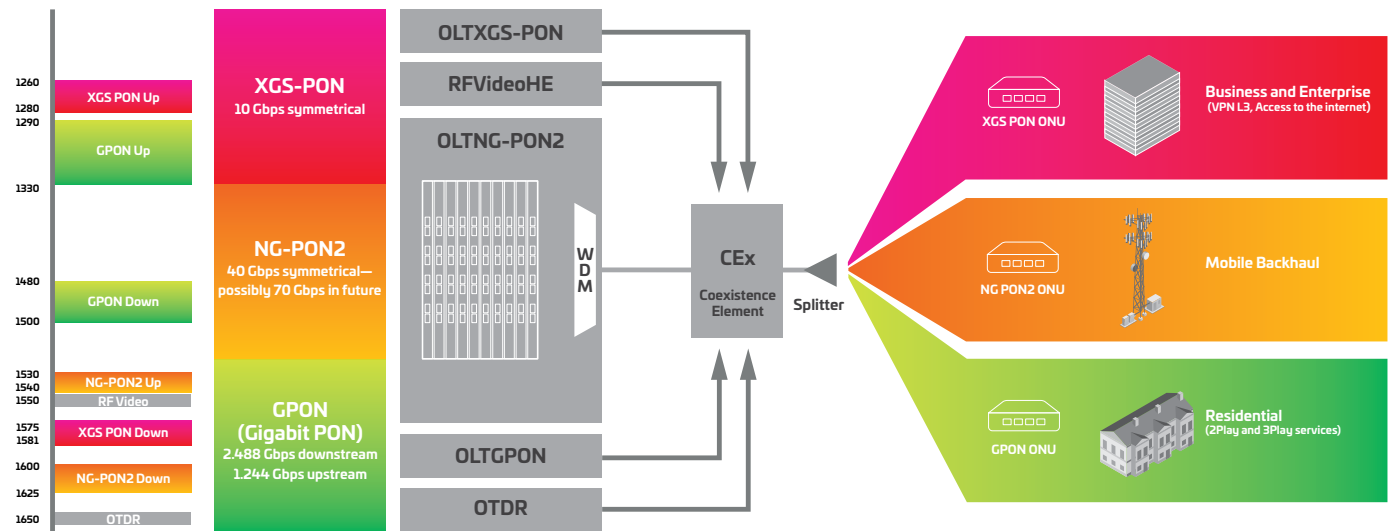
# Solutions overview

Upgrading your existing passive optical network (PON) enables increased data speed and the delivery of additional services without fully replacing existing PON infrastructure.

CommScope's passive optical devices support your migration to next-generation PON (XGS-PON or NG-PON2) services while controlling costs. Our portfolio of coexistence (CEx) modules are integrated into the network near the optical line terminal (OLT), enabling existing PON services to coexist with XGS-PON, NG-PON2, RF video, optical time domain reflectometer (OTDR), as well as other current and future technologies. The GPON port passband, 1290-1500nm, allows for future 25/50G services. The purpose of an upgrade port is to be able to add services not already in use, i.e. XGS-PON, RF, NG-PON2, OTDR.

CommScope's LGX CEx portfolio of solutions meet OSP requirements of -40°C to +70°C operating temperature environments, and our NG4 CEx portfolio of solutions meet ISP requirements of -10°C to +65°C operating temperature environments.

LGX products are tested to IEC 61300-2-1, -9, -21, -22, -26 and GR-1209 requirements. NG4 products are tested to GR-63 requirements.



## CEx Product Configurations

Module Type	Networks/Services	Wavelengths (nm)
CEx 1	GPON/25G	1290 - 1500
	UPG	1260-1280 & 1525-1650
CEx 2	GPON/25G	1290 - 1500
	XGS-PON	1260 - 1280; 1575 - 1581
CEx 3	UPG	1525-1560 & 1596-1650
	GPON/25G	1290 - 1500
	RF	1550 - 1560
CEx 4	UPG	1260-1280 & 1525-1540 & 1575-1650
	GPON/25G	1290 - 1500
	XGS-PON	1260 - 1280 & 1575 - 1581
	NG-PON2	1524-1544 & 1596-1603
CEx 5	UPG	1550-1560 & 1613-1650
	PON (COMBI)	1260-1500nm & 1575-1581nm
	UPG	1525-1565nm & 1596-1650nm



Example NG4 VAM with LC connectors



Example LGX with LC connectors

# CEx optical performance

CEx Configuration	CEx 1	CEx 2	CEx 3	CEx 4	CEx 5
Connector type	LC/APC or SC/APC	LC/APC or SC/APC	LC/APC or SC/APC	LC/APC or SC/APC	LC/APC or SC/APC
Housing Type & Density	NG4 = 8 circuits with LC/APC LGX = 8 circuits with LC/APC LGX = 4 circuits with SC/APC	NG4 = 6 circuits with LC/APC LGX = 6 circuits with LC/APC LGX = 3 circuits with SC/APC	NG4 = 6 circuits with LC/APC LGX = 6 circuits with LC/APC LGX = 3 circuits with SC/APC	NG4 = 4 circuits with LC/APC LGX = 4 circuits with LC/APC LGX = 2 circuits with SC/APC	NG4 = 8 circuits with LC/APC LGX = 8 circuits with LC/APC LGX = 4 circuits with SC/APC
Passband	GPON: 1290-1500nm UPG: 1260-1280nm & 1525-1650nm	GPON: 1290-1500nm XGS-PON: 1260-1280nm & 1575-1581nm UPG: 1525-1560nm & 1596-1650nm	GPON: 1290-1500nm RF: 1550-1560nm UPG: 1260-1280nm, 1525-1540nm & 1575-1650nm	GPON: 1290-1500nm XGS-PON: 1260-1280nm & 1575-1581nm NG-PON2: 1524-1544nm & 1596-1603nm UPG: 1550-1560 & 1613-1650nm	PON (COMBI): 1260-1500nm & 1575-1581nm UPG: 1525-1565nm & 1596-1650nm
Insertion Loss (Including Connectors)	COM to GPON: ≤ 0.8dB COM to UPG: ≤ 0.6dB	COM to GPON: ≤ 0.8dB COM to XGS-PON: ≤ 1.2dB COM to UPG: ≤ 1.2dB	COM to GPON: ≤ 0.8dB COM to RF: ≤ 1.2dB COM to UPG: ≤ 1.2dB	COM to GPON: ≤ 0.8dB COM to XGS-PON: ≤ 1.2dB COM to NG-PON2: ≤ 1.4dB COM to UPG: ≤ 1.4dB	COM to PON: ≤ 0.8dB COM to UPG: ≤ 0.6dB
Maximum Optical Input Power	+23dBm	+23dBm	+23dBm	+23dBm	+23dBm
Isolation	COM to GPON: ≥ 30dB COM to UPG: ≥ 15dB	COM to GPON: ≥ 30dB COM to XGS-PON: ≥ 30dB COM to UPG: ≥ 15dB	COM to GPON: ≥ 30dB COM to RF: ≥ 30dB COM to UPG: ≥ 15dB	COM to GPON: ≥ 30dB COM to XGS-PON: ≥ 30dB COM to NG-PON2: ≥ 30dB COM to UPG: ≥ 15dB	COM to PON: ≥ 30dB COM to UPG: ≥ 15dB
Return Loss	≥ 50dB	≥ 50dB	≥ 50dB	≥ 50dB	≥ 50dB
Polarization Dependent Loss (PDL)	≤ 0.3dB	≤ 0.3dB	≤ 0.3dB	≤ 0.3dB	≤ 0.3dB
Polarization Mode Dispersion (PMD)	≤ 0.5ps/km <sup>0.5</sup>	≤ 0.5ps/km <sup>0.5</sup>	≤ 0.5ps/km <sup>0.5</sup>	≤ 0.5ps/km <sup>0.5</sup>	≤ 0.5ps/km <sup>0.5</sup>
Directivity	≥ 50dB	≥ 50dB	≥ 50dB	≥ 50dB	≥ 50dB

## NG4 CEx Ordering Information

MID	Description	Module Type
NG4-VXLFA08AAN	NG4 Module, CEx 1, 8 circuits, LC/APC connectors	CEx 1
NG4-VXLF06AAN	NG4 Module, CEx 2, 6 circuits, LC/APC connectors	CEx 2
NG4-VXLFC06AAN	NG4 Module, CEx 3, 6 circuits, LC/APC connectors	CEx 3
NG4-VXLFE04AAN	NG4 Module, CEx 4, 4 circuits, LC/APC connectors	CEx 4
NG4-VXLFG08AAN	NG4 Module, CEx 5, 8 CIRCUITS, LC/APC	CEx 5



## LGX CEx Ordering Information

MID	Description	Module Type
LX1SXA08AAN	Single Width LGX Module, CEx 1, 8 circuits, LC/APC connectors	CEx 1
LX1SXA04CCN	Single Width LGX Module, CEx 1, 4 circuits, SC/APC connectors	CEx 1
LX1SXB06AAN	Single Width LGX Module, CEx 2, 6 circuits, LC/APC connectors	CEx 2
LX1SXB03CCN	Single Width LGX Module, CEx 2, 3 circuits, SC/APC connectors	CEx 2
LX1SXC06AAN	Single Width LGX Module, CEx 3, 6 circuits, LC/APC connectors	CEx 3
LX1SXC03CCN	Single Width LGX Module, CEx 3, 3 circuits, SC/APC connectors	CEx 3
LX1SXD04AAN	Single Width LGX Module, CEx 4, 4 circuits, LC/APC connectors	CEx 4
LX1SXD02CCN	Single Width LGX Module, CEx 4, 2 circuits, SC/APC connectors	CEx 4
LX1SXG08AAN	LGX MODULE, CEx 5, 8 circuits, LC/APC	CEx 5
LX1SXG04CCN	LGX MODULE, CEx 5, 4 circuits, SC/APC	CEx 5



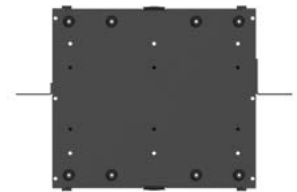
# LGX chassis solutions

## LGX 4RU back-to-back chassis

### Features

- The LGX 4RU back-to-back chassis holds 14 single-width LGX modules per side or seven dual-width LGX modules per side
- Maximum density of 28 single-width LGX modules or 14 dual-width LGX modules
- 19-in. or 23-in. rack mount
- 2.5-in., 5-in., or 8-in. recess mounting options
- Dimensions (H x W x D): 6.9 x 17 x 15 inches

MID	Description	Color
FBPS-LGX-4RU-BLK	LGX 4RU back-to-back chassis Ships equipped with two pass-through modules (LGX-PASSTHUR-3BK)	Black



## 3RU chassis

### Features:

- Maximum density of 14 single-width LGX modules or 7 dual-width LGX modules
- 19-in. rack mount
- Dimensions (H x W x D): 132.5 x 482 x 235 mm

MID	Description	Color
760252747	FPS-OCM-I-F-BLK	Black



## LGX 1RU chassis

### Features

- Holds three single-width LGX modules
- 19-inch rack mount
- Dimensions (H x W x D): 1.7 x 18.9 x 8.9 inches / 44 x 481 x 225 mm

MID	Description	Color
760250917	LGX 1 RU chassis—FPS-OCM-K-F-BLK	Black



# NG4 chassis solutions

## NG4access universal chassis

### Features

- Single 4 RU and 2 RU chassis for all applications
- One single-high VAM per access tray loaded from rear side of chassis/frame
- Up to 24 single-high VAMs per 4 RU universal chassis. Up to 12 single-high VAMs per 2 RU universal chassis.
- Can be deployed as a standalone 19"/23" chassis in standard racks



MID	Description	Color
NG4-CH100000	NG4-CH100000: 4RU NG4 CHASSIS W/O ADPTRS	Black
760242618	NG4-CH100000-2B: 2RU NG4 CHS W/O ADPTRS	Black

## NG4 1RU Chassis – All Front Access

### Features

- 3 trays per chassis
- Chassis accepts single high standard NG4 modules (front connectors only)
- 6 modules per 1RU chassis



MID	Description	Color
760240294	EHD-1U-NG4VAM	Black

## FACT NG4 Chassis

### Features

- The FACT NG4 element includes two trays
- Each element can accommodate two single-height NG4 VAM modules



MID	Description
760239975	FACT-1ENG4

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at [commscope.com](https://commscope.com)

**COMMSCOPE®**

---

[commscope.com](https://commscope.com)

Visit our website or contact your local CommScope representative for more information.

© 2023 CommScope, Inc. All rights reserved.

All trademarks identified by ™ or ® are trademarks or registered trademarks in the US and may be registered in other countries. All product names, trademarks and registered trademarks are property of their respective owners. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services.

CO-115592.2-EN (09/23)