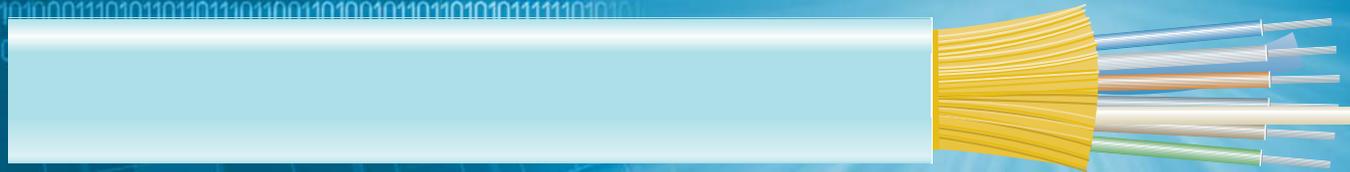


10-Gigabit Multimode, 50-Micron Fiber Optic Cable



Here it is: tight-buffered 50-micron multimode cable that's laser optimized for 10-Gigabit Ethernet.

FEATURES

- All feature tight-buffered fiber with an acrylate fiber coating and aramid yard strength members.
- Use with either LED or laser light sources.
- With a laser light source, bandwidth increases to 2000 MHz/km.
- Use the cable in 10-Gigabit Ethernet runs up to 300 meters, making it ideal for backbone and campus connections.

OVERVIEW

Thinking of upgrading to 10-Gigabit Ethernet? Here's the laser-optimized 50-micron cable you want.

Since 10-Gigabit Ethernet (10-GBE) was ratified in June 2002, the move is on to upgrade Ethernet networks. 10-GBE is a logical extension of previous Ethernet versions and was designed to make the transition from LANs to Wide Area Networks (WANs) and Metropolitan Area Networks (MANs). 10-GBE offers a cost-effective migration for high-performance and long-haul transmissions at up to 40 kilometers. Its most common application now is as a backbone for high-speed LANs, server farms, and campuses. It also enables you to connect geographically separated LANs to new MANs and WANs via dark fiber, dark wavelengths, or SONET/SDH networks.

10-GBE supports existing Ethernet technologies. It uses the same layers (MAC, PHY, and PMD), and the same frame sizes and formats. But the IEEE 802.3ae spec defines two sets of physical interfaces: LAN (LAN PHY) and WAN (WAN PHY).

The most notable difference between 10-GBE and previous Ethernets is that 10-GBE operates in full-duplex only and specifies fiber optic media. The chart shown at **right** notes the differences between Gigabit and 10-Gigabit Ethernet.

Choose from three styles:

- Zipcord patch cable with a PVC jacket.
- Bulk distribution-style cable with a PVC or plenum jacket.
- Bulk zipcord cable with a PVC or plenum jacket.

You can use these cables with LED or laser light sources. Because the cable is optimized for a laser light source, bandwidth increases to 2000 MHz/km with one.

This cable is ideal for use in 10-Gigabit Ethernet runs up to 300 meters, making it ideal for backbone and campus connections.

Buyer's Guide Gigabit vs. 10-Gigabit Ethernet

10-GBE	Distance	Wavelength	Cable
10GBASE-SR	300 m	850 nm	Multimode
10GBASE-SW	300 m	850 nm	Multimode
10GBASE-LR	10 km	1310 nm	Single-Mode
10GBASE-LW	10 km	1310 nm	Single-Mode
10GBASE-LX4	Multimode 300 m/ Single-Mode 10 km	1310 nm WVDM	Multimode or Single-Mode
10GBASE-ER	40 km	1550 nm	Single-Mode
10GBASE-EW	40 km	1550 nm	Single-Mode
10GBASE-CX4*	15 m	—	4 x Twinax
10GBASE-T*	25–100 m	—	Twisted Pair

* Proposed for copper.

The alphabetical coding for 10-GBE is as follows:

S = 850 nm X = 8B/10B signal encoding
L = 1310 nm R = 66B encoding
E = 1550 nm W = WIS interface (for use with SONET)

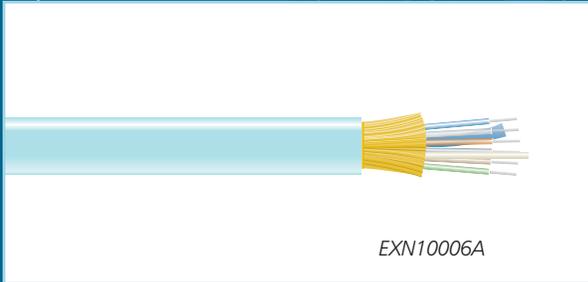
TECH SPECS FOR ZIPCORD PATCH CABLE

Attenuation — 3.0 dB/km @ 850 nm; 1.0 dB/km @ 1310 nm
Bandwidth — LED: 1500/500 MHz/km OFL @ 850/1310 nm;
Laser: 2000/500 MHz/km RML @ 850/1310 nm
Diameters — Core: 50 µm;
Cladding: 125 µm;
Buffer: 900 µm
Fiber Type — Laser-optimized multimode
Jacket — PVC
Operating Temperature — -40 to +185°F (-40 to +85°C)

TECH SPECS FOR DISTRIBUTION-STYLE AND ZIPCORD BULK CABLE

Attenuation (Maximum) — 3.5/1.0 dB/km @ 850/1300 nm
Bandwidth (Minimum) — 1500/500 MHz-km @ 850/1300 nm
Bend Radius —
Distribution-Style PVC: 2-Fiber: 3.7" (9.4 cm) installation, 2.8" (7.1 cm) operating;
4-Fiber: 4.4" (11.2 cm) installation, 3.3" (8.4 cm) operating;
6-Fiber: 4.7" (11.9 cm) installation, 3.5" (8.9 cm) operating;
8-Fiber: 4.9" (12.4 cm) installation, 3.7" (9.4 cm) operating;
12-Fiber: 5.5" (14 cm) installation, 4.1" (10.4 cm) operating;
24-Fiber: 10.3" (26.2 cm) installation, 7.7" (19.6 cm) operating;
36-Fiber: 12.5" (31.8 cm) installation, 9.3" (23.6 cm) operating;
Distribution-Style Plenum: 2-Fiber: 3.4" (8.6 cm) installation, 2.5" (6.4 cm) operating;
4-Fiber: 3.4" (8.6 cm) installation, 2.6" (6.6 cm) operating;
6-Fiber: 3.8" (9.7 cm) installation, 2.8" (7.1 cm) operating;
8-Fiber: 4" (10.2 cm) installation, 2.9" (7.4 cm) operating;
12-Fiber: 4.6" (11.7 cm) installation, 3.5" (8.9 cm) operating;
24-Fiber: 8" (20.3 cm) installation, 6" (15.2 cm) operating;
36-Fiber: 10" (25.4 cm) installation, 7.5" (19.1 cm) operating;
Zipcord PVC: 2-Fiber: 2" (5.1 cm) installation, 1" (2.5 cm) operating;
Zipcord Plenum: 2" (5.1 cm) installation, 1" (2.5 cm) operating
Buffer Diameter — 900 µm
Cable Size — Distribution-Style PVC: 2-Fiber: 0.187" (4.75 mm),
4-Fiber: 0.22" (5.59 mm),
6-Fiber: 0.235" (5.97 mm),
8-Fiber: 0.245" (6.22 mm),
12-Fiber: 0.275" (6.99 mm),
24-Fiber: 0.516" (13.11 mm),
36-Fiber: 0.623" (15.82 mm);
Distribution-Style Plenum:
2-Fiber: 0.165" (4.19 mm),
4-Fiber: 0.17" (4.32 mm),
6-Fiber: 0.185" (4.7 mm),
8-Fiber: 0.195" (4.95 mm),
12-Fiber: 0.23" (5.84 mm),
24-Fiber: 0.4" (10.16 mm),
36-Fiber: 0.502" (12.75 mm);
Zipcord PVC and Plenum: 0.113" x 0.241" (2.87 x 6.1 cm)
Diameters — Core: 50 µm;
Cladding: 125 µm;
Buffer: 900 µm

Fiber Type — Laser-optimized multimode
Jacket — PVC or low-smoke plenum
Pulling Strength — Distribution-Style: 2-Fiber: 800 Newtons/180 lb.;
4- and 6-Fiber: 1000 Newtons/225 lb.;
8-Fiber: 1400 Newtons/315 lb.;
12-Fiber: 1800 Newtons/405 lb.;
24-Fiber: 2700 Newtons/600 lb.;
36-Fiber: 4000 Newtons/900 lb.;
Zipcord: 1000 Newtons/225 lb.
Standards — PVC: UL® 1666, CSA FT4; Plenum: UL 910, CSA FT6;
All: IEEE 802.3 for 1000BASE-SX/LX, 100BASE-F, 10BASE-F, ATM 155,
ATM 622, ATM 1.2/2.4 Gbps, TOA 492AAAC 1-Gigabit Ethernet,
Fibre Channel FC-PH, IEEE 802.5, FDDI, ICEA 83-596,
EIA/TIA-568-B
Tension (Operating) — Distribution-Style: 2-Fiber: 250 Newtons/56 lb.;
4- and 6-Fiber: 400 Newtons/91 lb.;
8-Fiber: 463 Newtons/104 lb.;
12-Fiber: 600 Newtons/135 lb.;
24-Fiber: 1110 Newtons/250 lb.;
36-Fiber: 2000 Newtons/450 lb.;
Zipcord: 500 Newtons/112 lb.
Vertical Rise — Distribution-Style PVC: 2-Fiber: 2987 ft. (910.4 m),
4-Fiber: 3832 ft. (1168 m),
6-Fiber: 3467 ft. (1056.7 m),
8-Fiber: 3617 ft. (1102.5 m),
12-Fiber: 3600 ft. (1097.3 m),
24-Fiber: 2227 ft. (678.8 m),
36-Fiber: 2515 ft. (766.6 m);
Distribution-Style Plenum: 2-Fiber: 4978 ft. (1517.3 m),
4-Fiber: 5200 ft. (1585 m),
6-Fiber: 4853 ft. (1479.2 m),
8-Fiber: 4622 ft. (1408.8 m),
12-Fiber: 4909 ft. (1496.3 m),
24-Fiber: 3006 ft. (916.2 m),
36-Fiber: 3133 ft. (954.9 m);
Zipcord PVC and Plenum: 11,200 ft. (3413.8 m)
Temperature — Operating: -4 to +176°F (-20 to +80°C);
Storage: -40 to +176°F (-40 to +80°C);
Installation: 32 to 122°F (0 to 50°C)



EXN10006A

Item	Code
10-Gigabit Multimode, 50-Micron Distribution-Style Fiber Optic Bulk Cable	
PVC (OFNR)	
2-Fiber 1000-ft. (304.8-m)	EXN10002A-1000
Custom Lengths	EXN10002A
4-Fiber 500-ft. (152.4-m)	EXN10004A-0500
Custom Lengths	EXN10004A
6-Fiber Custom Lengths	EXN10006A
8-Fiber Custom Lengths	EXN10008A
12-Fiber 500-ft. (152.4-m)	EXN10012A-0500
1000-ft. (304.8-m)	EXN10012A-1000
Custom Lengths	EXN10012A
24-Fiber Custom Lengths	EXN10024A
36-Fiber Custom Lengths	EXN10036A
Plenum (OFNP)	
2-Fiber Custom Lengths	EXP10002A
4-Fiber 500-ft. (152.4-m)	EXP10004A-0500
1000-ft. (304.8-m)	EXP10004A-1000
Custom Lengths	EXP10004A
6-Fiber Custom Lengths	EXP10006A
8-Fiber Custom Lengths	EXP10008A
12-Fiber Custom Lengths	EXP10012A
24-Fiber Custom Lengths	EXP10024A
36-Fiber Custom Lengths	EXP10036A
10-Gigabit Multimode, 50-Micron Fiber Optic Patch Cable, Zipcord	
PVC	
ST®-ST 1-m (3.2-ft.)	EFNT010-001M-STST
2-m (6.5-ft.)	EFNT010-002M-STST
3-m (9.8-ft.)	EFNT010-003M-STST
5-m (16.4-ft.)	EFNT010-005M-STST
10-m (32.8-ft.)	EFNT010-010M-STST
Custom Lengths	EFNT010-STST
ST-SC 1-m (3.2-ft.)	EFNT010-001M-STSC
2-m (6.5-ft.)	EFNT010-002M-STSC
3-m (9.8-ft.)	EFNT010-003M-STSC
5-m (16.4-ft.)	EFNT010-005M-STSC
10-m (32.8-ft.)	EFNT010-010M-STSC
Custom Lengths	EFNT010-STSC

Item	Code
10-Gigabit Multimode, 50-Micron Fiber Optic Patch Cable, Zipcord, (Continued)	
PVC	
SC-SC 1-m (3.2-ft.)	EFNT010-001M-SCSC
2-m (6.5-ft.)	EFNT010-002M-SCSC
3-m (9.8-ft.)	EFNT010-003M-SCSC
5-m (16.4-ft.)	EFNT010-005M-SCSC
10-m (32.8-ft.)	EFNT010-010M-SCSC
Custom Lengths	EFNT010-SCSC
LC-LC 1-m (3.2-ft.)	EFNT010-001M-LCLC
2-m (6.5-ft.)	EFNT010-002M-LCLC
3-m (9.8-ft.)	EFNT010-003M-LCLC
5-m (16.4-ft.)	EFNT010-005M-LCLC
10-m (32.8-ft.)	EFNT010-010M-LCLC
Custom Lengths	EFNT010-LCLC
LC-ST 1-m (3.2-ft.)	EFNT010-001M-STLC
2-m (6.5-ft.)	EFNT010-002M-STLC
3-m (9.8-ft.)	EFNT010-003M-STLC
5-m (16.4-ft.)	EFNT010-005M-STLC
10-m (32.8-ft.)	EFNT010-010M-STLC
Custom Lengths	EFNT010-STLC
LC-SC 1-m (3.2-ft.)	EFNT010-001M-SCLC
2-m (6.5-ft.)	EFNT010-002M-SCLC
3-m (9.8-ft.)	EFNT010-003M-SCLC
5-m (16.4-ft.)	EFNT010-005M-SCLC
10-m (32.8-ft.)	EFNT010-010M-SCLC
Custom Lengths	EFNT010-SCLC
10-Gigabit 50-Micron Fiber Optic Bulk Cable, Zipcord	
PVC (OFNR)	
2-Fiber Custom Lengths	EXN10000A
Plenum (OFNP)	
2-Fiber Custom Lengths	EXP10000A