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MiniXtend® Cable Frequently Asked Questions

1. What are the differences in our MiniXtend® cable portfolio?

Cable Type	Fiber Count	Buffer Tube Configuration	Jacket Configuration
MiniXtend cable	12-144	1.4 mm tube by 12 F, Corning® SMF-28® fiber	Standard jacket with binders and ripcords
MiniXtend cable with binderless* FastAccess® technology	12-144	1.4 mm tube by 12 F, SMF-28 Ultra fiber	Binderless FastAccess technology
MiniXtend HD cable	144-288	1.7 mm tube by 24 F, SMF-28 Ultra 200 fiber	Standard jacket with binders and ripcords

There are three products in the MiniXtend cable product portfolio:

a) MiniXtend cable
- Standard loose tube construction, 12-144 fibers
- No special jacketing or additional features beyond its smaller dimensions

b) MiniXtend cable with binderless* FastAccess technology
- Same dimensions and fiber counts as MiniXtend cable plus the benefit of binderless FastAccess technology – details on Page 2
- Sold with SMF-28 Ultra fiber as standard, combining low-loss characteristics with superior bend-insensitivity in a single, backward-compatible package

c) MiniXtend HD cable
- Our highest-density micro cable product which harnesses the SMF-28 Ultra 200 fiber to deliver up to 288 fibers
- 24 200 µm fibers per 1.7 mm tube for a maximum outer diameter of 9.7 mm
- Currently only available with traditional binders and jacketing

2. What is MiniXtend® cable with binderless FastAccess® technology?

Binderless FastAccess technology is an innovative cable jacket design which enables up to 70 percent faster cable access, compared to traditional micro cables. Our binderless FastAccess technology refers to the combination of a FastAccess technology jacket featuring technology that binds the cable construction through the manufacturing and installation process without the need for binder yarns, waterblocking tapes, and ripcords. The jacket opening is initiated with common, safe hand tools, after which the jacket can be simply peeled away by hand to reveal an SZ-stranded cable core that is unencumbered by binder yarns and waterblocking tapes. Since no sharp tools are needed for jacket access or binder removal, the risk of tube/fiber damage during the process is greatly reduced.

3. What is MiniXtend HD cable?

MiniXtend HD cable features Corning® SMF-28® Ultra 200 fiber, the industry's first 200 µm fiber with 9.2 µm mode field diameter, for seamless integration with existing networks. The high-fiber-count, high-density micro cable delivers up to 288 fibers in an SZ-stranded, loose tube micro cable design that is up to 60 percent smaller, up to 70 percent lighter, and totally backward compatible with a G.652.D fiber base. MiniXtend HD cable is only available with traditional binders and jacketing.

4. Will MiniXtend HD cable be available with FastAccess technology?

Today it is not available, but we are continuously improving all of our products.

5. Is binderless FastAccess technology proprietary to Corning Optical Communications?

Yes. We created this technology to be compatible with and seamlessly integrate into existing infrastructures to make it easy for end users to reap the benefits: faster cable access, improved safety, and reduced risk of fiber damage.

6. What fiber types and fiber counts are available?

MiniXtend cable with binderless FastAccess technology comes standard with SMF-28 Ultra fiber and can be ordered with 12 to 144 fibers.

MiniXtend HD cable comes standard with SMF-28 Ultra 200 fiber and is available with 144, 192, 216, and 288 fibers. MiniXtend HD cable has 24 fibers per buffer tube instead of the standard 12 fibers per tube.

Multimode and other single-mode fiber types are not currently available. Contact Customer Care at 800-743-2671 for information about additional configurations.

7. What are the cable dimensions?

MiniXtend Cable with Binderless FastAccess Technology

Fiber Count	Cable Outer Diameter (mm)	Smallest Compatible Microduct Inner Diameter (mm)
12-72	5.4	8
96	6.3	8
144	8.1	10

MiniXtend HD Cable

Fiber Count	Cable Outer Diameter (mm)	Smallest Compatible Microduct Inner Diameter (mm)
144	6.3	8
192	7.5	10
216	8.0	10
288	9.7	12

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8. Will I notice a difference by looking at the standard MiniXtend® cable and the new MiniXtend cable with binderless FastAccess® technology?

From the outside, MiniXtend cables with binderless FastAccess technology have two distinguishing features from the original MiniXtend cable:

1. Cable print – "MiniXtend cable with binderless FastAccess technology" has been added to the print statement. The rest of the required print statement will stay the same as on original MiniXtend cable.
2. Locator ridges – Installers will notice two slightly raised ridges running along the length of the cable. These ridges indicate the FastAccess technology location and do not have any impact on the cable's installation procedure.

Once the jacket is peeled back, installers will immediately notice the absence of binder yarns and ripcords which are found in traditional micro cables. The installer will enjoy up to 70 percent faster cable access and a significant reduction in the risk of cable damage, at a time when speed and cost really matter.

9. How does the performance of MiniXtend cable with binderless FastAccess technology compare to standard MiniXtend cable?

Just like standard MiniXtend cable, the new MiniXtend cable with binderless FastAccess technology meets or exceeds all standard industry criteria for optical, mechanical, and physical performance. MiniXtend cables with binderless FastAccess technology are suitable for use with jetting or air-blown installation methods in microduct applications. All MiniXtend cables meet the IEC 60794-5-10 requirements for outdoor fiber optic micro cables. Additional standards for micro cables are being developed for ICEA and Telcordia GR-20.

10. Which tools will I need to access the cable?

Please refer to the standard recommended procedure.

11. Will the cable open accidentally through twisting or normal installation stresses?

We are confident that MiniXtend cable with binderless FastAccess technology can meet the requirements of an outside plant installation in a microduct when standard recommended procedures are followed. Although the cable peels with ease, we have designed the feature in a manner that allows the cable to meet or exceed all industry specifications. Extensive testing was performed for more than a year in both lab and field environments to ensure the highest cable integrity no matter what the environment or conditions. We fully understand how a field failure of this manner would affect customers and have therefore designed and tested the cable to ensure the highest level of reliability.

12. Do MiniXtend cables with binderless FastAccess technology and MiniXtend HD cables meet all industry standards?

Yes. Both MiniXtend cable with binderless FastAccess technology and MiniXtend HD cable are designed and tested to IEC 60794-5-10 requirements for outdoor fiber optic micro cables.

13. What are the temperature ranges?

Operating and Storage Temperature Range	Installation Temperature Range
-40° to +70°C (-40° to +158°F)	-15° to +60°C (-5° to +140°F)

14. Where can these cables be installed?

We recommend that these cables be installed in a microduct using air-blown or jetting methods per manufacturer's recommended procedures. We do not recommend pulling these cables due to their low tensile rating. We also do not recommend lashing these cables in aerial plant or direct burying.

15. What are the benefits of Corning® SMF-28® Ultra fiber?

SMF-28 Ultra fiber offers the industry-leading low attenuation of Corning SMF-28e+ LL fiber and combines it with bend performance exceeding the ITU-T recommendations G.657.A1. With a 9.2 µm mode field diameter (MFD), SMF-28 Ultra fiber is completely backward compatible with standard G.652 fibers, avoiding the MFD mismatch that can trigger costly additional OTDR field testing. The SMF-28 Ultra fiber portfolio delivers better system margin for high-capacity performance at 100G and beyond, and for next-generation passive optical networks and wavelength division multiplexed passive optical networks.

16. Can you perform a mid-span access on these cables?

Yes, please refer to the standard recommended procedures. MiniXtend® cable with binderless* FastAccess® technology meets the requirements for mid-span express buffer tube storage in Telcordia GR-20 and RDUP PE-90. The binderless* FastAccess technology also improves the mid-span access procedure, allowing easy peeling of the jacket and eliminating the need to cut away binder yarns to access the buffer tubes.

17. Are these cables waterblocked?

MiniXtend cables are waterblocked and meet industry-standard water penetration requirements for outdoor cables (IAW IEC 60794-1-22, Method F5B).

18. Can I splice SMF-28 Ultra 200 fiber to standard 250 µm single-mode fibers (ITU-T G.652.D)? Do I need special splicer settings?

When spliced to conventional ITU-T G.62.D fiber types such as SMF-28e+ fiber, the fusion splicing performance of SMF-28 Ultra 200 fiber is equivalent, as both fibers have a glass cladding diameter of 125 µm and MFD specifications of 9.2 ± 0.4 µm at 1310 nm and 10.4 ± 0.5 µm at 1550 nm. During fusion splicing studies of SMF-28 Ultra 200 fiber, using both core- and cladding alignment modes with standard splicing settings found on all of the commercially available splicing machines tested, a typical splice loss of 0.20 to 0.03 dB was achievable. No special splicer settings are required. SMF-28 Ultra 200 fiber is identifiable as an ITU-T G.652.D single-mode fiber with all splicing machines tested, including independent studies conducted by a well-known fusion splice equipment manufacturer.

For more information, see our AE Note on SMF-28 Ultra 200 fiber.

*Corning's patented binderless FastAccess® technology refers to the combination of a Corning FastAccess technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and waterblocking tapes.

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