UTG SOLUTIONS BRIEF

COMMSCOPE

OPTICAL FIBER

The Utility Grade INFRASTRUCTURE (UTG℠) program has been developed alongside world-class global Technology Alliance Partners℠. These UTG-rated components from CommScope enable you to support the rapid evolution of technology in today's building environments.

PRODUCT OVERVIEW

CommScope's UTG solutions provide a common infrastructure platform optimized for operational technology and high-performance applications. The fiber recommendations in this document complement a full UTG solution.

As part of the UTG connected architecture, the following convergence zones identify the most common environments fiber will be utilized within and around the building:

INTER-BUILDING | INTRA-BUILDING | EXTENDED-EDGE

CONSTRUCTION AND PERFORMANCE

INTER-BUILDING CONVERGENCE ZONE (BUILDING-TO-BUILDLING)

Utilized to connect two or more buildings together, it is a recommended UTG best practice to install single-mode optical fiber for inter-building environments.

UTG OPTICAL FIBER TIER I

Fiber Type: OS2 TeraSPEED Zero Water Peak
Minimum Fiber Count: 144
Construction: Indoor/outdoor, interlocking armored

FEATURES AND BENEFITS

- Zero Water Peak – utilizing a tri-window single-mode glass offers more channels across a single fiber
- Protection – indoor/outdoor fiber cable can be manufactured with an aluminum interlocked armor that has an extruded over jacket applied to it
- Burn rating – indoor/outdoor fiber cable is not only UV rated for outdoor installation, but it is also listed for plenum or riser applications
- No need for 50-foot transition point – with the benefit of a listed cable, there is no longer a need for a transition point before the 50-foot mark inside the building

CommScope Part #	Anixter Part #	Product Details
P-144-OZ-8W-FMUBK/760134965	373-COMOS2-TBA-144	Indoor/outdoor plenum, aluminum interlocking armored, single-mode

UTG OPTICAL FIBER TIER II

Fiber Type: OS2
Minimum Fiber Count: 144
Construction: OSP non-armored, loose tube or ribbon fiber

FEATURES AND BENEFITS

- Zero Water Peak – utilizing a tri-window single-mode glass offers more channels across a single fiber
- Flexibility – this cable is smaller and more flexible than armored fiber cable
- Scalability – outside plant fiber cable utilizing a conduit or duct system, allowing more fiber to be easily added
- Loose tube construction – allows for multiple breakouts and easier access midspan

CommScope Part #	Anixter Part #	Product Details
D-144-LN-8W-F12NS/760053918	372-COMOS2-LTD-144	Outdoor stranded loose tube, all dielectric, gel-free, single-mode

Utility Grade INFRASTRUCTURE by Anixter

INTRA-BUILDING CONVERGENCE ZONE (FLOOR-TO-FLOOR)

Utilized to connect two or more areas or floors within a building, it is a recommended UTG best practice to install laser-optimized multimode optical fiber for intra-building environments.

UTG OPTICAL FIBER TIER I SOLUTION:

Fiber Type: OM5 LazrSPEED 550 Wide-Band Multimode
Minimum Fiber Count: 48/floor
Construction: Indoor, armored, tight buffer

FEATURES AND BENEFITS

- Extended distance - utilizing an OM5 fiber type allows for the use of short wave division multiplexing (SWDM) over a pair of fibers to achieve 100G bandwidth beyond standards out to 170m
- Burn rating – fiber installed in a building must have a listing (plenum or riser) depending on the environment in which it is installed
- Armored cable – provides another layer of protection for cable that is going vertically or horizontally and may be exposed to incidental contact
- Bend-insensitive multimode fiber – allows for better handling and improved bend radius for installation

CommScope Part #	Anixter Part #	Product Details
P-048-DZ-5G-FMULM/760229559	370-COMOM5-TBA-48	Plenum distribution, interlocking armor, OM5, lime green

UTG OPTICAL FIBER TIER II SOLUTION:

Fiber Type: OM4 LazrSPEED 550
Minimum Fiber Count: 48/floor
Construction: Indoor, armored, tight buffer

FEATURES AND BENEFITS

- Extended distance – OM4 allows for the use of single wavelength over a pair of fibers to achieve 10G bandwidth beyond standards out to 550m
- Burn rating – fiber installed in a building must have a listing (plenum or riser) depending on the environment in which it is installed
- Armored cable – provides another layer of protection for cable that is going vertically or horizontally and may be exposed to incidental contact
- Bend-insensitive multimode fiber – allows for better handling and improved bend radius for installation

CommScope Part #	Anixter Part #	Product Details
P-048-DZ-5K-FMUAQ/760125971	370-COMOM4-TBA-48	Plenum distribution, interlocking armor, OM4, aqua
P-XXX-OZ-8W-FMUBK	Length dependent	Indoor/outdoor, plenum, aluminum, interlocking armor, single-mode
D-XXX-LN-8W-F12NS	Length dependent	Outdoor, non-armored, loose tube, single-mode
P-XXX-DZ-5G-FMULM	Length dependent	Plenum, aluminum, interlocking armor, OM5
P-XXX-DZ-5K-FMUAQ	Length dependent	Plenum, aluminum, interlocking armor, OM4
HD-1U/760209940	644048	1U fiber shelf, 4 slots
HD-4U/760209965	644050	4U fiber shelf, 16 slots
WBE-EMT-BK-4P-MOD/760060426	502940	Fiber wall box, 4 slots
G2-SP-24LCG-PT/760244929	9995047	24 LC fiber splice cassette, single-mode with pigtails
G2-SP-24LCV-PT/760245398	10002307	24 LC fiber splice cassette, OM5 with pigtails
360DPis-24LC-SM/760216762	660102	24 LC fiber coupler panel, single-mode
360DPis-24LC-WB/760236041	1025099	24 LC fiber coupler panel, OM5
SFC-LCF-09-8Y-12-PACK/760243372	9806637	Fusion splice connector LC, single-mode
MFC-LCF-09-5Y-12-PACK/760242874	9870399	Fusion splice connector LC, OM3/4/5
FEWLCLC42-JXFXXX	Length dependent	2 fiber, LC-LC single-mode patch cord, yellow
UDVLCLC42-NXFXXX	Length dependent	2 fiber, LC-LC OM5 patch cord, lime green
12A1 Clamp/700025513	106721	Grounding clamp, metallic cable

EXTENDED-EDGE CONVERGENCE ZONE (POWERED)

Fiber is used to extend the distances of the network and can also be used to extend the distances of certain devices on the network. By combining optical fibers and copper conductors into a common cable, increased distance on both can be achieved. With a known power level and conductor size, voltage drop can be determined across the distance of the run and provide opportunity to remotely power devices up to three kilometers away.

UTG OPTICAL FIBER TIER I SOLUTION:

Fiber Type: OS2 Powered Fiber Cable
Recommended Fiber Count: 4
Construction Type: Indoor/outdoor tri cable, 12 AWG conductors

FEATURES AND BENEFITS

- Power over distance - larger gauged conductors provide further distance reach to power remote devices
- Appropriate pathways and spaces should be planned to make remote power and signal a cost savings
- No need for 50-foot transition point – with the benefit of a listed cable, there is no longer a need for a transition point before the 50-foot mark inside the building

CommScope Part #	Anixter Part #	Product Details
PFC-S04L12F	373-COMOS2-PFC1204FT	Powered fiber cable, OS2, 4 fibers, indoor/outdoor, 12 AWG conductor

FOR MORE DETAILS, VISIT ANIXTER.COM/UTG