

FTTX-K30: FTTx + Active Electronics Kit

The FTTX-K30 kit from LightSpeed Technologies® is an affordable, easy-to-install package that streamlines fiber-to-the-home and business. The kit includes two enclosures – one passive (non-powered) and one active (powered) – designed to simultaneously route and manage broadband, network, and/or audio-visual fiber connections from an outdoor location to an indoor demarcation point or, alternatively, between two outdoor locations. For added versatility, the FTTX-K30 active enclosure features power outlets for installed devices, environmental temperature control, and an oversized mounting panel. The FTTX-K30 kit is an ideal solution for securing, connecting, and managing fiber-based electronics.

Unlike other demarcation wiring systems that are specific to broadband, networking or audio/video, the FTTX-K30 kit includes innovative hybrid panels that manage single mode SC/APC connections (typically broadband), single mode LC connections (typically long-range networking and AV), and multimode LC connections (typically short-range networking and AV) in a single enclosure. For added versatility, the FTTX-K30 hybrid panel system is also swappable and conforms to LGX standards, allowing integrators to quickly and easily customize fiber optic connections using off-the-shelf components.

Installing the FTTX-K30 system is easy: simply mount the passive enclosure, mount and connect power to the active enclosure, run and connect a compatible fiber optic cable between the two enclosures, and plug-in the broadband, networking, and/or audio-visual equipment. If needed, LightSpeed Technologies® offers a variety of factory-terminated fiber optic cables built in various lengths and configurations. A fully populated FTTX-K30 enclosure requires ten strands of fiber in the following cable configuration:

Product Snapshot

- FTTx demarcation wiring package including two enclosures (one active and one passive) with hybrid LGX panels
- Ideal for routing broadband, networking and/or audio-visual fiber-based signals between indoor and outdoor locations or between two outdoor locations
- Included enclosures feature two simplex single mode SC/APC, two duplex single mode LC and two duplex multimode LC connections
- Hybrid LGX panels are swappable and follow industry standards, allowing for quick customizations in the field
- Passive (non-powered) enclosure features:
 - Outdoor rating for exposure to water and UV
 - Built-in cable management
 - Multiple entry / exit points supporting conduit connections up to 1 inch in diameter
 - Copper electrical ground lug
 - Secure door latching with 3/8-inch hex bolt
- Active (powered) enclosure features:
 - Enhanced NEMA Type 3R outdoor rating for exposure to water and UV
 - 10.9 x 12.8-inch internal aluminum mounting plate for cable management and securing electronics
 - Four factory-installed 120VAC outlets with removable 120VAC terminal block
 - Two 4-inch vents with rain shields and screens
 - Built-in thermostat-controlled cooling fan
 - Multiple entry / exit points with cable glands
 - Copper electrical ground lug
 - Two stainless steel hinges with quick release latches and padlock hasps

Connection	Cable Type	Indoor Enclosure Connector	Outdoor Enclosure Connector	Typical Use
Cable 1	Single Mode	SC/APC	SC/APC	Broadband
Cable 2	Single Mode	SC/APC	SC/APC	Broadband
Cable 3	Single Mode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 4	Single Mode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 5	Single Mode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 6	Single Mode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 7	Multimode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 8	Multimode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 9	Multimode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV
Cable 10	Multimode	LC/UPC (standard LC)	LC/UPC (standard LC)	Networking & AV

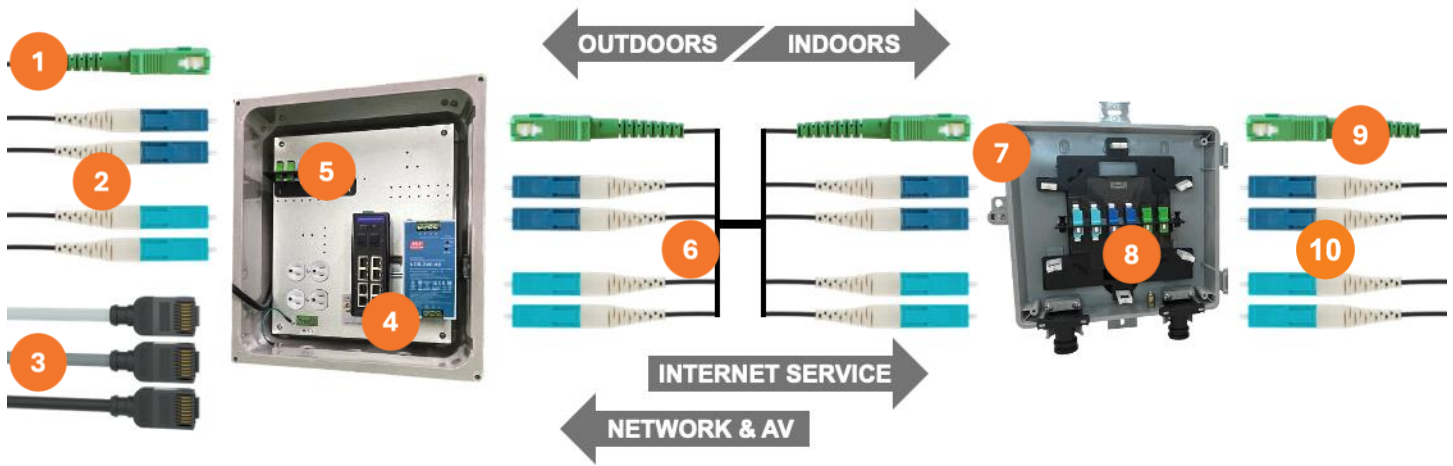
*LightSpeed Technologies® recommends adding at least 10 feet of extra cable length to all interconnect cables.

To future-proof installations, both the active and passive FTTX-K30 enclosures feature built-in cable management, cable coiling, and multiple entry and exit points to accommodate extra fiber optic cable for service loops, repairs, and retrofits.

The FTTX-K30 kit is ideal for residential and commercial installations where affordable, quick, consistent, reliable, and aesthetically pleasing fiber optic connections are required.



Typical Application Diagram



- 1 **Service Provider Cable Feed** (contractor provided)
Incoming service feed.
- 2 **Remote Fiber Optic Network and/or AV Feed** (contractor provided)
Outgoing fiber optic network and/or audio-visual feeds.
- 3 **Remote Twisted Pair Network and/or AV Feed** (contractor provided)
Outgoing twisted pair network and/or audio-visual feeds. Requires integration with a network switch and/or media converter (sold separately).
- 4 **Active Enclosure**
Weather-rated enclosure connects and protects the incoming service feed and outgoing network and AV feeds while providing power and mounting for devices, cable management and multiple secure cable entry / exit points.
- 5 **Hybrid LGX Panel**
Hybrid LGX panel with connectivity for two simplex single mode SC/APC, two duplex single mode LC and two duplex multimode LC connections.
- 6 **Trunk Cable** (contractor provided)
Fiber optic trunk cable connecting the active enclosure to the passive enclosure.
- 7 **Passive Enclosure**
Passive enclosure connects and protects the incoming service feed and outgoing network and AV feeds while providing cable management and multiple secure cable entry / exit points.
- 8 **Hybrid LGX Panel**
Hybrid LGX panel with connectivity for two simplex single mode SC/APC, two duplex single mode LC and two duplex multimode LC connections.
- 9 **ONT Cable Feed** (contractor provided)
Connection to the optical network terminal (modem).
- 10 **Network/or and AV Cable Feed** (contractor provided)
Connection to the network switch, media converters, HDMI over fiber optic extenders and/or other signal distribution electronics.

Specifications

Kit Information	
Part Number	FTTX-K30
Contents	1 x factory-loaded passive (non-powered) enclosure <ul style="list-style-type: none"> • 1 x hybrid LGX panel <ul style="list-style-type: none"> ○ 2 x simplex single mode SC/APC ○ 2 x duplex single mode LC ○ 2 x duplex multimode LC • 1 x copper ground lug
	1 x factory-loaded active (powered) enclosure <ul style="list-style-type: none"> • 1 x hybrid LGX panel <ul style="list-style-type: none"> ○ 2 x simplex single mode SC/APC ○ 2 x duplex single mode LC ○ 2 x duplex multimode LC • 3 x cable glands • 2 x removable air filters • 4 x stainless steel mounting feet • 1 x 120VAC power terminal block • 1 x copper ground lug



Passive Enclosure with Hybrid LGX Panel	
Dimensions	10.2 x 8.7 x 2.8in (261 x 222 x 73mm)
Material	PC and ABS outdoor-rated plastic
Color	Light gray
Input / Output Conduit Support	2 x up to 1in conduit
Input / Output Cable Support	2 x gasketed round entries accommodating from 0.12 to 0.63in (3.0 to 16.2mm) 2 x gasketed flat drop entries accommodating from 0.7 to 0.3 x 0.2in (2.0 to 8.1 x 4.5mm) 2 x variable size entry clamp
Grounding	Electrical copper ground lug
Temperature	-40°F to 176°F (-40°C to 80°C)
Relative Humidity	≤ 85%
Environmental Rating	GR-771 outdoor-rated for weather and UV exposure
Security	3/8" hex bolt with support for security seal
Panel Insert Format	LGX standard
Panel Insert Connections	2 x simplex single mode SC/APC 2 x duplex single mode LC/UPC 2 x duplex multimode LC/UPC
Panel Insert Total Fiber Capacity	10 strands (6 x single mode and 4 x multimode)
Panel Material	16-gauge steel with black powder coating
Panel Insertion Loss	0.03 – 0.01dB
Panel Durability	> 500 mating cycles

Specifications



Active Enclosure with Hybrid LGX Panel	
Outer Dimensions	15.7 x 13.8 x 8.0in (401 x 352 x 205mm)
Inner Dimensions	13.0 x 11.0 x 2.7in (330 x 279 x 69mm)
Mounting Plate Dimensions	10.9 x 12.8in (276 x 324mm)
Enclosure Material	Fiberglass reinforced polyester
Mounting Plate Material	0.1in (2.5mm) thick aluminum
Color	Light gray
Unloaded Weight	12.0lbs (5.4kg)
Input / Output Cable Support	3 x cable glands
Voltage	120VAC
Max Load	15A @ 120VAC
Internal Electrical Connections	4 x factory-wired power outlets and a terminal strip
Electrical Terminal Block Wire Range	12 – 18 AWG
Electrical Terminal Block Strip Length	0.2 – 0.3in (6 – 7mm)
Environmental Control	1 x factory-installed cooling fan
Cooling Fan Turn-On Temperature	100°F (38°C)
Cooling Fan Turn-Off Temperature	79°F (26°C)
Enclosure Environmental Rating	NEMA Type 3R, 3RX / IP24
Enclosure Flame Rating	UL94-5V
Security	2 x stainless steel hinges with quick release latches and padlock hasps
Panel Insert Format	LGX standard
Panel Insert Connections	2 x simplex single mode SC/APC 2 x duplex single mode LC/UPC 2 x duplex multimode LC/UPC
Panel Insert Total Fiber Capacity	10 strands (6 x single mode and 4 x multimode)
Panel Material	16-gauge steel with black powder coating
Panel Insertion Loss	0.03 – 0.01dB
Panel Durability	> 500 mating cycles

*Custom enclosure environmental and mounting options available. Please contact the factory for additional information.