

SYSTIMAX®
COMMSCOPE

Constellation® extended reach
building infrastructure platform

Endless Innovation



YOUR NETWORK
YOUR FUTURE

10X more power. 5X longer distances. 85% less space.

Today's enterprise network managers are responsible for supporting billions of high-powered, connected devices at the network edge—in the ceilings, walls and outdoors—often far beyond the standards-defined reach of the structured cabling network.

The move to the edge is disrupting traditional LAN/IP network designs, requiring more telecom rooms, IDFs, wiring closets, and UPS equipment and increasing the network's carbon footprint. The network is densifying and converging; IT and OT devices and their power requirements are rapidly increasing, threatening to outstrip the budgets and amount of skilled techs needed to design, deploy and manage them.

Simply meeting the current cabling standards is no longer good enough. Network managers need to move more power over longer distances without sacrificing valuable real estate. They need to dramatically streamline and simplify the delivery of power and data, ensure easy access during deployment and changes, and reduce the network's carbon footprint.

Addressing these challenges means rethinking everything. CommScope has. With the SYSTIMAX® Constellation platform, you can deliver 10X more power across 5X longer distances while reducing your network's square footage requirements up to 85% versus traditional LAN/IP networks.

Constellation extended reach platform: Rethinking power and data to the edge

The CommScope® Constellation extended reach platform is a unique, highly adaptable solution for today's rapidly expanding and densifying edge-based networks. It combines fault-managed power, configurable powered fiber cabling and compact Constellation Star hubs in an easy-to-deploy star topology.

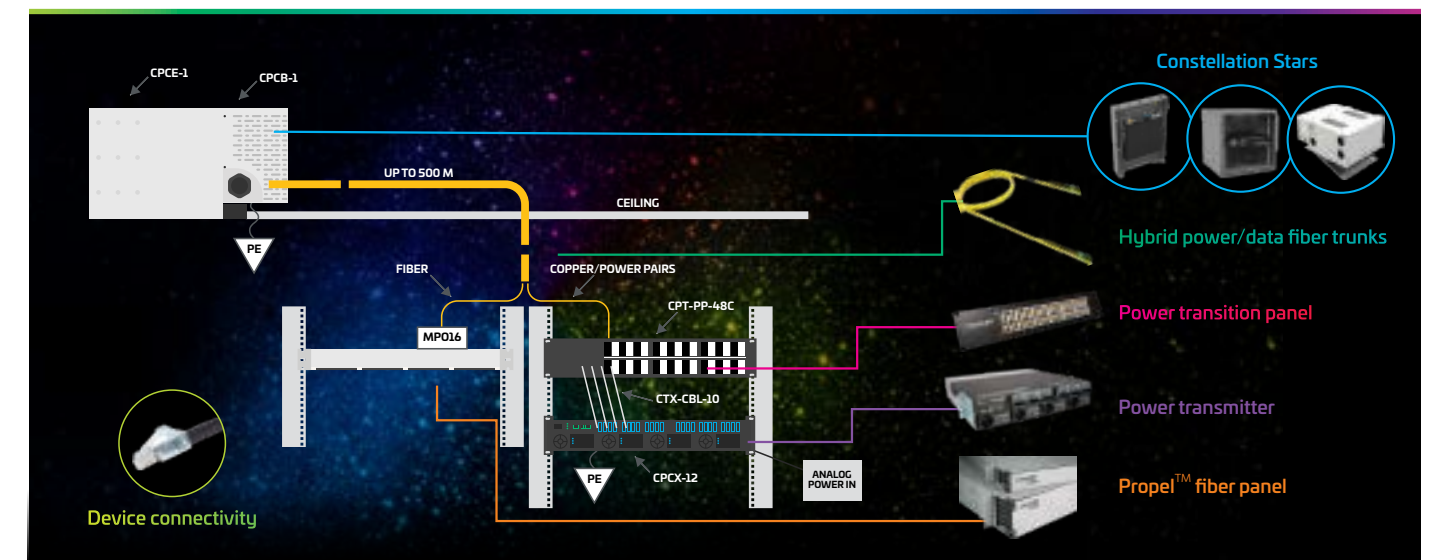
As a result, facility and network managers can deliver:

- 1,000 watts up to 500 meters
- 1,800 W up to 250 m
- 650 W up to 1,000 m

In addition, the Constellation platform enables network and facility managers to dramatically reduce the size, cost, environmental impact and management requirements of their networks.

Inside the Constellation solution: Radically streamlined, highly flexible

The Constellation platform is based on modular components deployed in a simplified, repeatable architecture. Technology agnostic, the Constellation solution supports a variety of network types, devices and environments while reducing real estate requirements, network complexity, design and deployment time and costs, and the need for skilled labor.



The solution's streamlined, modular design creates a highly efficient architecture that dramatically simplifies the cost and complexity of connecting edge-based devices and services. It begins in the main equipment room/distribution field that houses the power-sourcing and aggregation and/or core layer switching equipment. A compact rack-mounted power transmitter delivers up to 12 kW of fault-managed power to the power transition panel.

The power transition panel steps down the power feed from higher to lower gauge conductors. A modular SYSTIMAX Propel™ fiber panel terminates the fiber cabling.

Data and power are merged onto the hybrid powered fiber cabling at the Constellation Edge Enclosure and powered backplane. CommScope's patented powered fiber trunk cabling exits the equipment room and runs up to 500 m to Constellation Star hubs located in coverage zones throughout the building. Power is delivered via 16-AWG twisted-pair conductors—two-pair or four-pair. Data is transported on high-capacity, singlemode, eight- or 16-fiber cables.

Short runs of preterminated Cat 6 or 6A cabling supply power and data from each Constellation Star to devices in the coverage zone.

The Constellation Star

At the heart of the Constellation solution is the Constellation Star, a compact distribution node that can be installed in the ceiling, walls or outdoors for quick and easy access and manageability.

Each Constellation Star supports up to 50 connected devices with 1 kW of power—110 or 220 AC, 48 V and 24 V DC—and up to 16 fiber strands. Multiple service outlets power PoE access layer switches, building automation controllers, DAS fiber and other high-power devices like night vision cameras, Wi-Fi 6 and Wi-Fi 7 access points, DAS/small cell systems and more.

The new rack-mount Constellation offers redundant paths for both power and data. Critical applications such as emergency services and alarms benefit from using dual paths for redundancy and resiliency.

New, rounded Category 6/6A cables are CPR rated for international markets and plenum rated for North American markets, making the Constellation platform a truly global solution.

Uniquely powerful benefits

As much as
85%
less network
real estate

Can reduce
deployment
time by
57%

Can reduce
network equipment
by as much as
59%

Consolidate network resources

The extended reach capabilities and simplified design of the Constellation solution enable network managers to dramatically shrink the network's footprint, equipment and cabling requirements. For example, each compact Constellation Star provides the essential functions of a telecom room, IDF or wiring closet while using a fraction of the size. By eliminating the need for these larger distribution points on every floor, the Constellation platform shrinks the network's real estate requirements by as much as 85%. Perhaps more importantly, it eliminates the need for redundant power and connectivity equipment on every floor, as well as the cost and resources to operate and maintain them. This includes being able to consolidate and centralize all UPS systems and bulky AC/DC transformers in the MER/ MDF. This not only delivers bottom-line savings, but it also frees up valuable real estate that can be redeployed as revenue positive space.

Simplify and accelerate deployment and management

The Constellation platform reduces the amount of network equipment by more than half, compared to a traditional LAN/IP network. It also replaces the long runs of traditional horizontal copper used to connect each device, with much shorter and easier to install preterminated/field-terminated patch cords. As a result, the Constellation platform reduces deployment time by up to 57% and can cut skilled labor requirements in half. Management and upgrades are faster and easier, too. The ceiling-, wall- or rack-based Constellation Stars are easy to access and configure, reducing the risk of potential service outages and management costs. Using 16-AWG twisted-pair powered fiber cable built on a future-ready 16f SM platform, the Constellation solution ensures network managers have all the bandwidth and power needed for long-term growth on Day 1.

Improve sustainability

By reducing network complexity, space requirements and infrastructure materials, the Constellation platform provides a more responsible and sustainable long-term solution. Its simplified architecture reduces the amount of network equipment by as much as 59% while using less than half the number of components of a traditional LAN/IP network. This translates to significantly reduced raw materials and manufacturing requirements and up to 57% lower labor cost and installation time. The cumulative effects are fewer truck rolls, less fuel consumption and lower greenhouse gas emissions. By leveraging the extended product life of powered fiber cabling and Category 6 and 6A patch cables, the Constellation platform extends the infrastructure lifecycle, further reducing the effects of the building network on the environment.

Use cases

The extended distance, high power/high bandwidth and flexible capabilities of the Constellation platform make it an ideal solution for a wide range of vertical market use cases. With its modular, flexible, and technology-agnostic design, the Constellation platform supports converged and segmented networks, AC and DC, and IT/OT applications. This makes it ideal for use cases like adding high-end Wi-Fi®/DAS to existing network systems, densifying IoT and IIoT edge deployments, consolidating and centralizing multiple UPS locations, supporting dynamic multitenant requirements and more.

Venues/stadiums  Distance/flexibility High power and bandwidth for wireless applications	Large retail and shopping malls  Distance/flexibility - High power and bandwidth for wireless applications - Enhanced tenant space management	Warehouse/distribution/manufacturing  Distance/flexibility High power and bandwidth for wireless applications	Airports  Distance/flexibility - High power and bandwidth for wireless applications - Enhanced tenant space management
Commercial office space  Dynamic and hybrid workplaces - Wi-Fi First initiatives - Enhanced CRE tenant	Education  Fiber to the classroom - Future-ready for high-bandwidth learning technology such as AR/VR/AI in classroom - Collapsed campus distribution for higher education institutions/community colleges	Healthcare  Density High power and bandwidth for wireless applications	

Take the next step to power your space to the edge and beyond

CommScope WebTrak® product tracking platform

Constellation products are labeled with a QR code linked to the component’s unique serial number. Using the CommScope WebTrak® product tracking platform, you can easily verify the optical performance of any element when it left the factory.



Rely on CommScope, now and next

For years, enterprise network and facility managers have relied on CommScope’s powered fiber, PoE and Cat 6/6A solutions to continually evolve their power and data infrastructure capabilities. As part of our SYSTIMAX family of cabling and connectivity platforms, the Constellation platform represents the next step in the development of hyperconnected and digitally aware buildings and campuses. Our active involvement with the world’s major standards bodies and global presence provide the insight, innovation and resources to ensure customers have the solutions they need, when and where they need them.

For more information on the Constellation building edge infrastructure platform, contact your CommScope representative.

Ordering information

Constellation® solution

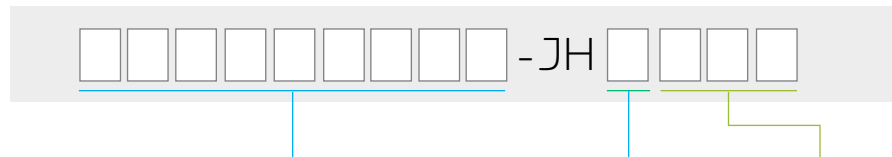
Material ID	Product Number	Description
760258034	CPCR-1 SN	Constellation rack mount receiver, single FMP input, 110 V AC
760258035	CPCR-1 SI	Constellation rack mount receiver, single FMP input, 220-230 V AC
760258036	CPCR-1 DN	Constellation rack mount receiver, dual FMP input, 110 V AC
760258037	CPCR-1 DI	Constellation rack mount receiver, dual FMP input, 220-230 V AC
760252854	CPCE-1	Constellation Enclosure, secure equipment enclosure providing 5RU of 19 inch rack space as well as 0RU accommodations for Propel and G2 modules
760252855	CPCB-1	Constellation Powered Backplane power conditioning component mounted to the CPCE-1 manages the transition from fault-managed power delivered via hybrid powered fiber cable to 1 kW of conventional power with power service outlets in 110 VAC, 48 VDC, and 24 VDC form
760254285	CPCX-12	Constellation Power Transmitter Chassis, capable of energizing up to ten enclosures with management module that provides remote access/monitoring/control of the Constellation power delivery system
760254288	CTX-6	Constellation Transmitter Card, 600 W, fault managed power delivery card interface between the CPCX-12 and the power delivery cabling. Up to 24 can be loaded into the CPCX-12
760254294	CTX-CBL-10	Constellation Power Interconnection Lead connecting CTX-6 and the Power Transition Panel
760254293	CPT-PP-48C	Constellation Power Transition Panel, with 48 color coded terminal blocks providing a transition point from 20 AWG to 16 AWG cabling, 19 in, 2RU
760254287	CPM-3K	Constellation Transmitter Power Module, 3 kW module that provides the CPCX-12 with up to 12 kW of capacity
760254290	CABLE-PWR-SAFD-L620P	Constellation Power Supply Cord, AC, Saf-D-Grid® to L620P power cable
760254642	PM500-COVER	Constellation optional blanking cover for unused power supply bays in CPCX-12
760254286	CTX-MGT	Management module containing pre-loaded graphical user interface software and Ethernet interface used by the administrator

Cable

Material ID	Product Number	Description
760261723	Z-016-HY-8G1-F54BK/4X16AWG/CTX	Indoor LSZH Constellation Cable, 2 pair 16 AWG, 16 OS2 SM fibers**
760261724	Z-016-HY-8G1-F54BK/8X16AWG/CTX	Indoor LSZH Constellation Cable, 4 pair 16 AWG, 16 OS2 SM fibers**
760261709	N-016-HY-8G1-F54BK/4X16AWG/CTX	I/O Riser Constellation Cable, 2 pair 16 AWG, 16 OS2 SM fibers*
760261708	N-016-HY-8G1-F54BK/8X16AWG/CTX	I/O Riser Constellation Cable, 4 pair 16 AWG, 16 OS2 SM fibers*
760255004	P-016-HY-8G-F30YL/4X16AWG/CTX	Constellation Plenum Hybrid Fault Managed Power Cable, 16 Fiber Loose Tube, 4 Conductor 16 AWG Twisted Pairs
760255005	P-016-HY-8G1-F30YL/8X16AWG/CTX	Constellation Plenum Hybrid Fault Managed Power Cable, 16 Fiber Loose Tube, 8 Conductor 16 AWG Twisted Pairs

* Available Q1 2026
** Available Q2 2026

Constellation cable assemblies



Material ID	
UGGRXRYR	MPO16 (pinned) to MPO16 (pinned), 2 pair 16AWG
UGGRXUCYR	MPO16 (pinned) to Unconnectorized, 2 pair 16AWG
UGGRXRXRZ	MPO16 (pinned) to MPO16 (pinned), 4 pair 16AWG
UGGRXUCZR	MPO16 (pinned) to Unconnectorized, 4 pair 16AWG
UGGQXQXY8	MPO8 (pinned) to MPO8 (pinned), 2 pair AWG
UGGQXUCY8	MPO8 (pinned) to unconnectorized, 2 pair AWG
UGGQXQXZ8	MPO8 (pinned) to MPO8 (pinned), 4 pair AWG
UGGQXUCZ8	MPO8 (pinned) to unconnectorized, 4 pair AWG

Unit of measure	
F	Foot
M	Meter

Length	
XXX	2 Pair parameters: 033-492 (in feet) / 10-150 (in meters)
XXX	4 Pair parameters: 033-999 (in feet) / 10-500 (in meters)

**NOTE: Use dimension parameters for 2 Pair or 4 Pair. Replace XXX with numeric values in feet or meters.
Example: 45 feet = 045**

Propel™ panels

Material ID	Product Number	Description
760252002	PPL-1U	Propel 1RU sliding panel
760252003	PPL-2U	Propel 2RU sliding panel
760252004	PPL-4U	Propel 4RU sliding panel

Propel™ modules

Material ID	Product Number	Description
760252352	PPL-DM-16AU-16LC-SM-BEU	Propel ULL Singlemode MPO-16 Distribution Module, 8 duplex LC/UPC to 1x16f MPO/APC non-pinned, Method B Enhanced
760252334	PPL-DM-8AU-8LC-SM-BEU	Propel ULL Singlemode MPO-08 Distribution Module, 4 duplex LC/UPC to 1x8f MPO/APC non-pinned, Method B Enhanced

GigaSPEED X10D® 360GS10E modular patch cords



Material ID	
CPCSSX2	360GS10E Solid Cordage
CPCSSV2	360GS10E Solid Plenum Cordage
CPCSC4X	360GS10E Single-ended Solid Cordage
CO199K2	360GS10E Single-ended Solid Cordage

Cord color options (below) are limited as follows:

CPCSSX2: 1, 2, 3, 4, 6, 7, 8, 9, B, C, K, L, Z

CPCSSY2: 1, 4, 6, 7, 8, 9, C, M, Z

CPCS4X2: 1, 2, 3, 4, 6, 7, 8, 9, B, C, L, Z

CO199K2: 1, 2, 3, 4, 7, 8, 9, K, L, Z

Length	
XXX	1-100 (in feet) / 1-30 (in meters)

NOTE: Replace XXX with numeric values in feet or meters. Example: 45 feet = 045

Unit of measure	
F	Foot
M	Meter

Cord color					
1	Black	7	Red	K	Pink
2	Light Blue	8	White	L	Violet
3	Dark gray	9	Yellow	M	Green
4	Spring Green	B	Lilac	Z	Blue
6	Orange	C	Gray		

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.

For more information, visit the [SYSTIMAX 2.0 solutions page](#)

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