



**SYSTIMAX<sup>®</sup> GigaSPEED<sup>®</sup> X10D**  
**FTP Solution Guide**

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The SYSTIMAX® GigaSPEED® X10D FTP Solution provides unprecedented performance for key parameters such as insertion loss and all forms of crosstalk, both within and between channels, yielding improved bandwidth, data throughput and network efficiency.

The SYSTIMAX® GigaSPEED® X10D FTP Solution has been specifically engineered with enhanced cable and connector performance designed to support the latest 10 Gb/s Ethernet requirements. Using patented technology and the scientific capabilities of CommScope Labs, this solution exhibits far superior channel performance than legacy FTP solutions, and innovative engineering techniques to meet the specific channel requirements of the ISO/IEC 11801 Class E<sub>A</sub> and ANSI/TIA-568-C.2 Category 6A standards. The SYSTIMAX® GigaSPEED® X10D FTP Solution delivers next generation support by providing double the bandwidth of today's Category 6 cabling channel and guaranteed performance in worst case installation conditions out to 500MHz.

**The GigaSPEED X10D UTP Solution**

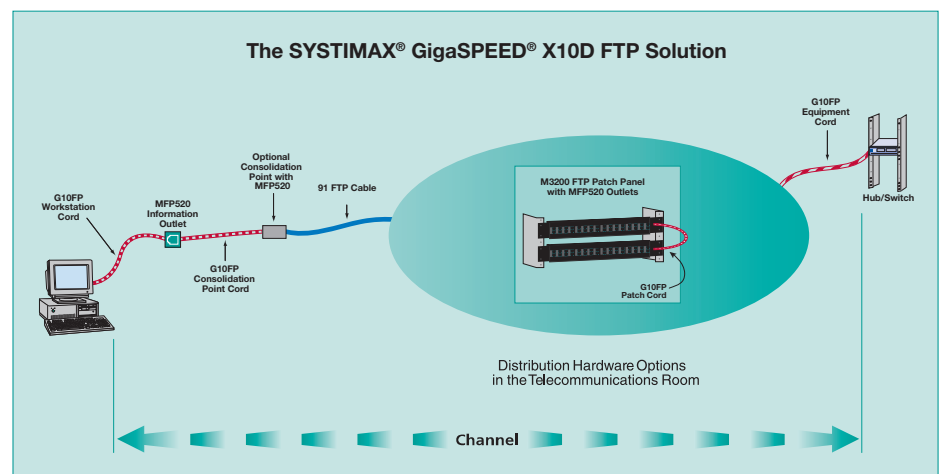
*Extending... the usable bandwidth of the enterprise*

*Extending... the peak performance of the enterprise*

*Extending... the technology of copper cabling*

*Extending... the value of the IT budget*

*Extending... the life of the enterprise cabling infrastructure*



**SYSTIMAX GigaSPEED X10D FTP Channel Performance**

The SYSTIMAX GigaSPEED X10D FTP cabling system is designed specifically to meet or exceed the latest ISO/IEC Class E<sub>A</sub> cabling specification. A major breakthrough of the SYSTIMAX GigaSPEED X10D FTP Solution over other legacy FTP solutions is vastly improved performance across the complete frequency spectrum from 1 to 500MHz.

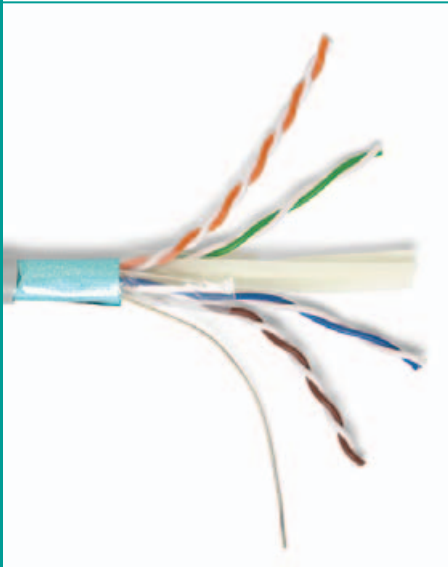
By utilizing the unique design tools available to CommScope Labs, the technologies implemented in the SYSTIMAX GigaSPEED X10D FTP Solution are capable of incorporating the FTP technology while maintaining pair balance without degrading the internal channel transmission performance. Superior Crosstalk performance, improved Insertion Loss performance and guaranteed channel performance up to 500 MHz are the key enhancements that set the SYSTIMAX GigaSPEED X10D FTP Solution apart from other FTP solutions on the market today.

**SYSTIMAX GIGASPEED X10D FTP PERFORMANCE SPECIFICATIONS**

Channel Performance Specifications for the GigaSPEED X10D FTP Solution												
Freq (MHz)	Insertion Loss (dB)	PS ANEXT (dB)	Avg. PS ANEXT (dB)	PS AACR-F (dB)	Avg. PS AACR-F (dB)	NEXT (dB)	ACR-N (dB)	PS NEXT (dB)	PS ACR (dB)	ACR-F (dB)	PSACR-F F (dB)	Return Loss (dB)
1	4.0	67.0	69.25	67.0	71.0	65.0	61.0	62.0	58.0	63.3	60.3	19.0
4	4.2	67.0	69.25	65.0	69.0	63.0	58.9	60.5	56.4	51.2	48.2	19.0
8	5.8	67.0	69.25	58.9	62.9	58.2	52.5	55.6	49.9	45.2	42.2	19.0
10	6.5	67.0	69.25	57.0	61.0	56.6	50.2	54.0	47.6	43.3	40.3	19.0
16	8.2	67.0	69.25	52.9	56.9	53.2	45.1	50.6	42.5	39.2	36.2	18.0
20	9.2	67.0	69.25	51.0	55.0	51.6	42.5	49.0	39.9	37.2	34.2	17.5
25	10.2	66.0	68.25	49.0	53.0	50.0	39.8	47.3	37.1	35.3	32.3	17.0
31.2	11.5	65.1	67.35	47.1	51.1	48.4	37.0	45.7	34.3	33.4	30.4	16.5
62.5	16.4	62.0	64.25	41.1	45.1	43.4	27.1	40.6	24.3	27.3	24.3	14.0
100	20.9	60.0	62.25	37.0	41.0	39.9	19.1	37.1	16.3	23.3	20.3	12.0
200	30.1	55.5	57.75	31.0	35.0	34.8	4.8	31.9	1.9	17.2	14.2	9.0
250	33.9	54.0	56.25	29.0	33.0	33.1	-0.7	30.2	-3.6	15.3	12.3	8.0
300	37.4	52.8	55.05	27.5	31.5	31.7	-5.6	28.8	-8.5	13.7	10.7	7.2
400	43.7	51.0	53.25	25.0	29.0	29.6	-14.0	26.6	-17.0	11.2	8.2	6.0
500	49.3	49.5	51.75	23.0	27.0	27.9	-21.4	24.8	-24.5	9.3	6.3	6.0

Note: values at specific frequencies for information only. Performance shall be met on a swept frequency basis as per the above listed formulae.

The SYSTIMAX GigaSPEED X10D FTP Solution offers guaranteed channel performance to the above specifications for registered SYSTIMAX Network Infrastructure Solutions installations. Please contact your CommScope representative for a GigaSPEED X10D FTP Solution Guide and GigaSPEED X10D FTP Design and Installation Guidelines.



1291 Cable

### SYSTIMAX GigaSPEED 91 Series FTP Cable

The SYSTIMAX GigaSPEED X10D FTP Solution includes the 91 Series FTP cable in Non-Plenum, Plenum and LSZH constructions. The SYSTIMAX GigaSPEED X10D FTP Solution is designed to give channel performance exceeding Class E<sub>A</sub> channel specifications and in addition has substantially improved balance.

The cable design has been dramatically enhanced using the CommScope Labs Cable Twist Accuracy Technology.

The 91 Series FTP Cables incorporate a round smooth shape that speeds the handling and termination process and minimizes variation in performance. The excellent crosstalk performance is enabled via patented high-technology pair isolator (improves pair separation and also cable flexibility) and an optimized twist and strand scheme, dramatically enhancing high-frequency performance.

The 91 Series FTP Cables have been specified out to 500 MHz to support high bandwidth applications operating at 10 Gb/s.

#### ORDERING INFORMATION:

Material ID	Product Number	Description	Colors (when applicable)
760081364	1291 004BBL 4/23 R1000	Non-Plenum PVC Cable	Blue
760081372	1291 004BGR 4/23 R1000	Non-Plenum PVC Cable	Green
760081380	1291 004BOR 4/23 R1000	Non-Plenum PVC Cable	Orange
760081398	1291 004BSL 4/23 R1000	Non-Plenum PVC Cable	Slate
760081406	1291 004BWH 4/23 R1000	Non-Plenum PVC Cable	White
760069112	2291 004ABL 4/23 R1000	Plenum Cable	Blue
760069120	2291 004ASL 4/23 R1000	Plenum Cable	Slate
760069104	2291 004AWH 4/23 R1000	Plenum Cable	White
760081315	3291 004BBL 4/23 R1000	LSZH Cable	Blue
760081323	3291 004BWH 4/23 R1000	LSZH Cable	White



GS10E translucent aqua sled

**SYSTIMAX GigaSPEED X10D G10FP FTP Modular Patch Cords**

These cords are for use at both ends of a SYSTIMAX® GigaSPEED® X10D FTP channel. Along with cable and patching hardware, CommScope Labs has characterized the performance of these cords in thousands of different channel configurations using the Modal Decomposition Modeling (MDM) tool.

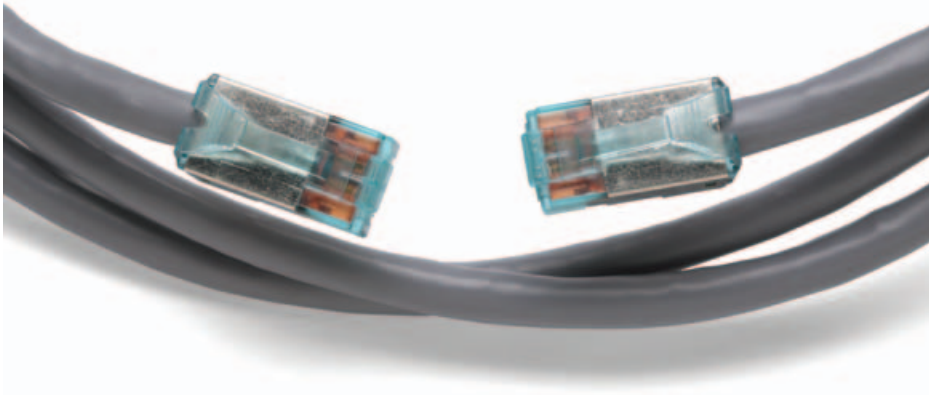
The high performance G10FP modular patch cord family has a patented plug design featuring a distinctive metallized construction, low profile rear housing and anti-sag latch for easy and rapid field identification. The G10FP plug exhibits dramatic reduction in performance variation via a new innovative design. Together with high precision manufacturing, this provides the electrical performance needed to deliver the SYSTIMAX GigaSPEED X10D FTP Solution.

**ORDERING INFORMATION:**

Material ID	Product Number	Description	Packaging	Color
CPCGGJ2	G10FP	PVC Cord	1/Pkg	Dark Gray, Light blue
CPCGGL2	G10FP-L	LSZH Cord	1/Pkg	White



GS10E Patch Cord Plug





MFP520 Information Outlets

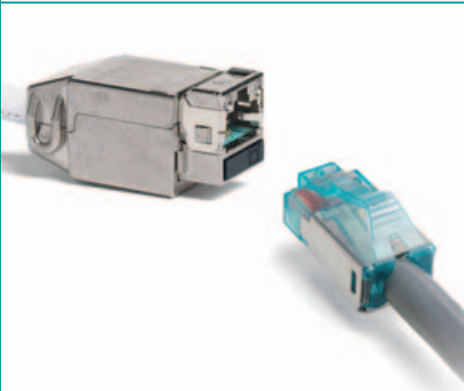
**SYSTIMAX GigaSPEED X10D MFP520 Information Outlets**

The MFP520 information outlet is the latest result of many years of continuous product development at CommScope Labs and features patented crosstalk cancellation and compensation techniques and a unique aqua colored inner tab that identifies it as a SYSTIMAX GigaSPEED X10D FTP component. The MFP520 has a redesigned upper and lower shield to capture the cable jacket and foil thus enhancing the strain relief for the FTP jacket and foil and improving the snap feature for secure shield assembly.

The MFP520 information outlet, used throughout the channel, exhibits high frequency internal and crosstalk suppression enabled via new Printed Wiring Board (PWB) materials, metallized plastic parts and other compensation technology. The MFP520 incorporates techniques that reduce crosstalk of all types, that becomes very critical at high frequencies (beyond Category 6).

**ORDERING INFORMATION:**

Material ID	Product Number	Description
760077032	MFP520	FTP Information Outlet



MFP520 Information Outlet with G10FP Patch Cord

**SYSTIMAX GigaSPEED X10D M3200 Modular FTP Patch Panel**

The SYSTIMAX GigaSPEED X10D M3200 Modular Patch Panel is a patch panel for M-series FTP outlets that can be configured for copper, fiber, or both and is available in a 24-port version. The M3200 panel incorporates rear cable management for consistent cable routing, and grounding studs for reliable grounding of the cable shield.

The M3200 panel mounts in a 19-inch (483 mm) rack with universal hole spacing. The M3200 includes a label sheet and clear label holders. A label area is provided to the left of each port. Port designations can be printed on the label sheet and individual port labels are trimmed from the label sheet and placed in the label area and secured by the clear label holder. If adhesive labelling is desired, adhesive labels can be applied to the label holder.

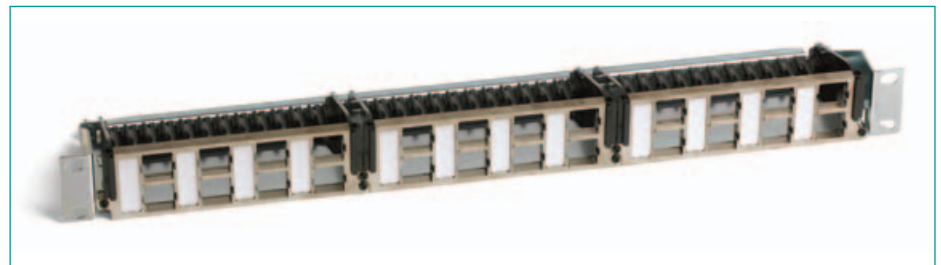
The SYSTIMAX iPatch M4200i 24-Port Intelligent Universal Modular Panel supports GigaSPEED X10D foil twisted pair (FTP) applications. The panel mounts in a 19" (483mm) rack with universal hole spacing. The iPatch M4200i incorporates rear cable management for consistent cable routing and grounding studs for reliable grounding of the cable shield for FTP applications.

**PHYSICAL SPECIFICATIONS**

<b>Height:</b>	1.75 in (4.45 cm)
<b>Width:</b>	19 in (48.20 cm)
<b>Depth:</b>	4.17 in (10.6 cm)

**ORDERING INFORMATION:**

Material ID	Product Number	Description
760058578	M3200	M3200 Modular Patch Panel
760060392	M3200 Custom Label Kit	8.5x11 6 rows of 12 labels, supports 6U of labelling
760083295	iP-M4200i-24MFP520	iPatch M4200i 24-Port Intelligent UMP with 24 GigaSPEED X10D FTP Outlets



M3200 Modular FTP Patch Panel



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