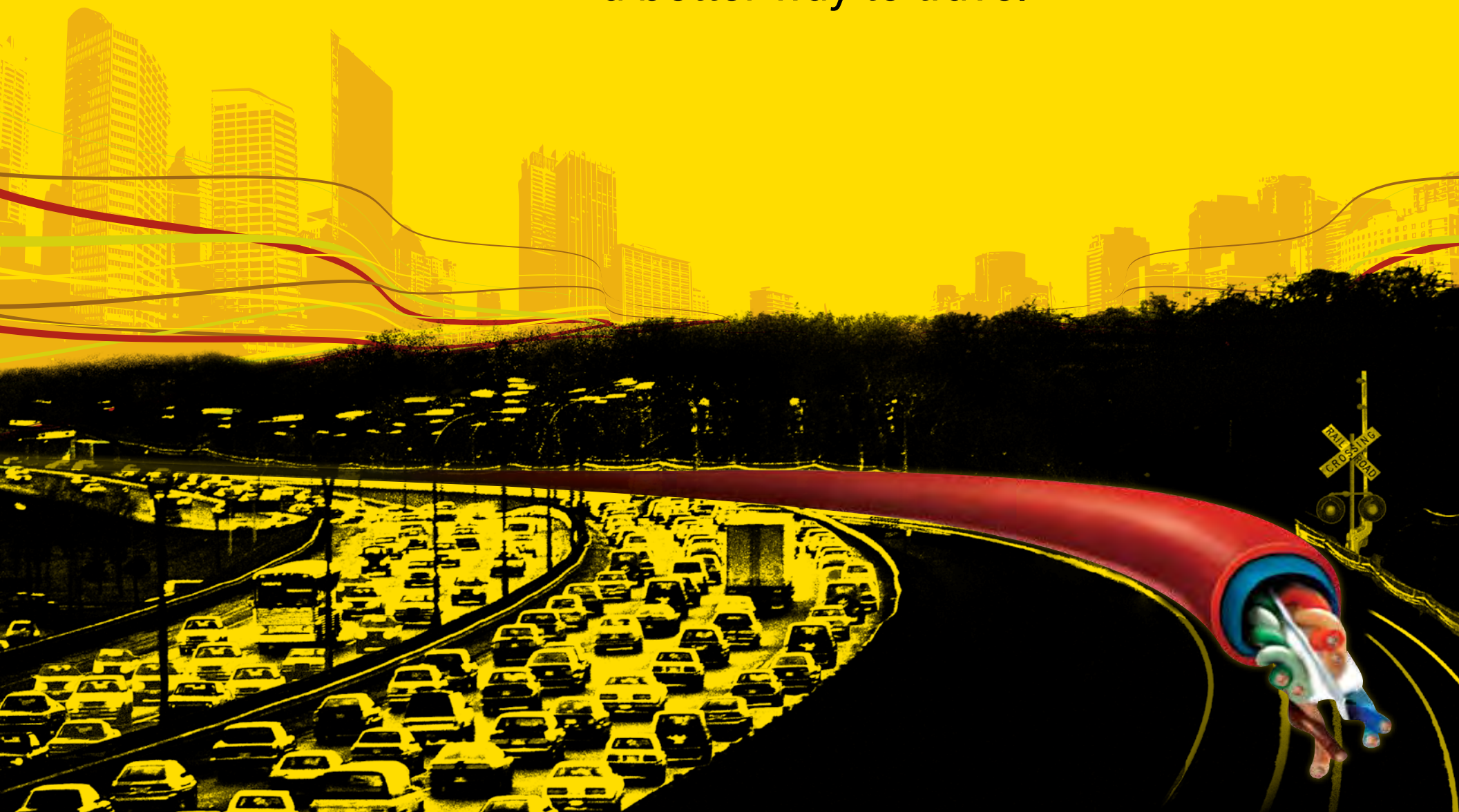


10Gain[®] XP CAT 6A cable



a better way to travel





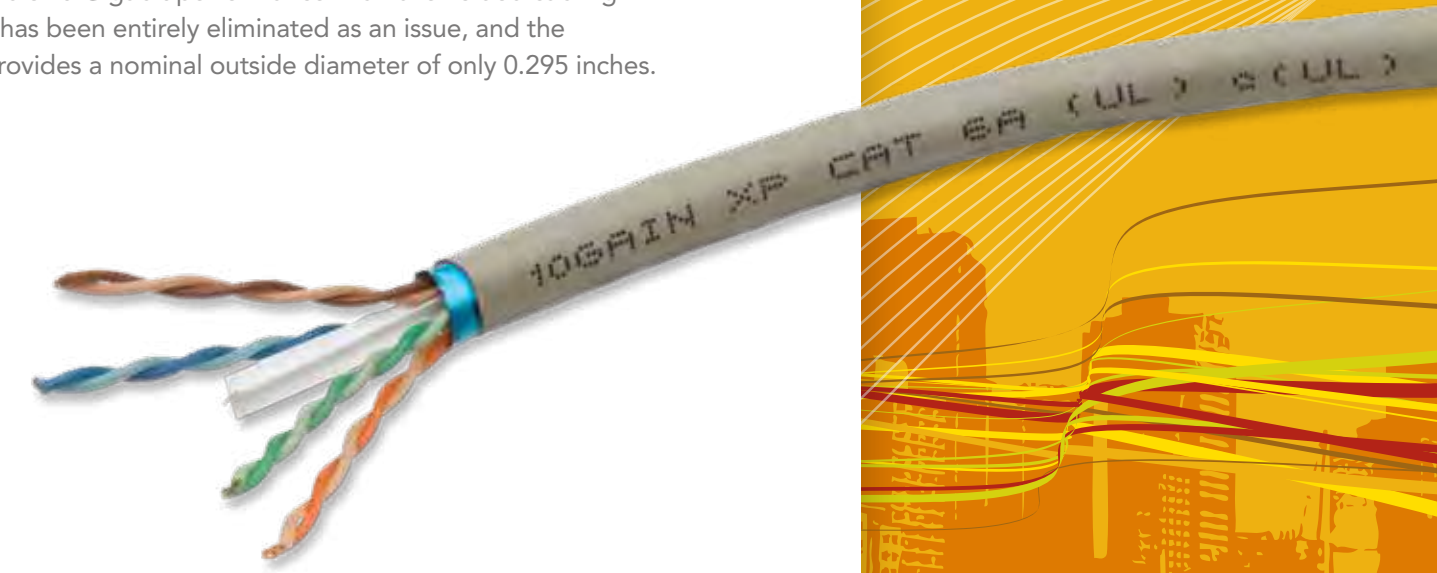
a better way to travel

Ever since the 10GBase-T Ethernet protocol was introduced, network engineers have been concerned about the weak link of unshielded cabling systems – Alien Crosstalk. Even when an unshielded Category 6A cabling system meets all Alien Crosstalk requirements, it typically does so with zero margin. The rule has been: If you want better electrical performance, you have to accept a large cable design. And that is not always practical.

These worries have led some engineers to switch to all-shielded network designs that solve some issues but force compromises as well.

The solution to this dilemma is **10Gain® XP**.

10Gain XP (extended performance) CAT 6A cable has been engineered to provide the highest possible 10 Gigabit performance in an unshielded cabling network. Alien Crosstalk has been entirely eliminated as an issue, and the perfectly round design provides a nominal outside diameter of only 0.295 inches.



small is beautiful

Both the plenum and riser versions of the **10Gain XP** CAT 6A cable are only 0.295 inches in diameter. That is 10% smaller than the typical riser CAT 6A cable (0.33 inches).

This small size allows for improved space utilization, better air flow, and reduced expense for cable trays and pathway infrastructure.



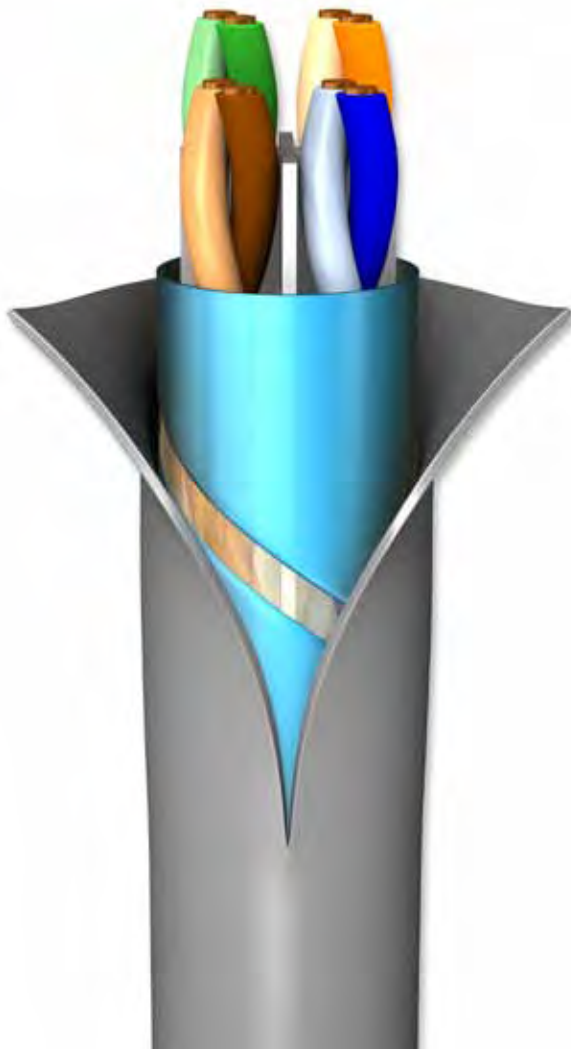
10Gain XP CAT 6A cable allows **71** cables in 4" conduit at a 40% fill rate.



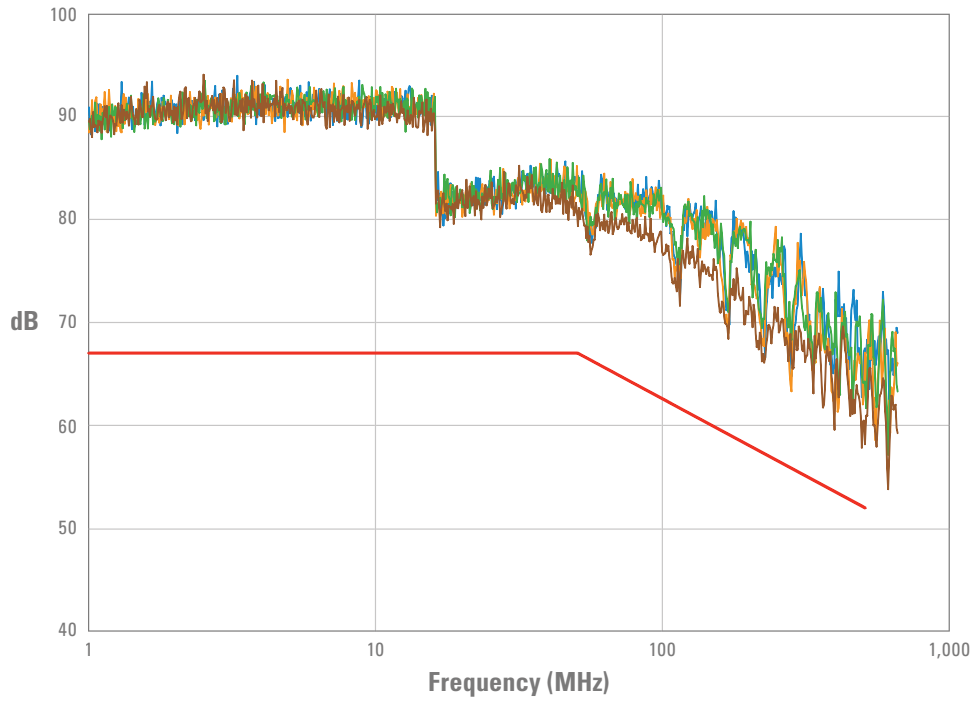
Typical 0.325" CAT 6A cable allows **61** cables in 4" conduit at a 40% fill rate.

10Gain XP technology

10Gain XP Cable with non-conductive Isolation Wrap



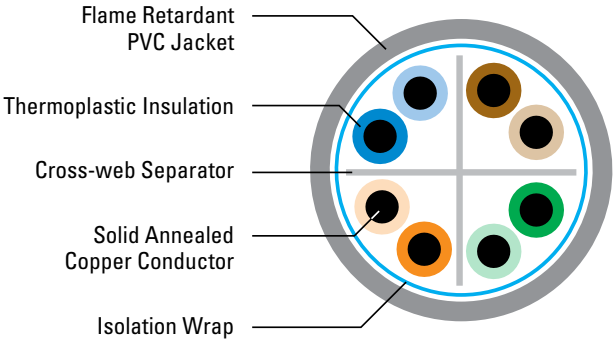
Typical Alien Crosstalk Cable Performance



10Gain XP is not a continuously shielded cable. Surrounding the core is a patent-pending Isolation Wrap, which contains separate sections of foil, held in place by a polymeric layer. This unique design prevents any electrical current from traversing the isolation wrap down the length of the cable – making it suitable for unshielded cabling networks and fully compliant with the UTP requirements of UL 444 and the National Electrical Code (NEC). Because the Isolation Wrap provides no electrical continuity, 10Gain XP cable cannot be grounded or bonded, and can only be used in an unshielded cabling network.

10Gain XP provides significant Alien Crosstalk performance in comparison to other CAT 6A UTP cables on the market.

With guaranteed Alien Crosstalk margin of 3 dB (and typical margin of 8 dB), 10Gain XP will reliably support 10G Ethernet in the noisiest of environments.



better than shielded, better than other UTP

Lately, many customers who have long preferred unshielded cabling networks have been persuaded to adopt a shielded system for their CAT 6A network. For some, both the alien crosstalk and small cable size advantages of shielded cable are outweighing other benefits of unshielded.

With **10G**gain XP, there are no trade-offs or compromises when selecting an unshielded CAT 6A cabling network.

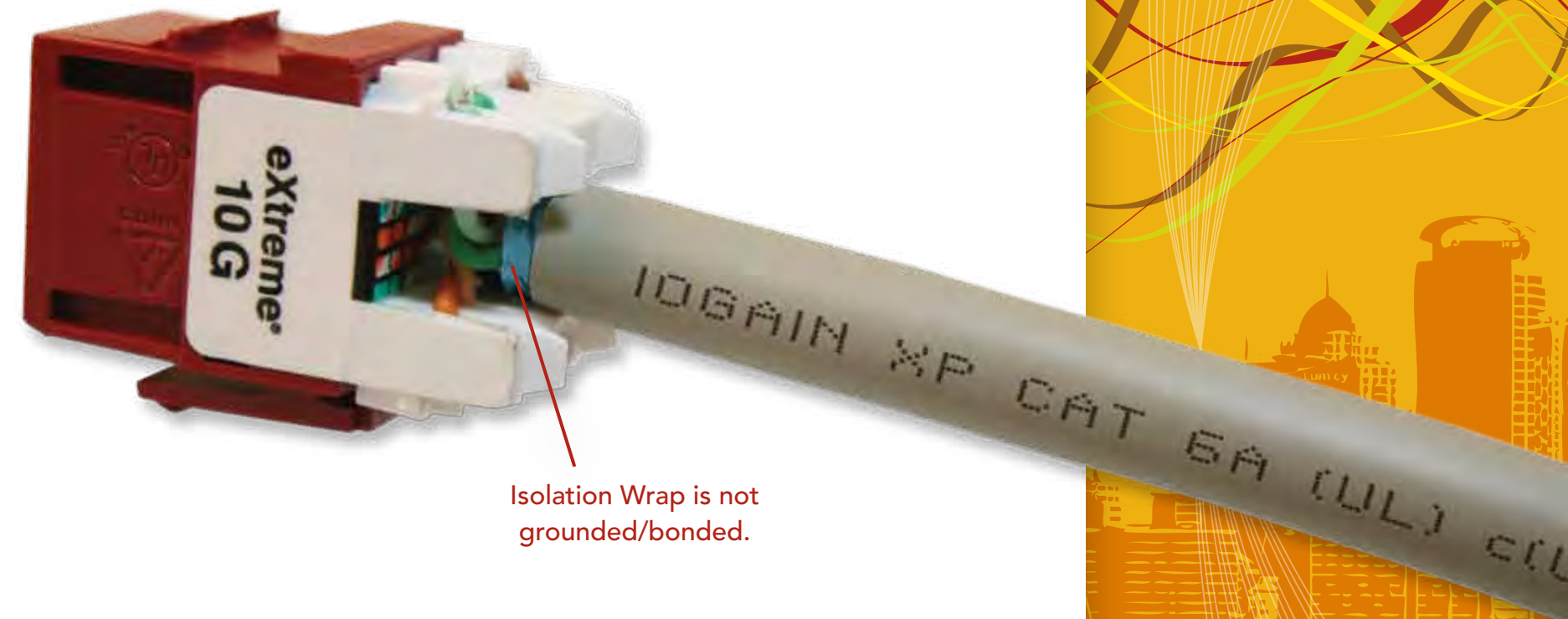
10Ggain XP offers the best features of both shielded and unshielded cables.

Benefit Comparison						
	Typical UTP CAT 6A		FTP CAT 6A		10Ggain XP CAT 6A	
Cable Size	0.31 to 0.35 inches	✗	0.28 to 0.30 inches	✓	0.295 inches	✓
EMI/Alien Crosstalk Resistance	Minimal	✗	Superior	✓	Superior	✓
Alien Crosstalk Field Testing	Recommended	✗	Not Necessary	✓	Not Necessary	✓
Cost of Installation	~17% less than FTP	✓	~20% more than UTP*	✗	Equal to UTP	✓
Compatibility with Existing UTP Network	Fully compatible	✓	Requires separate patch panels and grounding of existing racks	✗	Fully compatible	✓
Cable Bending Radius	4X diameter of cable	✓	8X diameter of cable	✗	4X diameter of cable	✓
Familiarity of Installation Practices to Average Technician	Very	✓	Not Very	✗	Very	✓

*Based on survey conducted in 2008 of LAN cable contractors

10Ggain XP installation

10Ggain XP uses the same familiar installation techniques of typical UTP CAT 6A cable. The Isolation Wrap cannot be grounded (because there is no electrical continuity), so it is simply cut back at the point of termination. The termination process should take no more than five seconds longer than it does for typical UTP CAT 6A. With a bending radius of 1.2 inches (4X cable diameter), **10G**gain XP also allows for installation into tighter spaces than typical UTP CAT 6A or shielded CAT 6A cables.

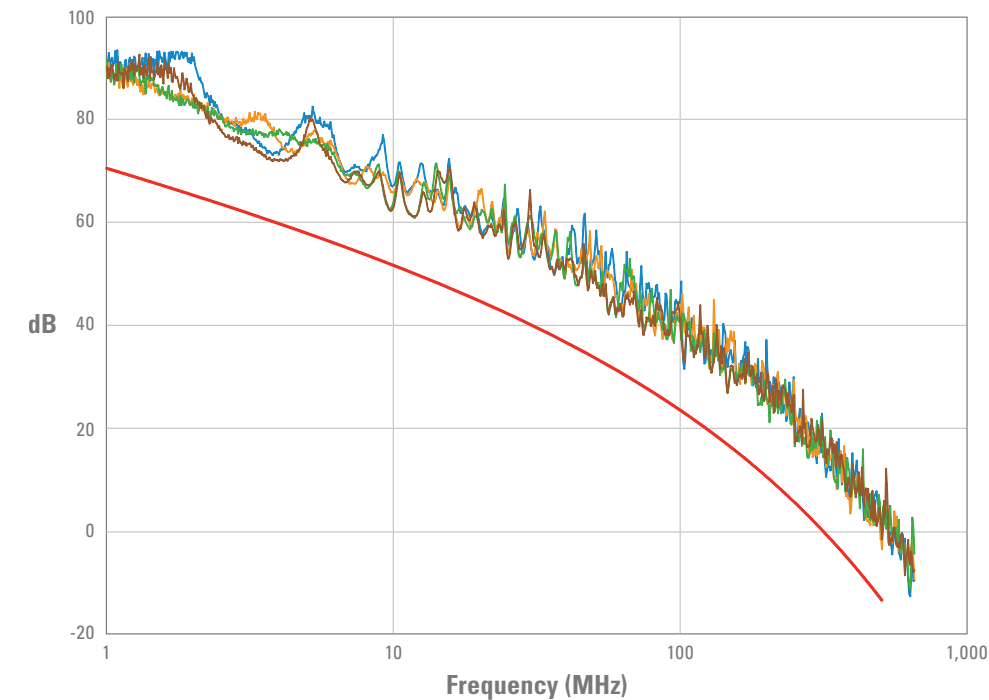


Isolation Wrap is not grounded/bonded.

10Gain XP performance specifications

In addition to superior Alien Crosstalk performance, **10Gain XP** internal cable performance meets or exceeds the electrical specifications of industry standards.

Typical PSACR Cable Performance



10Gain XP Applicable Standards

ANSI/TIA-568-C.2	✓
UL 444	✓
UL Listed CMP (NFPA 262)	✓
UL Listed CMR (UL 1666)	✓
RoHS-compliant	✓

10Gain XP Applications

IEEE 802.3, 10GBASE-T and Legacy	✓
IEEE 802.3af, Power over Ethernet	✓
IEEE 802.3at, Power over Ethernet Plus	✓

10Gain XP – a better way to travel

10Gain XP is the breakthrough CAT 6A cable design that so many network engineers have been wanting. It is the perfect blend of form and function, made possible by unmatched technical innovation.

10Gain XP Properties and Features

Conductor AWG (mm)	23 (0.57) Solid Annealed Copper
Pair Count	4
Color Coding	ColorTip™ Circuit Identification System
Insulation	CMR: Polyolefin CMP: Fluoropolymer
Separator	Cross-web
Isolation Wrap	Proprietary construction
Jacket Material	CMR: Flame retardant (FR) PVC CMP: FR, Low Smoke PVC
Nominal Diameter in (mm)	0.295 (7.49)
Approximate Weight lbs/kft (kg/km)	CMR: 47 (70) CMP: 45 (67)
Package Size	1000' plywood reel
Length Marking f (m)	QuickCount® system
Nominal Velocity of Propagation % Speed of Light	CMR: 66 CMP: 69
Minimum Bend Radius in (mm)	1.2 (30)
Maximum Pulling Force lbs	40
Installation Temperature Rating °C	0 to +60

10Gain XP Part Numbers

Part Number	Jacket Color
CMR Riser	
6H-272-2A	Blue
6H-272-3A	Gray
6H-272-4A	White
6H-272-5A	Green
6H-272-6A	Yellow
6H-272-7A	Purple
6H-272-9A	Red
6H-272-DA	Orange
CMP Plenum	
6H-272-2B	Blue
6H-272-3B	Gray
6H-272-4B	White
6H-272-5B	Green
6H-272-6B	Yellow
6H-272-7B	Purple
6H-272-9B	Red
6H-272-DB	Orange

For additional information, visit: [SPSX.com/comm/XP](https://www.spsx.com/comm/XP).



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