Hybrid Power and Data Cable

AGILE-CORE™
Distributed Edge Architecture

PROJECT:	QTY:
TYPE:	CATALOG:

SYSTEM OVERVIEW

The AGILE-CORE™ Distributed Edge Architecture solution is an intelligent power distribution and control system that leverages safe DC power to reduce the total installed and operating cost of a project while providing the best IT and OT networks possible.

OVERVIEW

The AGILE-CORE™ hybrid cable is essential for transporting Class 2 & 4 fault-managed power along with high-speed data to the Edge IDFs. This cable is crucial because it merges electrical power and data transmission within a single unit, providing an efficient and streamlined method for delivering both power and data signals to devices in one go. This is particularly beneficial in scenarios where space is constrained or running separate power and data cables would be inconvenient, such as network infrastructures or industrial automation systems.

FEATURES:

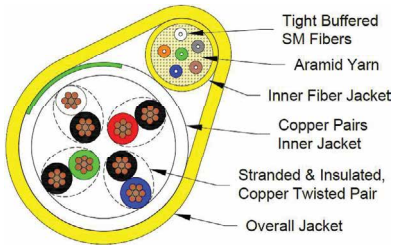
- Safely carry low-voltage power and data across long distances to remote locations
- Allows you to pull a single cable instead of two
- Leverage extra pairs of copper and strands of fiber to protect the value of your asset over the lifetime of the network
- For use in plenum air spaces

APPLICATIONS:

- K-12 Schools
- Office Buildings
- Warehouse
- Manufacturing
- Data Centers
- Advanced Ed and more

DIAGRAM

Cable Cross Section: (6-Fiber w/4-Pair Copper shown)



CERTIFICATIONS

Intertek · BAA · MADE IN USA · BABA · RoHS · TAA Compliant

ORDERING GUIDE:

Example Catalog # HYB ISP FMP16/3P OS2/6F YL

Series	Use/Location	FMP AWG Size	/	# of Pairs (P - unshielded)	Fiber Type	/	Fiber Count	Outer Jacket Color
HYB	ISP = inside plant	FMP16		1P 2P 3P 4P 6P 8P	OS2		6F 12F	YL = yellow W = white

Unshielded. For shielded cable, please contact your sales representative.
OS2 is single mode
Intended for use with Sinclair Digital's AGILE-CORE Distributed Edge Architecture Solution

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SPECIFICATIONS

FIBER LEG SPECIFICATIONS/CONSTRUCTION:

Fiber Type:	OS2
Buffer Diameter:	900 µm
Inner Jacket Material:	Plenum Polymer
Fiber Count:	6 or 12
Fiber Color Coding:	TIA/EIA-598
Color Code:	Blue, Orange, Brown, Gray, White, Red and Black
Cable Strength:	Water swellable aramid yarns are pulled in with tight-buffered fibers under the jacket
Inner Jacket Color:	Yellow
Nominal Jacket Diameter:	see Nominal Cable Dimensions and Weights Chart Belo

COPPER LEG SPECIFICATIONS/CONSTRUCTION:

Number of Pairs:	1, 2, 3, 4, 6, or 8
Conductor AWG Size:	16
Conductor Type:	Stranded Bare Copper
Insulation Material:	Plenum Polymer
Nominal Insulation Diameter:	see Nominal Cable Dimensions and Weights Chart Below
Color Code:	Black/Red, Black/White, Black/Green, Black/Blue, Black/Yellow, Black/Brown, Black, Orange, and Red/White
Inner Jacket Color:	White with Green Stripe

OUTER JACKET SPECIFICATIONS:

Jacket Material:	Plenum Polymer
Overall Sheath Color:	Yellow or White
Nominal Diameter:	see Nominal Cable Dimensions and Weights Chart Below
Indoor (ISP):	Plenum compliant

ELECTRICAL DETAILS (PAIRS):

Maximum Operating Voltage:	450 Volts, rms.
DCR:	See Table on Page 2
Nominal Mutual Capacitance, C to C:	35.0 pF/ft @ 1 kHz
Upper Limit Capacitance, C to C:	40.0 pF/ft @ 1kHz
Nominal Inductance:	133 nH/ft
Nominal D.C.R.:	See Table

MECHANICAL & ENVIRONMENTAL PERFORMANCE:

Maximum Tensile Load:	• Installation: 6 fiber - 1610N / 362lbf 12 fiber - 2700N / 600lbf • Long Term: 6 fiber - 535N / 120lbf 12 fiber - 135lbf
Minimum Bending Radius:	• Loaded: 20 x Diameter • Unloaded: 10 x Diameter
Crush Resistance:	Crush Resistance: 100 N/cm
Impact Resistance (min.):	Impact Resistance (min.): 25 Impact
Flexing +- 90 degrees (min.):	Flexing +- 90 degrees (min.): 25 cycles
Temperature Rating:	• Operating: -20°C to +85°C • Installation: 0°C to +75°C • Storage: -40°C to +85°C

CERTIFICATIONS:

- TIA/EIA FOTP Standards 455
- Color Coding of Fiber Optic Cables per TIA/EIA-598
- Meets CMP/FT6
- Compliant with ANSI/TIA-568-C.3 standard
- Compliant with NEC CL4 for fault managed power transmission
- cETLus

This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11).

Warranty: see general terms and conditions at sinclair-digital.com

NOMINAL CABLE DIMENSIONS & WEIGHTS

Catalog Number	Number of Pairs and AWG	D.C.R Ω/Mft	Nom. Dia. Over Insul. (in.)	Nom Dia. Over Copper Jkt. (in.)	Number of Fibers	Nom Dia. Over Fiber Jkt. (in.)	Nominal Overall Dimensions (in.)	Nominal Overall Dimensions (mm)	Weight (lb/1000ft)	Weight (kg/km)
HYB ISP FMP16 2P OS2 6F	2/P 16	3.74	0.088	0.392	6	0.200	0.462 x 0.662	11.7 x 16.8	123	182
HYB ISP FMP16 2P OS2 12F	2/P 16	3.74	0.088	0.392	12	0.250	0.462 x 0.712	11.7 x 18.1	130	193
HYB ISP FMP16 3P OS2 6F	3/P 16	3.74	0.088	0.418	6	0.200	0.488 x 0.688	12.4 x 17.5	147	218
HYB ISP FMP16 3P OS2 12F	3/P 16	3.74	0.088	0.418	12	0.250	0.488 x 0.738	12.4 x 18.7	158	236
HYB ISP FMP16 4P OS2 6F	4/P 16	3.74	0.088	0.464	6	0.200	0.534 x 0.734	13.6 x 18.6	170	253
HYB ISP FMP16 4P OS2 12F	4/P 16	3.74	0.088	0.464	12	0.250	0.534 x 0.784	13.6 x 19.9	178	265
HYB ISP FMP16 6P OS2 6F	6/P 16	3.74	0.088	0.568	6	0.200	0.638 x 0.838	16.2 x 21.3	227	338
HYB ISP FMP16 6P OS2 12F	6/P 16	3.74	0.088	0.568	12	0.250	0.638 x 0.888	16.2 x 22.6	228	339
HYB ISP FMP16 8P OS2 6F	8/P 16	3.74	0.088	0.623	6	0.200	0.693 x 0.893	17.6 x 22.7	269	400
HYB ISP FMP16 8P OS2 12F	8/P 16	3.74	0.088	0.623	12	0.250	0.693 x 0.943	17.6 x 24.0	281	418

Fiber Type (P/N)	Maximum Attenuation dB/km				Overfill Launch Min Bandwidth (MHz-km)		EMBc (MHz-km)	Gigabit Ethernet Minimum Link Distance (Meters)		10 Gigabit Ethernet Minimum Link Distance (Meters)	
	850 nm	1300 nm	1310 nm	1550 nm	850 nm	1300 nm		850 nm	1300 nm	850 nm	1300 nm
SM OS2 G.652.D/G.657.A1 BIF (76B)*	N/A	N/A	0.40	0.30	N/A	N/A	N/A	N/A	5000	N/A	10000

* G.652d&G.657.A1 (76B) Mandrel Radius of 10mm, 1 turn at 1550nm with an induced attenuation of ≤0.50dB
Measured attenuations on shipping reels will not exceed the nominal values by 0.75 dB/km

AGILE-CORE POWER DISTRIBUTION AND CONTROL SYSTEM