

# NetClear<sup>®</sup> MM10 STRUCTURED CABLING SYSTEM



NetClear<sup>®</sup> MM10 fiber optic solutions feature Berk-Tek GIGAlite™-10 and GIGAlite-10XB multimode fiber, guaranteed to support 10 Gigabit Ethernet to industry leading distances, and Ortronics connectivity for industry leading insertion-loss performance. They are engineered for high-speed performance in data centers/storage area networks (DC/SAN), the horizontal, backbone, and campus fiber optic structured cabling system.

## THE NETCLEAR ADVANTAGE

NetClear cabling systems offer exceptional performance at every level. The expertise of Berk-Tek in advanced cabling, and Legrand | Ortronics in superior connecting hardware, combine to create system solutions second to none. You get perfectly matched components, optical channel performance over distances exceeding specification requirements, and the support of a proven, reliable partnership ensuring a structured cabling system that simply works better.

## NETCLEAR MM10 SYSTEM PERFORMANCE

The NetClear MM10 fiber solution was developed to facilitate advanced network requirements. NetClear MM10 offers DC/SAN, horizontal, backbone, and campus fiber solutions that guarantee performance and network longevity. The NetClear MM10 solution is supported by Berk-Tek GIGAlite-10 and -10XB optical fiber, which provides superior performance for 10 Gb/s applications (at 850 nm) by ensuring specifications that meet or exceed industry requirements.

NetClear MM10 can also serve as a stepping stone to either 40 or 100G Ethernet speeds. Specifying MM10 with GIGAlite-10XB trunk cables in 12-fiber increments positions you to leverage your network backbone for the long term. Even better, all the OptiMo Fiber Systems enclosures have a variety of connectivity and adaptor panel choices to support your future networking needs in the full array of density options.

## NETCLEAR MM10 DISTANCE GUARANTEES (in meters)

FIBER TYPE	GIGALITE-10 50/125 @850 nm		GIGALITE-10XB 50/125 @850 nm	
	NetClear	Standard	NetClear	Standard
Gigabit Ethernet, 1 Gb/s	1000	550	1000	550
Fibre Channel, 2.125 Gb/s	500	480	600	300
Fibre Channel, 8 Gb/s *	150	150	190	190
10G Ethernet, 10 Gb/s	300	300	600	300
Fibre Channel, 16 Gb/s	100	100	125	125

\* Fiber Channel lengths based on 800-M5E-SN-I. Longer lengths are available with 800-M5E-SA-I.

## THE NETCLEAR MM10 PERFORMANCE GUARANTEE

### Exceptional Performance

- NetClear MM10 solutions guarantee performance well beyond the IEEE and Fibre Channel distance limitations for standard multimode fiber optic cable.

### Full Standards Compliance

- ANSI/TIA-568-C.3

### Zero Bit-Error Performance

- Free from bit errors caused by the NetClear MM10 cabling system.

### Improved Link Loss Budgets

- Superior DMD of GIGAlite-10XB offers greater than 25% improvement of link loss budget.
- Premium performance (low loss) cassettes, backbone cables and patch cords enable additional connections and/or greater link length

### Pre-Terminated Trunk Cable Assemblies

- Deliver enhanced optical performance and fast deployment.

### Full Peace of Mind

- The exceptional technology means guaranteed performance of any application specified to operate over multimode fiber.

**Ortronics Optimo Series Fiber Systems**  
**OPTIMO ULTRA HIGH DENSITY (UHD) FIBER SYSTEM**

DESCRIPTION	CAPACITY	HEIGHT	PART NUMBER
<i>Enclosures</i>			
UHD 1U rack mount enclosure, Long	12 Modules*	1RU	OR-UC01U-P
UHD 1U rack mount enclosure, Short	12 Modules*	1RU	OR-UC01U-A
<i>MPO-to-LC Cassette Modules</i>			
UHD M6 Cassette, LC Quad, 50 LOMF, TIER 3	12 LC	0.3RU	OR-M6LCQ12-50E
UHD M6 Cassette, LC Quad, Singlemode	12 LC	0.3RU	OR-M6LCQ12-09

\* Modules can be either cassettes and/or adapter panels designed to work with the UHD System

**OPTIMO HIGH DENSITY (HD) FIBER SYSTEM**

DESCRIPTION	CAPACITY	HEIGHT	PART NUMBER
<i>Enclosures</i>			
HD 1U rack mount fiber enclosure	4 Modules**	1 RU	OR-FC01U-M
HD 2U rack mount fiber enclosure	8 Modules**	2RU	OR-FC02U-M
HD 3U rack mount fiber enclosure	12 Modules**	3RU	OR-FC03U-M
HD 4U rack mount fiber enclosure	16 Modules**	4RU	OR-FC04U-M
<i>MPO-to-LC Cassette Modules</i>			
HD M4 Cassette, LC Quad, 50 LOMF, TIER 3	24 LC	1RU	OR-M4LCQ24-50EA3A1
HD M4 Cassette, LC Quad, 50 LOMF, TIER 2	24 LC	1RU	OR-M4LCQ24-50E
HD M4 Cassette, LC Quad, Singlemode	24 LC	1RU	OR-M4LCQ24-09
<i>MPO and LC Adapter Panel Modules</i>			
HD MTP Adapter Panel, Aqua, Type A	6 MTP	1RU	OR-HDFP-MPA72LA
HD MTP Adapter Panel, Green, Type A	6 MTP	1RU	OR-HDFP-MPA72CA
HD LC Adapter Panel, Ceramic Sleeve, Aqua	24 LC	1RU	OR-HDFP-LCQ24LC
HD LC Adapter Panel, Ceramic Sleeve, Blue	24 LC	1RU	OR-HDFP-LCQ24AC
HD Blank Adapter Panel	N/A	1RU	OR-HDFP-BLANK

\*\* Modules can be either cassettes or adapter panels designed to work with the HD System

**Berk-Tek Pre-Term Fiber Cables**  
**MDP CABLE, PREMIUM LOW-LOSS MTP(F) to MTP(F) TERMINATIONS\***

FIBERS	FIBER TYPE	MAX RECC. LENGTH	PART NUMBER
72	XB (OM4+)	600 meters	BMDP72XLLSSPxxx
12	XB (OM4+)	600 meters	BMDP12XLLSSPxxx
72	EB (OM3)	300 meters	BMDP72ELLSSPxxx
12	EB (OM3)	300 meters	BMDP12ELLSSPxxx

**Ortronics Optical Fiber Harness Assemblies**  
**MTP-to-LC DUPLEX 12 FIBER HARNESS**

DESCRIPTION	MTP/LC LEG LENGTHS, METERS	PART NUMBER
No Stagger, A-B Polarity	2/1	OR-63900071-001
Stagger, A-B Polarity	3/1	OR-63900071-002
Stagger, A-B Polarity	4/1	OR-63900071-003
No Stagger, A-B Polarity	2/1	OR-63900071-004
Stagger, A-B Polarity	3/1	OR-63900071-005
Stagger, A-B Polarity	4/1	OR-63900071-006
No Stagger, A-B Polarity	6/1	OR-63900071-007
Stagger, A-B Polarity	6/1	OR-63900071-008
No Stagger, A-B Polarity	6/1	OR-63900071-009
Stagger, A-B Polarity	6/1	OR-63900071-010

\*\*\*\* Standard stagger is 30mm per leg pair. Additional configurations and lengths are available. Call 1-800-934-5432 for more details.

**Ortronics Workstation Systems**  
**WORKSTATION MODULES & FACEPLATES**

DESCRIPTION	COLOR	PART NUMBER
<i>Fib-or-Cop II</i>		
Base and cover for three Series II modules, 5"x8"x1.19"		OR-62100040
Base and cover for six TracJack modules, 5"x8"x1.19"		OR-62100041
3-ST duplex (6 fibers) multimode adaptors	Beige	OR-62100044
6-SC simplex (6 fibers) multimode adaptors	Beige	OR-62100046
3-SC duplex (6 fibers) multimode adaptors	Beige	OR-62100048
6-LC duplex (12 fibers) multimode adaptors	Beige	OR-62100050
6-MT-RJ (12fibers) feed-through multimode adaptors	Beige	OR-62100052
4-LC quad, 50 micron LOMF adapters	Aqua	OR-62100054
<i>TracJack Modules</i>		
1-LC (2-fibers) multimode, 180° exit, flush, 1 unit	Aqua	OR-63700075****
1-SC simplex multimode, 180° exit, flush, 1 unit	Aqua	OR-63700078****
1-LC (2 fibers) multimode, 45° angled exit, 2 units	Aqua	OR-63700080
2-SC simplex multimode, 180° exit, 1 unit	Aqua	OR-63700081
1-SC simplex multimode, 45° angled exit, 2 units	Aqua	OR-63700082

\*\*\*\*Also available in black, red, orange, yellow, green, light green, WM light gray, WM gray, white and WM ivory. Visit www.legrand.us/ortronics for more details.

**Ortronics Fiber Accessories**  
**FUSION SPLICE ACCESSORIES**

TYPE	PART NUMBER
12 Fiber Splice Tray, use 3.0 mm heat shrinks	OR-FST2-F012
40 mm Heat Shrink, Fusion Splice Protection Cover, pack of 50	OR-20500043
48 Fiber Splice Tray, use 2.5 mm heat shrinks	OR-FST3-F048
Heat Shrink Sleeves, 2.5 mm, Pkg of 50	OR-20500337

**Berk-Tek Pre-Term Fiber Cables (cont.)**  
**MDP CABLE, MTP(F) to MTP(F) TERMINATIONS\***

FIBERS	FIBER TYPE	MAX RECC. LENGTH	PART NUMBER
72	XB (OM4+)	600 meters	BMDP72X77SSPxxx
12	XB (OM4+)	600 meters	BMDP12X77SSPxxx
72	EB (OM3)	300 meters	BMDP72E77SSPxxx
12	EB (OM3)	300 meters	BMDP12E77SSPxxx

**BACKBONE/TRUNK INTERBUILDING CABLE, MTP(F) to MTP(F) TERMINATIONS\***

FIBERS	FIBER TYPE	MAX RECC. LENGTH	PART NUMBER
72	XB (OM4+)	600 meters	BLTP72X77SSPxxx
12	XB (OM4+)	600 meters	BLTP12X77SSPxxx
72	EB (OM3)	300 meters	BLTP72E77SSPxxx
12	EB (OM3)	300 meters	BLTP12E77SSPxxx

\*3.0 mm round breakouts. Standard pulling eye, xxx=length in feet, additional fiber counts, type, and lengths available - please visit [www.berktek.com/teklab](http://www.berktek.com/teklab)

**Ortronics Connectors**  
**OPTIMO FIELD-INSTALLABLE CONNECTORS**

DESCRIPTION	STYLE	FIBER	PART NUMBER
No Epoxy/No Polish Zirconia Ferrule (for tight buffered cable)	SC	50/125	OR-205KAS9FA-50T
	LC	50/125	OR-205KAS9GA-50T
Field Installation Kit	Pre-Polished	--	OR-854B00000-1
Anaerobic Termination, Zirconia Ferrule (ideal for Adventum™ cable)	SC	Multimode	OR-205KAN9FA-MM
	LC	Multimode	OR-205KAN9GA-MM
Field Installation Kit	Anaerobic	--	OR-85400010
OptiMo 12 fiber Breakout Kit	--	--	OR-61500858

**ORTRONICS PATCH CORDS**

DESCRIPTION	POLARITY	FIBER	CONNECTORS	PART NUMBER
Premium Performance SpaceSaver Cord, 0.15 dB max, 2.4mm Round	A-B	50/125 LOMF	LC-LC	OR-P3DF6LPAZAZxxxM
Premium Performance SpaceSaver Cord, 0.15 dB max, 2.4mm Round	A-A	50/125 LOMF	LC-LC	OR-P3RF6LPAZAZxxxM
SpaceSaver Cord, 0.5 dB max, 2.4mm Round	A-B	50/125 LOMF	LC-LC	OR-P1DF6LPAZAZxxxM
SpaceSaver Cord, 0.5 dB max, 2.4mm Round	A-A	50/125 LOMF	LC-LC	OR-P1RF6LPAZAZxxxM
SpaceSaver Cord, 0.3 dB max, 2.4mm Round	A-B	Single-mode	LC-LC	OR-P1DC6IPUZUZxxxM
SpaceSaver Cord, 0.3 dB max, 2.4mm Round	A-A	Single-mode	LC-LC	OR-P1RC6IPUZUZxxxM
Premium Performance 2mm Zip Cord, 0.15 dB max	Configurable	50/125 LOMF	LC-LC	OR-P3DF2LRGZGZxxxM
Premium Performance 2mm Zip Cord, 0.15 dB max	Configurable	50/125 LOMF	SC-SC	OR-P3DF2LRFZGZxxxM
Premium Performance 2mm Zip Cord, 0.15 dB max	Configurable	50/125 LOMF	SC-LC	OR-P3DF2LRFZGZxxxM
2mm Zip Cord, 0.5 dB max	Configurable	50/125 LOMF	LC-LC	OR-P1DF2LRGZGZxxxM
2mm Zip Cord, 0.5 dB max	Configurable	50/125 LOMF	SC-SC	OR-P1DF2LRFZGZxxxM
2mm Zip Cord, 0.5 dB max	Configurable	50/125 LOMF	SC-LC	OR-P1DF2LRFZGZxxxM
2mm Zip Cord, 0.3 dB max	Configurable	Single-mode	LC-LC	OR-P1DC2IRGZGZxxxM
2mm Zip Cord, 0.3 dB max	Configurable	Single-mode	SC-SC	OR-P1DC2IRFZGZxxxM
2mm Zip Cord, 0.3 dB max	Configurable	Single-mode	SC-LC	OR-P1DC2IRFZGZxxxM

**Berk-Tek Optical Fiber Cables**  
**INTERCONNECT (TIGHT BUFFER) PLENUM**

FIBERS	FIBER TYPE	BANDWIDTH MHz□km (850nm/1300nm)	PART NUMBER
2	EB (OM3)	2000/500	ICP002EB3010/25
4	EB (OM3)	2000/500	ICP004EB3010/25
2	XB (OM4+)	4900/500	ICP002XB3010/X5
4	XB (OM4+)	4900/500	ICP004XB3010/X5

**PREMISE DISTRIBUTION (TIGHT BUFFER) RISER**

FIBERS	FIBER TYPE	BANDWIDTH MHz□km (850nm/1300nm)	PART NUMBER
6	EB (OM3)	2000/500	PDR006EB3010/25
12	EB (OM3)	2000/500	PDR012EB3010/25
6	XB (OM4+)	4900/500	PDR006XB3010/X5
12	XB (OM4+)	4900/500	PDR012XB3010/X5

**ADVENTUM INDOOR/OUTDOOR (LOOSE TUBE-DRY) RISER**

FIBERS	FIBER TYPE	BANDWIDTH MHz□km (850nm/1300nm)	PART NUMBER
24	EB (OM3)	2000/500	LTR12B024EB3010/25
48	EB (OM3)	2000/500	LTR12B048EB3010/25
24	XB (OM4+)	4900/500	LTR12B024XB3010/X5
48	XB (OM4+)	4900/500	LTR12B048XB3010/X5

## OPTIMO STANDARD DENSITY FIBER SYSTEM

DESCRIPTION	CAPACITY	HEIGHT	PART NUMBER
<b>Enclosures</b>			
Standard Density 1U rack mount fiber enclosure	3 Module***	1RU	OR-FC01U-C
Standard Density 2U rack mount fiber enclosure	6 Modules***	2RU	OR-FC02U-C
Standard Density 3U rack mount fiber enclosure	9 Modules***	3RU	OR-FC03U-C
Standard Density 4U rack mount fiber enclosure	12 Modules***	4RU	OR-FC04U-C
<b>MPO-to-LC Cassette Modules</b>			
M2 Cassette, LC Quad, 50 LOMF, TIER 3	24 LC	1RU	OR-M2LCQ24-50EA1
M2 Cassette, LC Quad, 50 LOMF, TIER 2	24 LC	1RU	OR-M2LCQ24-50E
M2 Cassette, LC Quad, Singlemode	24 LC	1RU	OR-M2LCQ24-09
M2 Cassette, LC Duplex, 50 LOMF, TIER 2	12LC	1RU	OR-M2LCD12-50E
M2 Cassette, LC Duplex, Singlemode	12 LC	1RU	OR-M2LCD12-09
M2 Cassette, SC Duplex, 50 LOMF, TIER 2	12 SC	1RU	OR-M2SCD12-50E
M2 Cassette, SC Duplex, Singlemode	12 SC	1RU	OR-M2SCD12-09
<b>MPO and LC Adapter Panel Modules</b>			
8-MTP Adapter Panel, Aqua, Type A	8 MTP	1RU	OR-OFP-MPA96LA
8-MTP Adapter Panel, Green, Type A	8 MTP	1RU	OR-OFP-MPA96CA
6-MTP Adapter Panel, Aqua, Type A	6 MTP	1 RU	OR-OFP-MPA72LA
6-MTP Adapter Panel, Aqua, Type A	6 MTP	1RU	OR-OFP-MPA72CA
LC Quad Adapter Panel, Aqua Adapters, Ceramic Sleeves	24 LC	1RU	OR-OFP-LCQ24LC
LC Quad Adapter Panel, Blue Adapters, Ceramic Sleeves	24 LC	1RU	OR-OFP-LCQ24AC
LC Duplex Adapter Panel, Aqua Adapters, Ceramic Sleeves	12 LC	1RU	OR-OFP-LCD12LC
LC Duplex Adapter Panel, Blue Adapters, Ceramic Sleeves	12 LC	1RU	OR-OFP-LCD12AC
SC Duplex Adapter Panel, Aqua Adapters, Ceramic Sleeves	12 SC	1RU	OR-OFP-SCD12LC
SC Duplex Adapter Panel, Blue Adapters, Ceramic Sleeves	12 SC	1RU	OR-OFP-SCD12AC
SC Duplex Adapter Panel, Aqua Adapters, Ceramic Sleeves	8 SC	1RU	OR-OFP-SCD08LC
SC Duplex Adapter Panel, Blue Adapters, Ceramic Sleeves	8 SC	1RU	OR-OFP-SCD08AC
SC Duplex Adapter Panel, Aqua Adapters, Ceramic Sleeves	6 SC	1RU	OR-OFP-SCD06LC
SC Duplex Adapter Panel, Blue Adapters, Ceramic Sleeves	6 SC	1RU	OR-OFP-SCD06AC
SC Simplex Adapter Panel, Aqua Adapters, Ceramic Sleeves	6 SC	1RU	OR-OFP-SCS06LC
SC Simplex Adapter Panel, Blue Adapters, Ceramic Sleeves	6 SC	1RU	OR-OFP-SCS06AC
Standard Blank Adapter Panel	N/A	1RU	OR-OFP-BLANK

\*\*\* Modules can be either cassettes and or adapter panels designed to work with the Standard System