

# LAN-Trak™ OSP

Outside Plant Cables



**MOHAWK**  
Cabling Excellence  
for Open Architecture

# Cat6 Cat5E+ Cat5

## LAN-Trak™ OSP



### Delivering the Category Performance You Require

LAN-Trak OSP delivers TIA/EIA 568-B Category 6, 5E+, or 5 electrical performance in an outside plant cable. Even small amounts of moisture or water in the cable will degrade the electrical performance of a Category cable. These power sum rated cables are filled with a user-friendly cream-like agent for a cleaner installation and less preparation time and are designed for exposure to the elements with a black UV resistant polyethylene jacket.

This allows you to extend your current network to outdoor satellite structures such as temporary classrooms or trailers in a campus environment. It is also well suited for runs under concrete slabs and in other wet locations.

These cables are offered in both unshielded (UTP) and the more robust shielded (ScTP) versions. Also, the NEC may require a Category 6, 5e or 5 rated protection device.

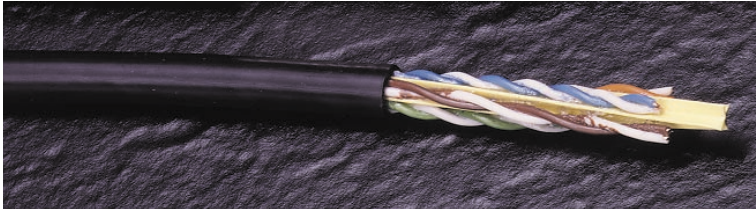
As with all horizontal cables, run length is limited to 90 meters (295 feet) per TIA/EIA 568-B for Category 6, 5e, or 5 operation.

Lan-Trak OSP provides the versatility you need for outdoor applications.

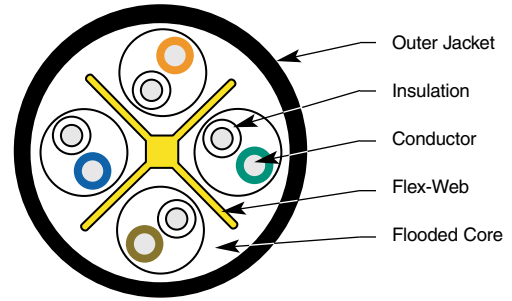
## MOHAWK

# LAN-Trak OSP AdvanceNet™ Category 6

4 PAIR #24 AWG OUTDOOR (SUITABLE FOR DUCT & AERIAL LASHING)



**PART NUMBER M57622**



## DESCRIPTION

ENHANCED UNSHIELDED TWISTED PAIR (UTP) ADVANCENET CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS AS DESCRIBED IN TIA/EIA 568-B. THE CABLE EXCEEDS TIA/EIA 568-B.2-1 AND ISO/IEC 11801 CATEGORY 6 ELECTRICAL CHARACTERISTICS. THE CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A "FLEX-WEB" CORE SEPARATOR, FLOODED TO PREVENT MOISTURE INGRESS, UNDER AN OVERALL JACKET. THIS PRODUCT AND/OR ITS MANUFACTURE IS COVERED BY US PATENT NOS. 6074503, 6496944 & 5424491.

THIS CABLE IS SUITABLE FOR OUTDOOR USE IN DUCT AND FOR AERIAL LASHING. IT IS WATER BLOCKED AND HAS A BLACK SUNLIGHT RESISTANT JACKET. THE CABLE IS NOT UL OR CSA LISTED, SINCE IT IS NOT FLAME RETARDANT. CONSULT THE NATIONAL ELECTRICAL CODE (NEC) ARTICLE 800 FOR USE IN BUILDINGS.

## SUPPORTED APPLICATIONS

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps, and 1.2 & 2.4 Gbps.

## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**COLOR CODE:** SEE TABLE 1

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER WITH A CORE SEPARATOR

**JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .040" (1.02 mm)  
NOMINAL DIAMETER: .271" (6.88 mm)

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BENDING RADIUS:** 2.75" (70 mm) MIN (10 x CABLE OD)

**CABLE WEIGHT:** 36 lbs/1000ft (54 kg/km)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

**TABLE 1**

PAIR NUMBER	PAIR COLOR CODE	
	1	WHITE-BLUE
2	WHITE-ORANGE	ORANGE
3	WHITE-GREEN	GREEN
4	WHITE-BROWN	BROWN

## ELECTRICAL CHARACTERISTICS (REF TABLE 2)

**STANDARDS:** EXCEEDS TIA/EIA 568-B.2-1 CAT 6, ISO/IEC 11801:2002 CAT 6, & IEC 61156-5 CAT 6 HORIZONTAL CABLE

**VOLTAGE RATING:** 300 VOLTS

**CONDUCTOR DCR:** 8.9 Ω/100m (27.1 Ω/mft) MAX

**DCR UNBALANCE:** 3% MAX

**MUTUAL CAPACITANCE:** 46 pF/m(14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 66 pF/100m (200 pF/mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100 Ω ± 15% (1-350 MHz)

**INPUT IMPEDANCE:** 100 Ω ± 15% (1-100 MHz)

**IMPEDANCE:** 100 Ω ± 18% (>100-200 MHz)  
100 Ω ± 22% (>200-350 MHz)

**RETURN LOSS (RL):** 20 + 6 log<sub>10</sub>(f) dB MIN (1-10 MHz)  
26 dB MIN (>10-20 MHz)  
26 - 5 log<sub>10</sub>(f/20) dB MIN (>20 MHz)

**INSERTION LOSS (ATTENUATION):** 1.795√f + .017f +  $\frac{20}{\sqrt{f}}$  dB/100m MAX

**NEAR END CROSSTALK (NEXT):** 45.3 - 15 log<sub>10</sub>(f/100) dB /100m MIN

**POWER SUM NEAR END CROSSTALK (PS-NEXT):** 43.3 - 15 log<sub>10</sub>(f/100) dB /100m MIN

**EQUAL LEVEL FAR END CROSSTALK (ELFEXT):** 30- 20 log<sub>10</sub>(f/100) dB /100m MIN

**POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):** 28 - 20 log<sub>10</sub>(f/100) dB /100m MIN

**PROPAGATION DELAY:** 534 + 36/√f ns/100m MAX

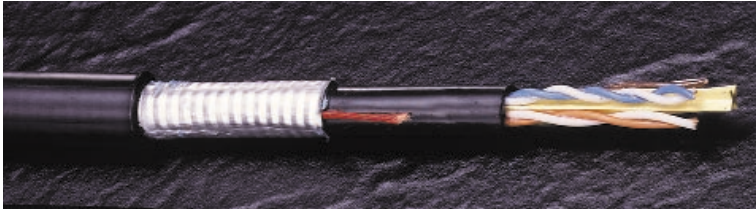
**DELTA DELAY (SKEW):** 25 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 65%

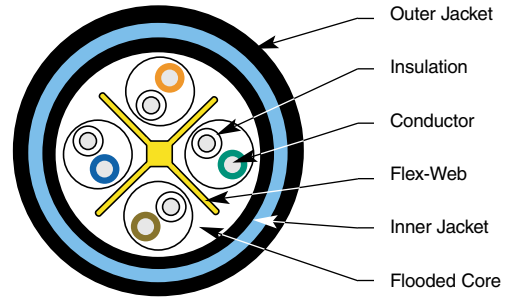
WHERE f = FREQUENCY IN MHz from .722 to 350 MHz, except for ELFEXT and PS-ELFEXT from 1 to 350 MHz.

# LAN-Trak OSP AdvanceNet™ Category 6

4 PAIR #24 AWG OUTDOOR SHIELDED (SUITABLE FOR DIRECT BURIAL)



**PART NUMBER M57623**



## DESCRIPTION

ENHANCED OVERALL SHIELDED TWISTED PAIR (ScTP) ADVANCENET CABLE FOR USE IN HORIZONTAL CABLING SYSTEMS AS DESCRIBED IN TIA/EIA 568-B. THE CABLE EXCEEDS TIA/EIA 568-B.2-1 AND ISO/IEC 11801 CATEGORY 6 ELECTRICAL CHARACTERISTICS. THE CABLE CONSISTS OF #24 AWG SOLID BARE COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS, WITH A "FLEX-WEB" CORE SEPARATOR, FLOODED TO PREVENT MOISTURE INGRESS, UNDER AN INNER JACKET, CORRUGATED ALUMINUM SHIELD AND OUTER JACKET. THIS PRODUCT AND/OR ITS MANUFACTURE IS COVERED BY US PATENT NOS. 6074503, 6496944 & 5424491.

THIS CABLE IS SUITABLE FOR OUTDOOR USE IN DUCT, FOR AERIAL LASHING, AND FOR DIRECT BURIAL. IT IS WATER BLOCKED AND HAS A BLACK SUNLIGHT RESISTANT JACKET. THE CABLE IS NOT UL OR CSA LISTED, SINCE IT IS NOT FLAME RETARDANT. CONSULT THE NATIONAL ELECTRICAL CODE (NEC) ARTICLE 800 FOR USE IN BUILDINGS.

## SUPPORTED APPLICATIONS

IEEE 802.3 10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), ANSI.X3.263 FDDI TP-PMD, IEEE 802.5 4 AND 16 Mbps TOKEN RING, ATM UP TO 155 Mbps, 550 MHz BROADBAND VIDEO AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps, and 1.2 & 2.4 Gbps.

## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**COLOR CODE:** SEE TABLE 1

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER WITH A CORE SEPARATOR

**JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .030" (.76 mm)  
NOMINAL DIAMETER: .251" (6.38 mm)

**SHIELD:** CORRUGATED ALUMINUM TAPE

**OUTER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .045" (1.14 mm)  
NOMINAL DIAMETER: .420" (10.67 mm)

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BENDING RADIUS:** 6.3" (160 mm) MIN (15 x CABLE OD)

**CABLE WEIGHT:** 95 lbs/1000ft (141 kg/km)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

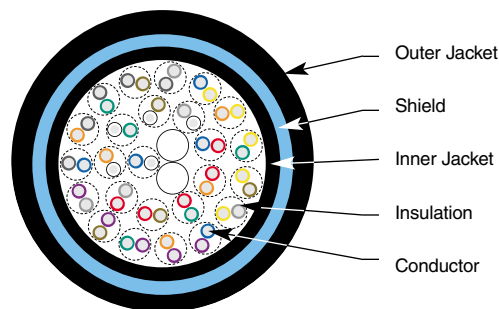
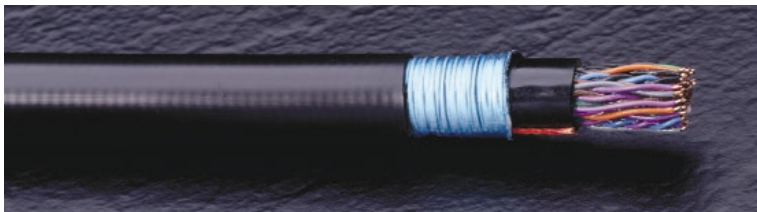
**TABLE 2  
REFERENCE ELECTRICAL CHARACTERISTICS**

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	86	77.0	75.2	80	75.0	73.2	-	-	-
1.0	1.8	2.0	82	75.3	73.3	75	73.3	71.3	70.0	68.0	20.0
4.0	3.5	3.8	73	66.3	62.5	65	64.3	60.5	58.0	56.0	23.6
8.0	5.0	5.3	69	61.8	56.5	61	59.8	54.5	51.9	49.9	25.4
10.0	5.6	5.9	67	60.3	54.4	60	58.3	52.4	50.0	48.0	26.0
16.0	7.1	7.5	66	57.2	49.7	58	55.2	47.7	45.9	43.9	26.0
20.0	7.9	8.4	64	55.8	47.4	56	53.8	45.4	44.0	42.0	26.0
25.0	8.9	9.4	63	54.3	44.9	54	52.3	42.9	42.0	40.0	25.5
31.25	10.0	10.6	62	52.9	42.3	53	50.9	40.3	40.1	38.1	25.0
62.5	14.4	15.3	58	48.4	33.1	49	46.4	31.1	34.1	32.1	23.5
100.0	18.5	19.7	54	45.3	25.6	45	43.3	23.6	30.0	28.0	22.5
155.0	23.5	25.0	52	42.4	17.4	43	40.4	15.4	26.2	24.2	21.6
200.0	27.2	28.8	50	40.8	12.0	42	38.8	10.0	24.0	22.0	21.0
250.0	30.7	32.6	49	39.3	6.7	40	37.3	4.7	22.0	20.0	20.5
300.0	34.0	36.2	48	38.1	2.0	39	36.1	0.0	20.5	18.5	20.1
350.0	37.2	39.5	47	37.1	-	38	35.1	-	19.1	17.1	19.8
400.0	40.2	42.7	46	36.3	-	37	34.3	-	-	-	19.5
500.0	45.8	48.6	45	34.8	-	36	32.8	-	-	-	19.0
550.0	48.4	51.5	44	34.2	-	35	32.2	-	-	-	18.8

VALUES ABOVE 350 MHz ARE FOR ENGINEERING INFORMATION ONLY.

# LAN-Trak OSP Category 5e

25 PAIR #24 AWG (SUITABLE FOR DIRECT BURIAL)



**PART NUMBER M58527**

## APPLICATIONS

10BASE-T (ETHERNET), 100BASE-T (FAST ETHERNET), AND 1000BASE-T (GIGABIT ETHERNET), FDDI TP-PMD, IEEE 802.5 4 AND 16Mbps TOKEN RING, ATM UP TO 155 Mbps AND STANDARDS UNDER DEVELOPMENT SUCH AS ATM AT 622 Mbps.

## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**CABLE ASSEMBLY:** 25 PAIRS CABLED TOGETHER

**BINDER:** OVERALL OPEN BINDER

**INNER JACKET:** MATERIAL: MEDIUM DENSITY POLYETHYLENE  
NOMINAL WALL: .040" (1.0 mm)  
NOMINAL DIAMETER: .510" (12.95 mm)  
COLOR: BLACK

**SHEILD:** CORRUGATED ALUMINUM TAPE .088" (.20mm)

**OUTER JACKET:** MATERIAL: MEDIUM DENSITY POLYETHYLENE  
NOMINAL WALL: .060" (1.52 mm)  
NOMINAL DIAMETER: .730" (18.54 mm)  
COLOR: BLACK

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BENDING RADIUS:** 11.0" (279 mm) MIN (15 x CABLE OD)

**CABLE WEIGHT:** 300 lbs/1000ft (446 kg/km)

**PULLING TENSION:** 165 lbf (750 N) MAX

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\* THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

## ELECTRICAL CHARACTERISTICS

**STANDARDS:** TIA/EIA 568-B.2 CAT 5 BACKBONE CABLE, MEETING POWER SUM NEXT, ANSI/ICEA S-99-689-1997

**VOLTAGE RATING:** 300 VOLTS

**CONDUCTOR DCR:** 9.38 Ω/100m (28.6 Ω/mft) MAX

**CAPACITANCE:** 46 pF/100m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 262 pF/100m (800 pF/mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100 Ω ± 15% (1-100 MHz)

**STRUCTURAL RETURN LOSS (SRL):** 23 dB MIN (1-20 MHz)  
23 - 10 log<sub>10</sub>(f/20) dB MIN (>20 MHz)

**RETURN LOSS (RL):** 17+3 log<sub>10</sub>(f) dB MIN (1-10 MHz)  
20 dB MIN (>10-20 MHz)  
20 - 7 log<sub>10</sub>(f/20) dB MIN (>20 MHz)

**ATTENUATION:** 1.967√f + .023f +  $\frac{.050}{\sqrt{f}}$  dB/100m MAX

**POWER SUM NEAR END CROSSTALK (PS-NEXT):** 64 - 15 log<sub>10</sub>(f/.772) dB /100m MIN

**POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):** 63 - 20 log<sub>10</sub>(f/.772) dB /100m MIN

**PROPAGATION DELAY:** 534 + 36/√f ns/100m MAX

**DELTA DELAY (SKEW):** 45 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 65%

WHERE f = FREQUENCY IN MHz from .722 to 100 MHz

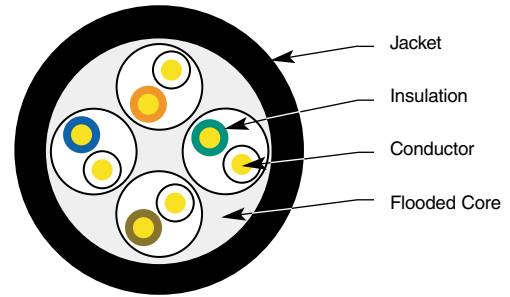
## REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	ATTENUATION (dB/100m)			PS-NEXT (dB/100m)		PS-ACR* (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	max	avg	min			
.772	1.5	1.8	5.5	70	64.0	66.2	-	-
1.0	1.9	2.0	6.3	68	62.3	60.3	60.8	20.0
4.0	3.8	4.1	13	57	53.3	49.2	48.7	23.0
8.0	5.4	5.8	18	54	48.8	43.0	42.7	24.5
10.0	6.1	6.5	20	52	47.3	40.8	40.8	25.0
16.0	7.8	8.2	25	50	44.3	36.1	36.7	25.0
20.0	8.8	9.3	28	48	42.8	33.5	34.7	25.0
25.0	9.9	10.4	32	47	41.3	30.9	32.8	24.3
31.25	11.1	11.7	36	46	39.9	28.2	30.9	23.6
62.5	16.0	17.0	52	42	35.4	18.4	24.8	21.5
100.0	20.5	22.0	67	38	32.3	10.3	20.8	20.1

\*ACR - ATTENUATION TO CROSSTALK RATIO

# LAN-Trak OSP MegaLAN™ Category 5E+

4 PAIR #24 AWG OUTDOOR AERIAL/DUCT



**PART NUMBER M57561**

## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**INNER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .040" (1.02 mm)  
NOMINAL DIAMETER: .251" (6.38 mm)

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BEND RADIUS:** 2.5" (61 mm) MIN (10 x CABLE OD)

**CABLE WEIGHT:** 31 lbs/1000ft (46 kg/km)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\* THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

## ELECTRICAL CHARACTERISTICS

**STANDARDS:** EXCEEDS TIA/EIA 568-B.2 CAT 5e  
AND ISO/IEC 11801 CAT 5  
HORIZONTAL CABLE

**VOLTAGE RATING:** 300 VOLTS

**CONDUCTOR DCR:** 8.9 Ω/100m (27.1 Ω/mft) MAX

**DCR UNBALANCE:** 3% MAX

**MUTUAL CAPACITANCE:** 46 pF/m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 66 pF/100m (200 pF/mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100 Ω ± 15% (1-400 MHz)

**INPUT IMPEDANCE:** 100 Ω ± 15% (1-100 MHz)  
100 Ω ± 22% (>100-200 MHz)

**RETURN LOSS (RL):** 20 + 5 log<sub>10</sub>(f) dB MIN (1-10 MHz)  
25 dB MIN (>10-20 MHz)  
25 - 7 log<sub>10</sub>(f/20) dB MIN (>20 MHz)

**INSERTION LOSS:** 1.97√f + .013f +  $\frac{.050}{\sqrt{f}}$  dB/100m MAX

**NEAR END CROSSTALK (NEXT):** 40.3 - 15 log<sub>10</sub>(f/100) dB /100m MIN

**POWER SUM NEAR END CROSSTALK (PS-NEXT):** 38.3 - 15 log<sub>10</sub>(f/100) dB /100m MIN

**EQUAL LEVEL FAR END CROSSTALK (ELFEXT):** 27.8 - 20 log<sub>10</sub>(f/100) dB /100m MIN

**POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):** 24.8 - 20 log<sub>10</sub>(f/100) dB /100m MIN

**PROPAGATION DELAY:** 534 + 36/√f ns/100m MAX

**DELTA DELAY (SKEW):** 25 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 65%

WHERE f = FREQUENCY IN MHz from .722 to 350 MHz, except for ELFEXT and PS-ELFEXT from 1 to 250 MHz.

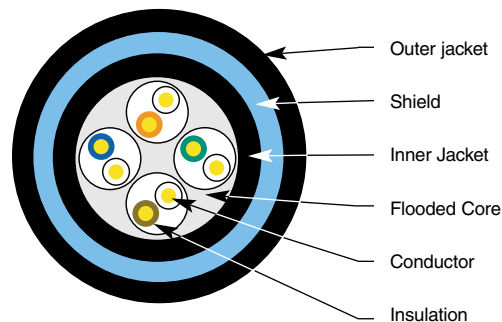
## REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS			NEXT		ACR (dB/100m)	PS-NEXT		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	(dB/100m)	(dB/mft)	(dB/100m)	(dB/100m)	(dB/100m)		(dB/100m)	(dB/100m)				
	avg	max	max	avg	min	min	avg	min	min	min	min	min
1.0	1.8	2.0	6.2	80	70.3	70.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	12.2	70	61.3	59.3	63	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	17.4	66	56.8	53.1	59	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	19.4	64	55.3	50.9	58	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	24.7	62	52.2	46.1	56	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	27.7	60	50.8	43.7	54	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	31.0	59	49.3	41.1	52	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	34.8	58	47.9	38.5	51	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	50	54	43.4	29.0	47	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	64	50	40.3	21.3	43	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	81	48	37.4	12.9	41	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	93	46	35.8	7.3	40	33.8	3.3	21.8	18.8	18.0
350.0	40.0	41.4	126	43	32.1	-	36	30.1	-	-	-	16.3
400.0	43.2	44.6	136	42	31.3	-	35	29.3	-	-	-	15.9

VALUES ABOVE 250 MHz ARE FOR ENGINEERING INFORMATION ONLY.

# LAN-Trak OSP MegaLAN™ Category 5E+

4 PAIR #24 AWG OUTDOOR SHIELDED/DIRECT BURIAL



**PART NUMBER M57562**

## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**INNER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .030" (.76 mm)  
NOMINAL DIAMETER: .231" (5.87 mm)

**SHIELD:** CORRUGATED COATED ALUMINUM TAPE

**OUTER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .045" (1.14 mm)  
NOMINAL DIAMETER: .420" (10.67 mm)

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BEND RADIUS:** 6.3" (160 mm) MIN (15 x CABLE OD)

**CABLE WEIGHT:** 91 lbs/1000ft (135 kg/km)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

## ELECTRICAL CHARACTERISTICS

**STANDARDS:** EXCEEDS TIA/EIA 568-B.2 CAT 5e  
AND ISO/IEC 11801 CAT 5  
HORIZONTAL CABLE

**VOLTAGE RATING:** 300 VOLTS

**CONDUCTOR DCR:** 8.9 Ω / 100m (27.1 Ω / mft) MAX

**DCR UNBALANCE:** 3% MAX

**MUTUAL CAPACITANCE:** 46 pF/m(14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 66 pF/100m (200 pF/mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100 Ω ± 15% (1-400 MHz)

**INPUT IMPEDANCE:** 100 Ω ± 15% (1-100 MHz)  
100 Ω ± 22% (>100-200 MHz)

**RETURN LOSS (RL):** 20 + 5 log<sub>10</sub>(f) dB MIN (1-10 MHz)  
25 dB MIN (>10-20 MHz)  
25 - 7 log<sub>10</sub>(f / 20) dB MIN (>20 MHz)

**INSERTION LOSS:** 1.97√f + .013f +  $\frac{.050}{\sqrt{f}}$  dB/100m MAX

**NEAR END CROSSTALK (NEXT):** 40.3 - 15 log<sub>10</sub>(f / 100) dB / 100m MIN

**POWER SUM NEAR END CROSSTALK (PS-NEXT):** 38.3 - 15 log<sub>10</sub>(f / 100) dB / 100m MIN

**EQUAL LEVEL FAR END CROSSTALK (ELFEXT):** 24.8 - 20 log<sub>10</sub>(f / 100) dB / 100m MIN

**POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):** 21.8 - 20 log<sub>10</sub>(f / 100) dB / 100m MIN

**PROPAGATION DELAY:** 534 + 36/√f ns/100m MAX

**DELTA DELAY (SKEW):** 25 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 65%

WHERE f = FREQUENCY IN MHz from .722 to 350 MHz, except for ELFEXT and PS-ELFEXT from 1 to 250 MHz.

## REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)	
	avg	max	avg	min		avg	min					
1.0	1.8	2.0	6.2	80	70.3	70.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	12.2	70	61.3	59.3	63	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	17.4	66	56.8	53.1	59	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	19.4	64	55.3	50.9	58	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	24.7	62	52.2	46.1	56	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	27.7	60	50.8	43.7	54	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	31.0	59	49.3	41.1	52	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	34.8	58	47.9	38.5	51	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	50	54	43.4	29.0	47	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	64	50	40.3	21.3	43	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	81	48	37.4	12.9	41	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	93	46	35.8	7.3	40	33.8	3.3	21.8	18.8	18.0
350.0	40.0	41.4	126	43	32.1	-	36	30.1	-	-	-	16.3
400.0	43.2	44.6	136	42	31.3	-	35	29.3	-	-	-	15.9

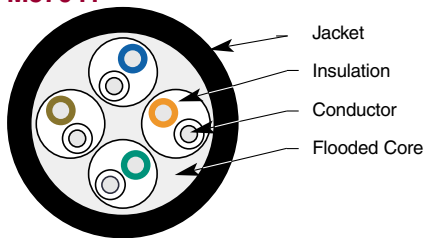
VALUES ABOVE 250 MHz ARE FOR ENGINEERING INFORMATION ONLY.

# LAN-Trak OSP Category 5

4 PAIR #24 AWG (SUITABLE FOR AERIAL LASHING)



**PART NUMBER M57041**



## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**INNER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .040" (1.02 mm)  
NOMINAL DIAMETER: .246" (6.25 mm)

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BEND RADIUS:** 2.5" (61 mm) MIN (10 x CABLE OD)

**CABLE WEIGHT:** 30 lbs/1000ft (45 kg/km)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\*THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

## ELECTRICAL CHARACTERISTICS

**STANDARDS:** TIA/EIA 568-B.2 CAT 5 HORIZONTAL CABLE

**VOLTAGE RATING:** 300 VOLTS

**CONDUCTOR DCR:** 9.38 Ω/100m (28.6 Ω/mft) MAX

**DCR UNBALANCE:** 5% MAX

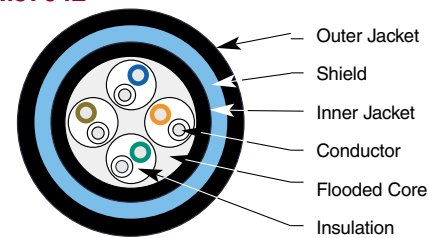
**MUTUAL CAPACITANCE:** 46 pF/m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 132 pF/100m (400 pF/mft) MAX

4 PAIR #24 AWG (SUITABLE FOR DIRECT BURIAL)



**PART NUMBER M57042**



## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**CABLE ASSEMBLY:** 4 PAIRS CABLED TOGETHER

**INNER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .030" (.76 mm)  
NOMINAL DIAMETER: .226" (5.74 mm)

**SHEILD:** CORRUGATED ALUMINUM TAPE

**OUTER JACKET:** MATERIAL: BLACK POLYETHYLENE  
NOMINAL WALL: .045" (1.14 mm)  
NOMINAL DIAMETER: .420" (10.67 mm)

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BEND RADIUS:** 6.3" (160 mm) MIN (15 x CABLE OD)

**CABLE WEIGHT:** 90 lbs/1000ft (134 kg/km)

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

**CHARACTERISTIC IMPEDANCE:** 100 Ω ± 15% (1-100 MHz)

**PROPAGATION DELAY:** 534 + 36/√f ns/100m MAX

**DELTA DELAY (SKEW):** 25 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 65%

WHERE f = FREQUENCY IN MHz from .722 to 100 MHz

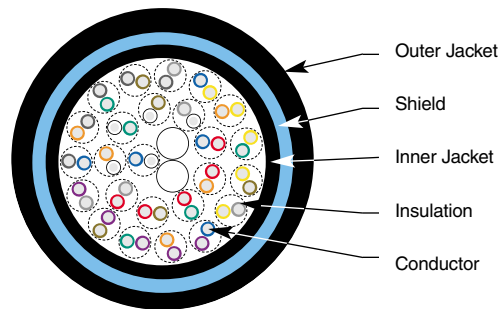
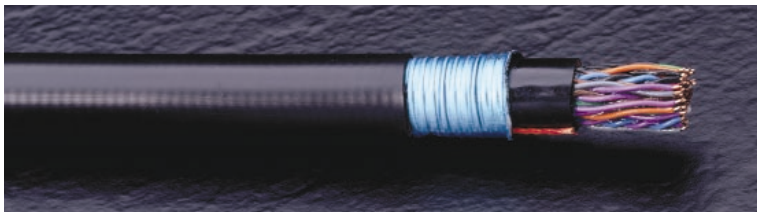
## REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	ATTENUATION (dB/100m)		NEXT (dB/100m)		ACR*	PS-NEXT (dB/100m)		PS-ACR*	ELFEXT	PS-ELFEXT	SRL	RL	
	avg	max	avg	min	(dB/100m)	avg	min	(dB/100m)	(dB/100m)	(dB/100m)	(dB)	(dB)	
.772	1.6	1.8	5.5	79	68.0	66.2	70	64.0	62.2	-	-	-	-
1.0	1.8	2.0	6.3	77	66.3	64.3	68	62.3	60.3	61.8	58.8	23.0	17.0
4.0	3.8	4.1	13	68	57.3	53.2	57	53.3	49.2	49.7	46.7	23.0	18.8
8.0	5.4	5.8	18	64	52.8	47.0	54	48.8	43.0	43.7	40.7	23.0	19.7
10.0	6.0	6.5	20	62	51.3	44.8	52	47.3	40.8	41.8	38.8	23.0	20.0
16.0	7.6	8.2	25	60	48.3	40.1	50	44.3	36.1	37.7	34.7	23.0	20.0
20.0	8.6	9.3	28	58	46.8	37.5	48	42.8	33.5	35.7	32.7	23.0	20.0
25.0	9.7	10.4	32	57	45.3	34.9	47	41.3	30.9	33.8	30.8	22.0	19.3
31.25	10.9	11.7	36	56	43.9	32.2	46	39.9	28.2	31.9	28.9	21.1	18.6
62.5	15.8	17.0	52	52	39.4	22.4	42	35.4	18.4	25.8	22.8	18.1	16.5
100.0	20.5	22.0	67	48	36.3	14.3	38	32.3	10.3	21.8	18.8	16.0	15.1

\*ACR - MINIMUM ATTENUATION TO CROSSTALK RATIO

# LAN-Trak OSP Category 5

25 PAIR #24 AWG (SUITABLE FOR DIRECT BURIAL)



**PART NUMBER M57656**

## APPLICATIONS

IEEE 802.5, 100BASE-T, 100BASE VG-ANYLAN  
TPDDI, CDDI, and ATM at 155/622 Mbps

## CONSTRUCTION / PHYSICAL CHARACTERISTICS

**PRIMARIES:** CONDUCTOR: 24 AWG (.5 mm) SOLID BARE COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN

**PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS

**CABLE ASSEMBLY:** 25 PAIRS CABLED TOGETHER

**BINDER:** OVERALL OPEN BINDER

**INNER JACKET:** MATERIAL: MEDIUM DENSITY POLYETHYLENE  
NOMINAL WALL: .040" (1.0 mm)  
NOMINAL DIAMETER: .510" (12.95 mm)  
COLOR: BLACK

**SHEILD:** CORRUGATED ALUMINUM TAPE .008" (.20 mm)

**OUTER JACKET:** MATERIAL: MEDIUM DENSITY POLYETHYLENE  
NOMINAL WALL: .060" (1.52 mm)  
NOMINAL DIAMETER: .730" (18.54 mm)  
COLOR: BLACK

**NOTE:** CABLE FLOODED FOR MOISTURE PROTECTION

**BENDING RADIUS:** 11.0" (279 mm) MIN (15 x CABLE OD)

**CABLE WEIGHT:** 300 lbs/1000ft (446 kg/km)

**PULLING TENSION:** 165 lbf (750 N) MAX

**OPERATING TEMP.:** -40°C to +60°C (-40°F to +140°F)

**STORAGE TEMP.:** -40°C to +75°C (-40°F to +167°F)

**INSTALLATION TEMP.:** -20°C to +60°C (-4°F to +140°F)

\* THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED.

## ELECTRICAL CHARACTERISTICS

**STANDARDS:** TIA/EIA 568-B.2 CAT 5 BACKBONE CABLE, MEETING POWER SUM NEXT, ANSI/ICEA S-99-689-1997

**VOLTAGE RATING:** 300 VOLTS

**CONDUCTOR DCR:** 9.38 Ω/100m (28.6 Ω/mft) MAX

**CAPACITANCE:** 46 pF/100m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:** 262 pF/100m (800 pF/mft) MAX

**CHARACTERISTIC IMPEDANCE:** 100 Ω ± 15% (1-100 MHz)

**STRUCTURAL RETURN LOSS (SRL):** 23 dB MIN (1-20 MHz)  
23 - 10 log<sub>10</sub>(f/20) dB MIN (>20 MHz)

**RETURN LOSS (RL):** 17+3 log<sub>10</sub>(f) dB MIN (1-10 MHz)  
20 dB MIN (>10-20 MHz)  
20 - 7 log<sub>10</sub>(f/20) dB MIN (>20 MHz)

**ATTENUATION:** 1.967√f + .023f +  $\frac{.050}{\sqrt{f}}$  dB/100m MAX

**POWER SUM NEAR END CROSSTALK (PS-NEXT):** 64 - 15 log<sub>10</sub>(f/.772) dB /100m MIN

**POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):** 63 - 20 log<sub>10</sub>(f/.772) dB /100m MIN

**PROPAGATION DELAY:** 534 + 36/√f ns/100m MAX

**DELTA DELAY (SKEW):** 45 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):** 65%

WHERE f = FREQUENCY IN MHz from .722 to 100 MHz

## REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	ATTENUATION (dB/100m)			PS-NEXT (dB/100m)		PS-ACR* (dB/100m)	PS-ELFEXT (dB/100m)	SRL (dB)	RL (dB)
	avg	max	max	avg	min				
.772	1.5	1.8	5.5	70	64.0	66.2	-	-	-
1.0	1.9	2.0	6.3	68	62.3	60.3	60.8	23.0	17.0
4.0	3.8	4.1	13	57	53.3	49.2	48.7	23.0	18.8
8.0	5.4	5.8	18	54	48.8	43.0	42.7	23.0	19.7
10.0	6.1	6.5	20	52	47.3	40.8	40.8	23.0	20.0
16.0	7.8	8.2	25	50	44.3	36.1	36.7	23.0	20.0
20.0	8.8	9.3	28	48	42.8	33.5	34.7	23.0	20.0
25.0	9.9	10.4	32	47	41.3	30.9	32.8	22.0	19.3
31.25	11.1	11.7	36	46	39.9	28.2	30.9	21.1	18.6
62.5	16.0	17.0	52	42	35.4	18.4	24.8	18.1	16.5
100.0	20.5	22.0	67	38	32.3	10.3	20.8	16.0	15.1

\*ACR - ATTENUATION TO CROSSTALK RATIO

# Mohawk's Comprehensive Line of Cables includes:

## Enhanced UTP Cables

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- GigaLAN™ Enhanced Category 6e+
- GigaLink™ Enhanced Category 6e+ Patch Cable
- AdvanceNet™ Category 6e
- AdvanceLink™ Category 6e Patch Cable
- 6 LAN Category 6
- MegaLAN™ 400 Enhanced Category 5E+
- MegaLink™ Enhanced Category 5E Patch Cable
- 5e LAN™ Category 5e
- High Pair Count

## PlenumPlus™ Cables Limited Combustible

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- GigaLAN 6e+
- AdvanceNet 6e
- MegaLAN 5E+
- Category 5e
- Category 5e

## ScTP Cables

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- AdvanceNet Category 6e
- MegaLAN 400 Enhanced Category 5E
- MegaLink Enhanced Category 5E Patch Cable
- Category 5
- Category Patch Cables

## High Pair Count

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- UTP & ScTP
- Category 3-5e
- ARMM

## Outside Plant Cables

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- AdvanceNet
- MegaLAN 400 LAN-Trak™ OSP
- Category 5 LAN-Trak OSP

## Fiber Optic Cables Cables

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- ArmorLite™
- AdvanceLite™
- Distribution Cables
- Breakout Cables
- Loose Tube Cables
- VersaLite™
- RiserLite™ Loose Tube Cables
- Simplex and Duplex Cables
- Field Breakout Kit
- QwikConnect™ System

## HomeLAN™ Cables

## Media-Pull™ Composite Cables

## Spectrum™ Sound, Broadcast and Audio Cables

## Computer and Control Cables

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