

# Advance Link<sup>®</sup>

## 4 Pair #24 AWG UTP Category 6e Patch

### DESCRIPTION

ENHANCED UNSHIELDED TWISTED PAIR (UTP) ADVANCE LINK PATCH CABLE FOR USE AS PATCH OR EQUIPMENT CORDS PER TIA 568-B. THE CABLE EXCEEDS TIA 568-B.2-1 AND ISO/IEC 11801 CATEGORY 6 AND IS TESTED TO 650 MHz. THE CABLE CONSISTS OF #24 AWG STRANDED TINNED COPPER INSULATED CONDUCTORS, ASSEMBLED INTO FOUR TIGHTLY TWISTED PAIRS WITH A CORE SEPARATOR UNDER AN OVERALL JACKET. PRINT INCLUDES DESCENDING FOOTAGE MARKERS FROM 1000 TO 0. THIS PRODUCT AND/OR ITS MANUFACTURE IS COVERED BY US PATENT NOS. 6998537, 6570095 & 5424491.

THE CABLE IS RATED FOR GENERAL PURPOSE COMMUNICATIONS USE IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE (NEC). THE CABLE IS UL (USA) & CSA (CANADA) LISTED FOR THIS APPLICATION BY PASSING UL 1581 VERTICAL TRAY FLAME TEST AND CSA FT4 VERTICAL FLAME TEST - CABLES IN CABLE TROUGH FROM CLAUSE 4.11.4 OF CSA C22.2 NO. 0.3.

THIS CABLE COMPLIES WITH THE EU-RoHS DIRECTIVE 2002/95/EC (RESTRICTIONS ON HAZARDOUS SUBSTANCES) REGULATIONS.

### 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

- PRIMARIES:** CONDUCTOR: 24 AWG (7/32) STRANDED TIN COPPER  
INSULATION: THERMOPLASTIC POLYOLEFIN
- PAIR ASSEMBLY:** 2 PRIMARIES TWISTED IN VARIED LAYS
- COLOR CODE:** SEE TABLE 1
- CABLE ASSEMBLY:** 4 PAIRS CABLED WITH CORE SEPARATOR
- JACKET:** NO LEAD FLAME RETARDANT THERMOPLASTIC  
JACKET COLOR: SEE TABLE 2  
NOMINAL CABLE OD: .216" (5.49 mm)
- LISTING:** C(UL)US TYPE CMG --- ETL VERIFIED CAT 6 PATCH

### PHYSICAL CHARACTERISTICS

- CABLE WEIGHT:** 25 lbs/1000ft (37 kg/km)
- BENDING RADIUS:** 1" (25.4 mm) MIN (4 x CABLE OD)
- PULLING TENSION:** 25 lbf (110 N) MAX
- OPERATING TEMP.:** -20°C to +60°C (-4°F to +140°F)
- STORAGE TEMP.:** -20°C to +75°C (-4°F to +167°F)
- INSTALLATION TEMP.\*:** 0°C to +60°C (+32°F to +140°F)

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

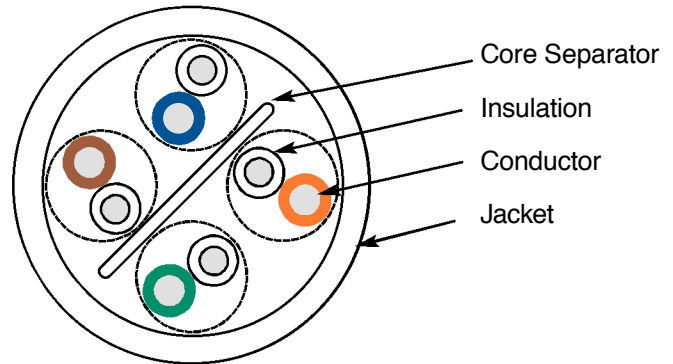


TABLE 1

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

TABLE 2

PART NUMBER	JACKET COLOR
M57507	WHITE
M57508	BLUE
M57509	GRAY
M57511	YELLOW
M57512	GREEN
M57517	VIOLET
M57518	ORANGE
M57519	RED
M57520	BLACK
M58204	PINK
M58695	POWDER BLUE



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### ELECTRICAL CHARACTERISTICS (REF TABLE 3)

<b>CONDUCTOR DCR:</b>	9.09 Ω/100m (27.7 Ω/Mft) MAX	<b>INSERTION LOSS:</b>	$2.1696 f + .0204 f + \frac{.24}{f}$ dB/100m MAX
<b>DCR UNBALANCE:</b>	3% MAX	<b>NEAR END CROSSTALK (NEXT):</b>	46.3 - 15 log <sub>10</sub> (f/100) dB/100m MIN
<b>MUTUAL CAPACITANCE:</b>	46 pF/m (14 pF/ft) NOM	<b>POWER SUM NEAR END CROSSTALK (PS-NEXT):</b>	44.3 - 15 log <sub>10</sub> (f/100) dB/100m MIN
<b>CAPACITANCE UNBALANCE PAIR/GROUND:</b>	66 pF/100m (200 pF/Mft) MAX	<b>EQUAL LEVEL FAR END CROSSTALK (ELFEXT):</b>	30 - 20 log <sub>10</sub> (f/100) dB/100m MIN
<b>CHARACTERISTIC IMPEDANCE:</b>	100 Ω ± 15% (1-300 MHz)	<b>POWER SUM EQUAL LEVEL FAR END CROSSTALK (PS-ELFEXT):</b>	28 - 20 log <sub>10</sub> (f/100) dB/100m MIN
<b>INPUT IMPEDANCE:</b>	100 Ω ± 15% (1-100 MHz) 100 Ω ± 18% (>100-200 MHz) 100 Ω ± 22% (>200-350 MHz)	<b>PROPAGATION DELAY:</b>	534 + 36 / f ns/100m MAX
<b>RETURN LOSS (RL):</b>	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)	<b>DELTA DELAY (SKEW):</b>	25 ns/100m MAX
		<b>NOMINAL VELOCITY OF PROPAGATION (NVP):</b>	68%

WHERE  $f$  = FREQUENCY IN MHz from .772 to 350 MHz, except for ELFEXT and PS-ELFEXT from 1 to 350 MHz.

TABLE 3

### 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	2.0	2.2	88	78.0	75.8	81	76.0	73.8	-	-	-
1.0	2.2	2.4	86	76.3	73.9	79	74.3	71.9	70.0	68.0	20.0
4.0	4.3	4.5	77	67.3	62.8	70	65.3	60.8	58.0	56.0	23.0
8.0	6.0	6.4	73	62.8	56.4	66	60.8	54.4	51.9	49.9	24.5
10.0	6.8	7.1	71	61.3	54.2	64	59.3	52.2	50.0	48.0	25.0
16.0	8.6	9.1	68	58.2	49.1	61	56.2	47.1	45.9	43.9	25.0
20.0	9.6	10.2	67	56.8	46.6	60	54.8	44.6	44.0	42.0	25.0
25.0	10.8	11.4	65	55.3	43.9	58	53.3	41.9	42.0	40.0	24.3
31.25	12.1	12.8	64	53.9	41.1	57	51.9	39.1	40.1	38.1	23.6
62.5	17.5	18.5	59	49.4	30.9	52	47.4	28.9	34.1	32.1	21.5
100.0	22.5	23.8	56	46.3	22.5	49	44.3	20.5	30.0	28.0	20.1
155.0	28.6	30.2	53	43.4	13.2	46	41.4	11.2	26.2	24.2	18.8
200.0	32.9	34.8	52	41.8	7.0	45	39.8	5.0	24.0	22.0	18.0
250.0	37.2	39.4	50	40.3	0.9	43	38.3	-	22.0	20.0	17.3
300.0	41.4	43.7	49	39.1	-	42	37.1	-	20.5	18.5	16.8
350.0	45.1	47.7	48	38.1	-	41	36.1	-	19.1	17.1	16.3
400.0	48.8	51.6	47	37.3	-	40	35.3	-	18.0	16.0	15.9
500.0	55.5	58.7	46	35.8	-	39	33.8	-	16.0	14.0	15.2
550.0	58.7	62.1	45	35.2	-	38	33.2	-	-	-	14.9
600.0	61.5	54.2	45	34.6	-	38	34.6	-	-	-	14.7
650.0	64.5	56.8	44	34.1	-	37	34.1	-	-	-	14.4

VALUES ABOVE 350 MHz ARE FOR ENGINEERING INFORMATION ONLY.

Mohawk reserves the right to change specification in the interest of product enhancement.