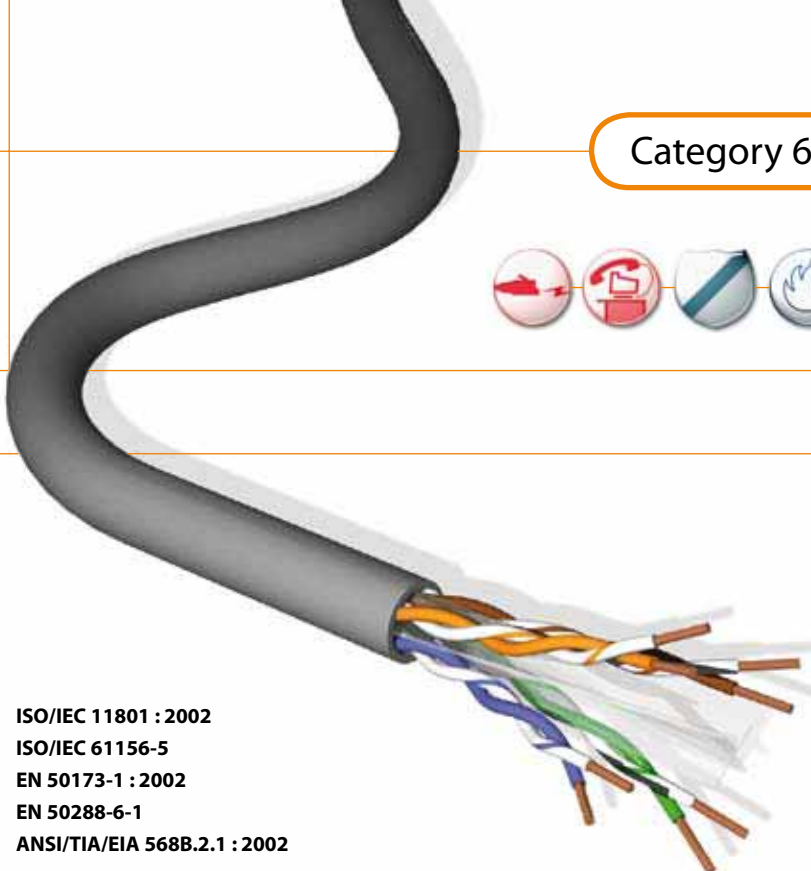


# Category 6 Systems

CAT6PLUS



ISO/IEC 11801 : 2002  
 ISO/IEC 61156-5  
 EN 50173-1 : 2002  
 EN 50288-6-1  
 ANSI/TIA/EIA 568B.2.1 : 2002

## Brand-Rex Copper Cables - Cat6Plus

Communication Cable, U/UTP, 100 Ω, 4x2xAWG 23/1



### Independent 3rd Party Certification (3P)

#### PRODUCT DESCRIPTION:

Cat6Plus U/UTP, 100 Ω, 4x2xAWG 23/1 premium grade Class E/Cat 6 cable to support Gigabit Ethernet protocol for installation in horizontal and backbone areas.

#### PRODUCT PERFORMANCE:

##### Core

Conductor: 23 AWG Plain Annealed  
 Copper Wire  
 Insulation: Polyolefin  
 Diameter: 1.00mm Nominal  
 Pair: 2 of the above cores  
 Pair Colour: Blue-White, Orange-White,  
 Green-White, Brown-White

##### Final Assembly

Cable: 4 of the above pairs cabled together  
 around a cross filler  
 Sheath: PVC or LSZH compound

##### Mechanical and Environmental

Temp - Installation: 0°C to +50°C  
 Temp - Operation: -20°C to +75°C  
 Max Tensile Load:  
 10kg per simplex cable (installation)  
 Min Bend Radius:  
 8 x Outer Diameter (installation)  
 4 x Outer Diameter (operation)

##### Packaging

RLX 305m Reelex Box  
 WRL 500m Wooden Reel  
 1000m Wooden Reel

Electrical Characteristics @ 20°C	Specification	Typical Performance
Conductor Loop Resistance	Max 19 Ω / 100m	14 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.5%
Dielectric Strength	1.0kV dc or 0.7kV ac for 1 min	100% in process test
Insulation Resistance	>500MΩ.km @ 100-500 V test voltage	>5 GΩ.km
Capacitance Unbalance to Earth	Max 160 pF/100m	40 pF/100m
Velocity of Propagation	<534 nsec/100m @ 100MHz	490 nsec/100m @ 100MHz (NVP for hand held testers = 0.69)
Skew	Max 40 nsec/100m @ 100MHz	30 nsec/100m @ 100MHz
Mean Characteristic Impedance	100 Ω +/- 5 Ω @ 100MHz	100 Ω +/- 3 Ω @ 100MHz
Coupling Attenuation up to 1Ghz	Min 40 dB	56 dB

Frequency (MHz)	1	4	10	16	20	31.25	62.5	100	155	200	250	300	550
Insertion Loss (dB / 100m)	Spec	2.1	3.8	6.0	7.6	8.5	10.7	15.5	19.9	25.3	29.1	33.0	na
	Typical	1.9	3.5	5.5	7.0	7.8	9.9	14.1	18.0	22.7	26.1	29.4	32.5
NEXT (dB)	Spec	66.0	65.3	59.3	56.2	54.8	51.9	47.4	44.3	41.4	39.8	38.3	na
	Typical	86.5	77.5	71.5	68.4	67.0	64.1	59.6	56.5	53.6	52.0	50.5	49.3
PSNEXT (dB)	Spec	64.0	63.3	57.3	54.2	52.8	49.9	45.4	42.3	39.4	37.8	36.3	na
	Typical	84.5	75.5	69.5	66.4	65.0	62.1	57.6	54.5	51.6	50.0	48.5	47.3
ELFEXT (dB / 100m)	Spec	66.0	58.0	50.0	45.9	44.0	40.1	34.1	30.0	26.2	24.0	22.0	na
	Typical	85.0	73.0	65.0	60.9	59.0	55.1	49.1	45.0	41.2	39.0	37.0	35.5
PSELFEXT (dB / 100m)	Spec	64.0	55.0	47.0	42.9	41.0	37.1	31.1	27.0	23.2	21.0	19.0	na
	Typical	82.0	70.0	62.0	57.9	56.0	52.1	46.4	42.0	38.2	36.0	34.0	32.5
Return Loss (dB / 100m)	Spec	na	23.0	25.0	25.0	25.0	23.6	21.5	20.1	18.8	18.0	17.3	na
	Typical	27.0	30.0	30.0	30.0	30.0	28.6	26.5	25.1	23.8	23.0	22.3	21.8
ACR (dB / 100m)	Typical	84.6	73.9	66.0	61.4	59.1	54.2	45.5	38.5	30.9	25.9	21.1	16.9
PSACR (dB / 100m)	Typical	82.6	71.9	64.0	59.4	57.1	52.2	43.5	36.5	28.9	23.9	19.1	14.9

### Product Part Numbering

Part Number	C6U	C6U-D	C6U-HF1	C6U-HF1-D	C6U-HF3	C6U-HF3-D
Outer Sheath	PVC	PVC	LSZH	LSZH	LSZH	LSZH
Construction	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Cable Weight	43.5 kg/km	87.0 kg/km	43.0kg/km	86.0 kg/km	56.5 kg/km	113 kg/km
Calorific Value	0.19 k Wh/m	0.38 k Wh/m	0.18 k Wh/m	0.36 k Wh/m	0.26 k Wh/m	0.52 k Wh/m
Outer Diameter (nom)	6.2mm	12.5 x 6.2mm	6.2mm	12.5 x 6.2mm	7.0mm	14.1 x 7.0mm
Sheath Colour	Grey RAL 7037	Grey RAL 7037	Violet RAL 4005	Violet RAL 4005	Blue RAL 5015	Blue RAL 5015
Fire Safety Rating	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-1-2	IEC 60332-3-24	IEC 60332-3-24
Acid Gas Emissions	na	na	IEC 60754-1	IEC 60754-1	IEC 60754-1	IEC 60754-1
Smoke Index	na	na	IEC 61034	IEC 61034	IEC 61034	IEC 61034
Packaging	RLX / WRL	WRL	RLX / WRL	WRL	WRL	WRL