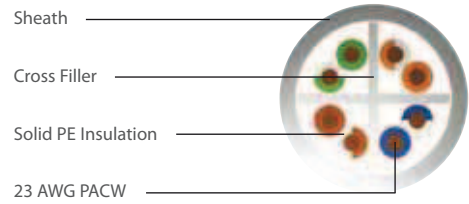


**Cable Standards**

The cable is compliant with:

- ISO/IEC 61156-5, EN 50288-6-1 and ANSI/TIA/EIA 568C



**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 LSHF 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)

**Brand-Rex Copper Cables - Cat6Plus**  
Communication Cable, U/UTP, 100 Ω, 4x2xAWG 23/1

| 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 +/- 3Ω @ 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 | 45.4 |
| 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 | -2.0 |

**Product Part Numbering**

| Part Number       | Length (m) | Cable type | Colour | Nominal Cable Diameter (mm) | Nominal Weight (Kg/Km) | Calorific Value kWh/m | Fire Safety Rating |
|-------------------|------------|------------|--------|-----------------------------|------------------------|-----------------------|--------------------|
| C6U-Rlx-305GY     | 305        | PVC        | Grey   | 5.75                        | 38                     | 0.16                  | IEC 60332-1-2      |
| C6U-500GY         | 500        |            |        |                             |                        |                       |                    |
| C6U-1000GY        | 1000       |            |        |                             |                        |                       |                    |
| C6U-D500GY        | 500        | PVC        | Grey   | 11.6 x 5.75                 | 77                     | 0.32                  | IEC 60332-1-2      |
| C6U-D1000GY       | 1000       |            |        |                             |                        |                       |                    |
| C6U-HF1-Rlx-305VT | 305        |            |        |                             |                        |                       |                    |
| C6U-HF1-500VT     | 500        | LSHF       | Violet | 5.75                        | 38                     | 0.14                  | IEC 60332-1-2      |
| C6U-HF1-1000VT    | 1000       |            |        |                             |                        |                       |                    |
| C6U-HF1-D500VT    | 500        |            |        |                             |                        |                       |                    |
| C6U-HF1-D1000VT   | 1000       | LSHF       | Violet | 11.6 x 5.75                 | 77                     | 0.28                  | IEC 60332-1-2      |
| C6U-HF3-500BU     | 500        |            |        |                             |                        |                       |                    |
| C6U-HF3-1000BU    | 1000       |            |        |                             |                        |                       |                    |
| C6U-HF3-D500BU    | 500        | LSHF       | Blue   | 13.2 x 6.55                 | 103                    | 0.46                  | IEC 60332-3-24     |
| C6U-HF3-D1000BU   | 1000       |            |        |                             |                        |                       |                    |
| C6U-X-500BK       | 500        |            |        |                             |                        |                       |                    |
| C6U-X-1000BK      | 1000       |            |        |                             |                        |                       |                    |
| C6U-HF1-X-500BK   | 500        |            |        |                             |                        |                       |                    |
| C6U-HF1-X-1000BK  | 1000       | PE         | Black  | 6.95                        | 49                     | 0.27                  | N/A                |