

# Category 6 U/UTP EuroClass Eca Cables

Datasheet: GD102051v17



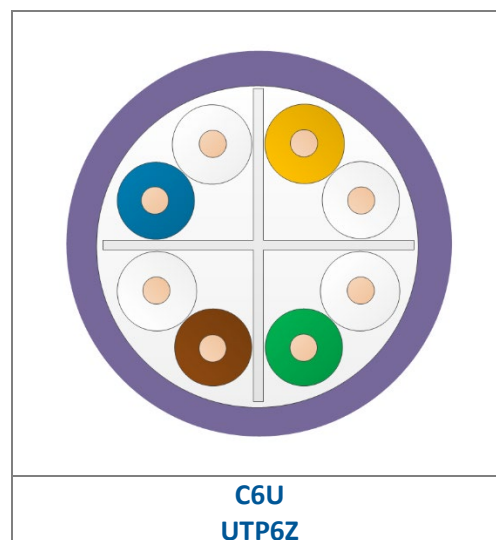
## APPLICATION

Leviton Category 6 U/UTP cables exceed Category 6 performance standards. They are rated to 250MHz and are suitable for use in all Class E structured wiring cable systems. Category 6 U/UTP cables support Gigabit Ethernet, Power over Ethernet, voice, and broadband video transmissions at frequencies up to 250MHz.

## FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- 4 unshielded twisted pairs cabled together
- Central separator for increased internal crosstalk performance
- HFFR-LS\* jacket enables the cable to meet the requirements of the Construction Products Regulation (CPR) EuroClass Eca
- Included in the Leviton Limited 25-Year System Warranties when used in conjunction with Leviton copper connectivity. System warranties are available for qualified projects installed by certified contractors
- Designed and manufactured in a carbon neutral facility in the UK
- Reel and box packaging are 100% recyclable

\* Halogen Free Flame Retardant – Low Smoke



## STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
  - ISO/IEC 11801 Class E, IEC 61156-5
  - EN50173-1 and EN 50288-6-1
  - ANSI/TIA 568.2-D
- Supports Gigabit Ethernet
- Recommended for PoE standards:
  - IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af
  - IEEE 802.3bt PoE Type 2 (30 Watts) formerly 802.3at
  - IEEE 802.3bt PoE Type 3 (60 Watts)
  - IEEE 802.3bt PoE Type 4 (90 Watts)
  - Cisco UPoE (60 Watts)
  - Cisco UPoE+ (90 Watts)
  - Power over HDBaseT™ PoH (95 Watts)

## REACTION TO FIRE

|                            |                  |
|----------------------------|------------------|
| Material Identifier        | HF1              |
| Material Description       | Standard HFFR-LS |
| Flammability Rating        | IEC/EN 60332-1-2 |
| Classification / EuroClass | Eca              |

# Category 6 U/UTP EuroClass Eca Cables

Datasheet: GD102051v17



## PRIMARY ELECTRICAL PARAMETERS

| CHARACTERISTIC                 | SPECIFICATION         | TYPICAL PERFORMANCE @ 20°C |
|--------------------------------|-----------------------|----------------------------|
| Conductor Loop Resistance      | Max 19 $\Omega$ /100m | 16 $\Omega$ /100m          |
| Conductor Resistance Unbalance | Max 2%                | 0.1%                       |
| Insulation Resistance          | >5G $\Omega$ .km      | >50G $\Omega$ .km          |
| Dielectric Strength            | 2500 Vdc/2secs        | Pass                       |

## SECONDARY ELECTRICAL PARAMETERS

| CHARACTERISTIC                   | SPECIFICATION                        | TYPICAL PERFORMANCE @ 20°C             |
|----------------------------------|--------------------------------------|----------------------------------------|
| Velocity of Propagation          | <534nsec/100m @ 100MHz               | 490nsec/100m @ 100MHz                  |
| Delay Skew                       | Max 45nsec/100m @100MHz              | 25nsec/100m @ 100MHz                   |
| Mean Characteristic Impedance    | 100 $\Omega$ +/- 5 $\Omega$ @ 100MHz | 100 $\Omega$ $\pm$ 3 $\Omega$ @ 100MHz |
| Transverse Conversion Loss (TCL) | $\geq$ 50-10log(f)dB                 | 61dB @ 10MHz                           |

## ELECTRICAL PERFORMANCE

| Frequency (MHz)             |          | 1    | 4    | 10   | 20   | 100  | 200  | 250  | 500  | 550  |
|-----------------------------|----------|------|------|------|------|------|------|------|------|------|
| Insertion Loss<br>(dB/100m) | Standard | 2.0  | 3.8  | 6.0  | 8.5  | 19.8 | 29.0 | 32.8 | N/A  | N/A  |
|                             | Typical  | 1.7  | 3.5  | 5.6  | 8.0  | 18.9 | 27.6 | 31.1 | 43.0 | 45.4 |
| NEXT (dB)                   | Standard | 75.3 | 66.3 | 60.3 | 55.8 | 45.3 | 40.8 | 39.3 | N/A  | N/A  |
|                             | Typical  | 91.0 | 91.5 | 86.0 | 80.4 | 69.2 | 64.0 | 64.1 | 46.0 | 45.4 |
| PSNEXT (dB)                 | Standard | 72.3 | 63.3 | 57.3 | 52.8 | 42.3 | 37.8 | 36.3 | N/A  | N/A  |
|                             | Typical  | 83.7 | 84.2 | 78.0 | 71.9 | 61.9 | 57.3 | 57.0 | 44.0 | 43.4 |
| ACR-F (dB)                  | Standard | 67.8 | 58.0 | 50.0 | 44.0 | 30.0 | 24.0 | 22.0 | N/A  | N/A  |
|                             | Typical  | 91.2 | 83.7 | 75.8 | 68.2 | 52.3 | 47.8 | 45.0 | 31.0 | 30.2 |
| PSACR-F (dB)                | Standard | 64.8 | 55.0 | 47.0 | 42.0 | 27.0 | 21.0 | 19.0 | N/A  | N/A  |
|                             | Typical  | 84.8 | 76.4 | 68.4 | 61.4 | 46.4 | 42.4 | 39.6 | 28.0 | 27.2 |
| Return Loss<br>(dB)         | Standard | 20.0 | 23.0 | 25.0 | 25.0 | 20.1 | 18.0 | 17.3 | N/A  | N/A  |
|                             | Typical  | 34.0 | 36.5 | 39.1 | 41.6 | 37.1 | 31.3 | 30.2 | 20.2 | 19.9 |

- The standard values shown are the most demanding taken from across the relevant IEC, TIA and EN specifications. These standards values are the maximum permissible for Insertion loss and the minimum permissible for other parameters.
- N/A = Not applicable

## INSTALLATION

|                                 |                        |                                |                    |
|---------------------------------|------------------------|--------------------------------|--------------------|
| Temperature (Installation)      | 0°C to +50°C           | Min Bend Radius (Installation) | 8 x Outer Diameter |
| Temperature (Operation)         | -20°C to +75°C         | Min Bend Radius (Operation)    | 4 x Outer Diameter |
| Max Tensile Load (Installation) | 10kg per simplex cable | Field Test NVP Value           | 0.69               |
| Segregation Class               | Class B                |                                |                    |

# Category 6 U/UTP EuroClass Eca Cables

Datasheet: GD102051v17



## STANDARD PACKAGING SPECIFICATIONS - REELS

| Part Number         | Alternative** Part Number | Packaging Length (m) | Color  | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Reel Size<br>Flange<br>Diameter x<br>Width (mm) | Gross Weight (kg/Item) | Items Per Pallet |
|---------------------|---------------------------|----------------------|--------|-----------------------------|------------------------------|-------------------------------------------------|------------------------|------------------|
| C6U-HF1-Eca-500WH   | 128-UTP6Z-5WS             | 500                  | White  | 5.8                         | 39.7                         | 400 x 310                                       | 21.9                   | 18               |
| C6U-HF1-Eca-500VT   | 129-UTP6Z-5VS             | 500                  | Violet | 5.8                         | 39.7                         | 400 x 310                                       | 21.9                   | 18               |
| C6U-HF1-Eca-1000VT* | -                         | 1000                 | Violet | 5.8                         | 39.7                         | 465 x 390                                       | 42.7                   | 6                |
| C6U-HF1-Eca-D500VT* | -                         | 500                  | Violet | 11.6 x 5.8                  | 79.4                         | 465 x 390                                       | 42.7                   | 6                |

\* Only available in Europe and the Middle East regions

\*\* May be ordered using alternative part number in some regions

|| 'D' denotes Duplex Cable

## STANDARD PACKAGING SPECIFICATIONS - BOXES

| Part Number            | Alternative** Part Number  | Packaging Length (m) | Color  | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Box Size<br>L x W x H (mm) | Gross Weight (kg/Item) | Items Per Double Pallet |
|------------------------|----------------------------|----------------------|--------|-----------------------------|------------------------------|----------------------------|------------------------|-------------------------|
| C6U-HF1-Eca-Rlx-305VT* | 125-UTP6Z-MVB <sup>γ</sup> | 305                  | Violet | 5.8                         | 39.7                         | 405 x 265 x 372            | 12.8                   | 27 + 18 <sup>§</sup>    |
| C6U-HF1-Eca-Rlx-305GY* | 121-UTP6Z-MSB <sup>γ</sup> | 305                  | Gray   | 5.8                         | 39.7                         | 405 x 265 x 372            | 12.8                   | 27 + 18 <sup>§</sup>    |
| C6U-HF1-Eca-Rlx-305WH* | 122-UTP6Z-MWB <sup>γ</sup> | 305                  | White  | 5.8                         | 39.7                         | 405 x 265 x 372            | 12.8                   | 27 + 18 <sup>§</sup>    |
| C6U-HF1-Eca-Rlx-305BU* | 120-UTP6Z-MLB <sup>γ</sup> | 305                  | Blue   | 5.8                         | 39.7                         | 405 x 265 x 372            | 12.8                   | 27 + 18 <sup>§</sup>    |

\* Only available in Europe and the Middle East regions

\*\* May be ordered using alternative part number in some regions

§ Standard double stacked pallet configuration (lower + upper)

<sup>γ</sup> When supplied to Americas – 2 upper pallets are supplied double stacked

## COUNTRY OF ORIGIN

COO: United Kingdom

*“Leviton is **dedicated to designing, developing and manufacturing** sustainable **high-performance** structured cabling and specialty cabling solutions.”*

The information contained in this document is valid and correct at the time of issue. Leviton reserves the right to modify details without notice in light of subsequent standard/specification changes and ongoing technical developments.