

# Augmented Cat 6 U/FTP Cable Datasheet

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## 10GPLUS

The 10GPLUS Cabling System comprises of a set of very high performance cables and connectivity which not only provide a reliable platform for all of today's network applications but are also designed to future proof networks for the emerging, new, higher speed protocols of tomorrow, such as IEEE802.3an (10GBASE-T).

The 10GPLUS system is classified as an Augmented Category 6 and Class EA product set which is fully backwards compatible to Cat6 (Class E) & Cat5e (Class D) products.

The Brand-Rex Augmented Category 6 screened cables are part of the new Brand-Rex 10GPLUS Cabling System.

## Screened Cables

10GPLUS cables are high bandwidth cables for use in horizontal wiring in structured cabling installations, in datacenters and SANs and in shorter length backbones.

The key signal to noise ratios for cables which will run the new 10GBASE-T application are the attenuation to 'Alien' crosstalk ratios. 'Alien' crosstalk is a noise picked up by a cable from adjacent cables when cables run together in spaces and pathways.

## Features & Benefits

Δ Screened cables ready for the new 10GBASE-T application

Δ A design which uses screening technology to protect the transmission line from noise from adjacent cables (Alien Crosstalk) and the environment (EMI)

Δ Low Smoke and Fume Zero Halogen cable jacket materials as standard

Δ Designed to meet the performance requirements of 10GBASE-T (with performance verified in 100m length testing for both cable and channel configurations)

Δ Designed with a useable bandwidth which exceeds 500MHz (+ve PSAACR well beyond 500MHz)

Δ Cabling system performance guaranteed to meet ClassEA Channel limits when 10GPLUS cables are installed as part of a 10GPLUS installation

Δ Brand-Rex Warranty available when installed as a 10GPLUS installation

### Screened AC6 Cables



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## Applications

The AC6 cable provides a foundation for building reliable high speed, Local Area Networks to support transmission of Class A, B, C, D, E & EA protocols currently defined in ISO 11801 and EN 50173 and the new application from IEEE, 10GBASE-T.

High speed LAN protocols supported include:

- Δ ATM155
- Δ 10BASE-T
- Δ 100BASE-T
- Δ 1000BASE-T
- Δ 10GBASE-T

Other applications supported include voice, broadband video and PoE.

## Cable Standards

The cable is compliant with:

- Δ ISO 11801:2002 Amm1&2
- Δ ISO 61156-5 ed 2
- Δ EN 50173-1:2011
- Δ EN 50288-10-1
- Δ ANSI/TIA/EIA 568C.2

## Physical Specs

Installation recommendations:

- Δ Min bend radius during install: 60mm
- Δ Min bend radius post install: 30mm
- Δ Max 10kg tensile load per cable
- Δ Min install temp 0°C
- Δ Max install temp 50°C
- Δ Upper Operational temp rating: 75 °C

## Electrical Specs

Primary Characteristics:

- Δ Conductor Loop Resistance <19 Ω/100m
- Δ Conductor Resistance Unbalance <2 %
- Δ Capacitance Unbalance to Earth <1600 pF/km
- Δ Insulation resistance ≥5000 MΩ.km

Secondary Characteristics:

- Δ Mean Characteristic Impedance 100± 5Ω @100 MHz
- Δ NVP 80% @ 10MHz
- Δ Max skew 20ns

The typical electrical performance of the cable versus the current published and new draft standards is shown in the table:

Characteristic	Typical Headroom vs Cat6 (250MHz)	Typical Headroom vs AC6 (500MHz)
Return Loss	5dB	5dB
Insertion Loss	4%	2%
NEXT	34dB	34dB
PSNEXT	34dB	34dB
ELFEXT	34dB	34dB
PSSELFEXT	34dB	34dB
PSANEXT	NA	33dB
PSAACR-F	NA	30dB

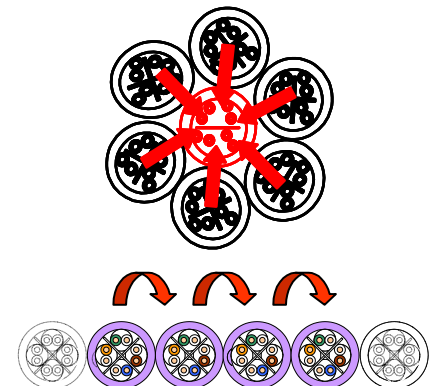
### Typical headroom on key S/N characteristics - for information only

PSACR @ 500MHz	NA	35dB
PSAXTIR* @ 500MHz	NA	56dB

\* Power Sum Attenuation to Alien Crosstalk (near end) Ratio

Because of the screening the cable construction easily passes the performance requirements stipulated in all of the standards when tested to any of the methods described.

The Alien crosstalk performance of cables is assessed using 100m lengths of '6 round' or '4 on a drum' methods:



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## Technical Information

Catalogue Number	Colour	Nominal Cable Diameter	Weight (Kg/Km)	Acid Gas Emissions	Smoke Index	Safety Rating
AC6U/FTP HF1	Violet	6.8 mm	45	IEC 60754-2	IEC 61034	IEC 60332-1-2
AC6U/FTP HF3	Blue	7.2 mm	53			IEC 60332-3-24

Example print legend

BRAND-REX LTD 10GPLUS AC6U/FTP-HF1 AUGMENTED CATEGORY 6  
IEC 60332-1-2 NVP 0.80 WWYY BBBBBB \*\*\*\*\*

Traceability

WWYY Week/Year of manufacture  
ββββββ Batch number  
\*\*\*\*\* Sequential metre mark

## Ordering Information

Catalogue Number	Length (m)	Reel Size (Flange OD x width)	Weight (Kg/reel)	Reels per pallet (Euro Pallet)
AC6U/FTP-HF1-500VT	500	400x391mm	25	12
AC6U/FTP-HF1-1000VT	1000	600x405mm	52	4
AC6U/FTP-HF3-500BU	500	400x391mm	29	12
AC6U/FTP-HF3-1000BU	1000	600x405mm	60	4

The information contained in this document is valid and correct at the time of issue. However, we reserve the right to modify details without notice in the light of subsequent Standard / Specification changes and ongoing technical developments.

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