

Category 5e UTP Cables

Datasheet: GD102446v4

Brand-Rex | a **LEVITON** company

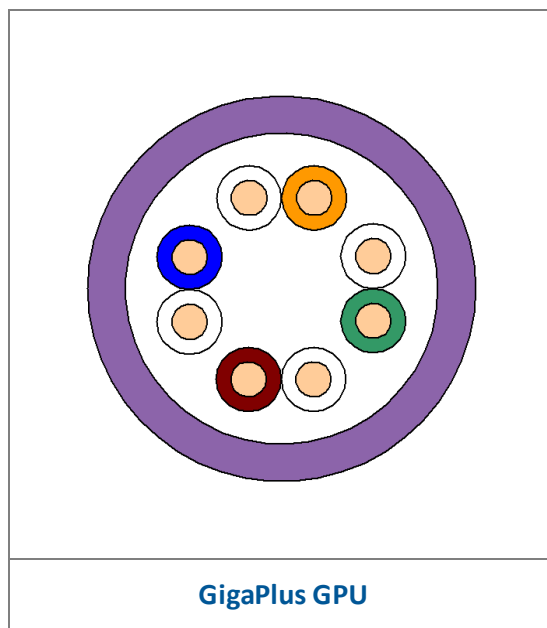
APPLICATION

The Brand-Rex GigaPlus GPU cables exceed the Category 5e performance standards. They are rated to 100MHz and are suitable for use in all Class D structured wiring cable systems.

The GigaPlus GPU cable supports Gigabit Ethernet, PoE and voice transmissions at frequencies up to 100MHz.

FEATURES AND BENEFITS

- 24 AWG Solid Annealed Copper Wire
- Polyolefin Core Insulation
- 4 Unshielded Twisted Pairs Cabled Together
- Available in a Range of Sheath Materials –to suit a variety of installation environments and colour coded for identification
- Designed to Support all Class D protocols including Gigabit Ethernet
- Supports Power Over Ethernet (PoE) Applications
- HFFR-LS versions meet the requirements of the Construction Products Regulation (CPR) Euroclass Eca
- Included in the Leviton and Brand-Rex 25 Year System Warranties when used in conjunction with Leviton or Brand-Rex copper connectivity. System warranties available for qualified projects installed by certified contractors.



STANDARDS

Applicable Cable Standards: ISO/IEC 11801, IEC 61156-5, EN 50173-1, EN 50288-3-1 and EIA/TIA 568C

MATERIAL IDENTIFICATION

Material Identifier	HF1	HF3	HF1-X
Material Description	Standard HFFR-LS*	Enhanced HFFR-LS	Inner - HFFR-LS Outer - Polyethylene
Flammability Rating	IEC 60332-1-2	IEC 60332-3-24	n/a – External Only
Fire Euroclass EN13501-6	Eca	Eca	n/a – External Only
Smoke Emission	IEC 61034-1 & 2	IEC 61034-1 & 2	n/a – External Only
Acid Gas Emission	IEC 60754-2	IEC 60754-2	n/a – External Only
Colour †	Violet or Grey	Blue	Inner - Grey Outer - Black

* Halogen Free Flame Retardant – Low Smoke

† Available in a range of non-standard colours

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PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω / 100m	18 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5GΩ.km	>45GΩ.km
Dielectric Strength	2500 Vdc/2secs	Pass

SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Propagation Delay	<534nsec/100m @ 100MHz	487nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	38nsec/100m @100MHz
Mean Characteristic Impedance	100Ω ± 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Transverse Conversion Loss (TCL)	≥50-10log(f)dB	65dB @ 10MHz

ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	16	20	31.25	100	200	250
Insertion Loss (dB/100m)	Standard	2.0	4.1	6.5	8.2	9.3	11.7	22.0	n/a	n/a
	<i>Typical</i>	1.9	3.8	6.0	7.7	8.6	10.9	20.6	30.4	34.6
NEXT (dB)	Standard	65.3	56.3	50.3	47.2	45.8	42.9	35.3	n/a	38.3
	<i>Typical</i>	76.8	67.8	61.8	58.7	57.3	54.4	46.8	42.3	40.8
PSNEXT (dB)	Standard	62.3	53.3	47.3	44.2	42.8	39.9	32.3	n/a	n/a
	<i>Typical</i>	73.8	64.8	58.8	55.7	54.3	51.4	43.8	39.3	37.8
ELFEXT (dB/100m)	Standard	63.8	51.8	43.8	39.7	37.8	33.9	23.8	n/a	n/a
	<i>Typical</i>	81.4	69.4	61.4	57.3	55.4	51.5	41.4	35.4	33.4
PSELFEXT (dB/100m)	Standard	60.8	48.8	40.8	36.7	34.8	30.9	20.8	n/a	n/a
	<i>Typical</i>	78.4	66.4	58.4	54.3	52.4	48.5	38.4	32.4	30.4
Return loss (dB)	Standard	20.0	23.0	25.0	25.0	25.0	23.6	20.1	n/a	n/a
	<i>Typical</i>	24.8	27.8	29.8	29.8	29.8	28.4	24.9	22.8	22.1
ACR (dB/100m)	<i>Typical</i>	74.9	64.0	55.8	51.1	48.7	43.4	26.2	11.9	6.2
PSACR (dB/100m)	<i>Typical</i>	71.9	61.0	52.8	48.1	45.7	40.4	23.2	8.9	3.2

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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		

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company GPU-HF1-Eca Cat 5e U/UTP IEC 60332-1-2 Euroclass Eca NVP 0.69 MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

Brand-Rex Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
GPU-HF1-Eca-500VT [†]	4.85	30.0	400 x 400 x 210	16.1	24
GPU-HF1-Eca-1000VT [‡]	4.85	30.0	400 x 400 x 390	31.7	12
GPU-HF1-Eca-500GY	4.85	30.0	400 x 400 x 210	16.1	24
GPU-HF1-Eca-1000GY	4.85	30.0	400 x 400 x 390	31.7	12
GPU-HF1-Eca-D500VT	5.05 x 10.0	63.1	400 x 400 x 390	34.0	12
GPU-HF1-Eca-D1000VT	5.05 x 10.0	63.1	600 x 600 x 405	70.5	4
GPU-HF3-Eca-500BU	5.65	42.7	400 x 400 x 310	23.4	18
GPU-HF3-Eca-1000BU	5.65	42.7	465 x 465 x 390	45.7	6
GPU-HF1-X-500BK	6.1	39.3	400 x 400 x 310	21.6	18
GPU-HF1-X-1000BK	6.1	39.3	465 x 465 x 390	42.3	6

[†]500 = 500m length

[‡]1000 = 1000m length

[§]305 = 305m box

^{||}'D' denotes duplex cable

STANDARD PACKAGING SPECIFICATIONS - BOXES

Brand-Rex Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Box Size L x W x H (mm)	Gross Weight (kg/Item)	Items Per Pallet
GPU-HF1-RIx-Eca-305VT [§]	4.85	30.0	365 x 250 x 365	9.9	27 or 18
GPU-HF1-RIx-Eca-305GY	4.85	30.0	365 x 250 x 365	9.9	27 or 18

[§]305 = 305m box

"Brand-Rex is dedicated to designing, developing and manufacturing sustainable high performance structured cabling and speciality cabling solutions"

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