R&M*freenet* U/UTP Cat.6 250 MHz

B2ca CPR

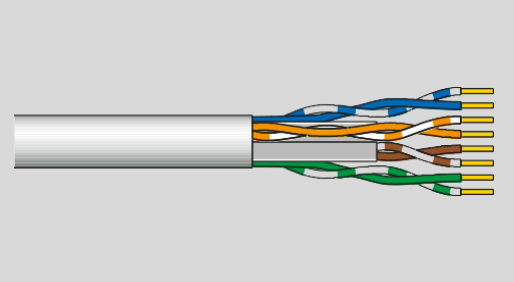
R&Mfreenet U/UTP Cat.6 250MHz 4PxAWG24 LSZH B2ca NVP=70% ISO/IEC 11801 ANSI/TIA-568-C.2 U <batch no.> <dd/mm/yy> <meter> m

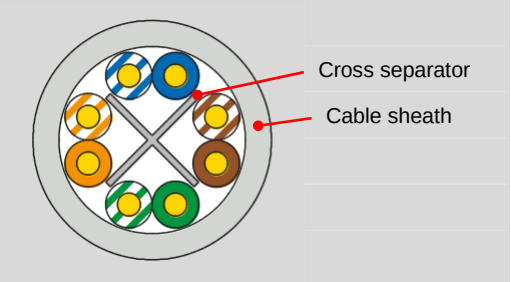
Cable reference

Part number	R852286
Source code	U
R&M positioning	Cat.6

Cable construction

Conductor	Bare solid copper wire AWG24 (≥ Ø 0.54 mm)
Insulation	Polyethylene ≤ Ø 0.96 mm
Twisting	2 wires to the pair
Cable lay up	4 pairs to the core with cross separator
Pair screen	Non
Overall screen	Non
Sheath	LSZH, grey





Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
IEEE 802.3an: 10Base-T; 100Base-TX; 1000Base-T
IEEE 802.5 16 MB; ISDN; TPDDI; ATM
IEEE 802.3af-2002: POE; IEEE 802.3at: POE+; IEEE 302.3.bt: 4PPOE
Cisco Universal Power Over Ethernet (UPOE and UPOE+)
Power over HDBaseT™ (PoH)
Confirming to European regulation “CPR” EN 50575

Standards

ISO/IEC 11801 2nd ed.; EN 50173-2; ANSI/TIA-568-C.2; IEC 61156-5 2nd ed; Power over Ethernet (PoE) Type 1-4.; IEC 61156-7; EN 50288-6-1

Fire rating

LSZH
IEC 60332-1-2; IEC 60332-3-24; EC 60754-2; IEC 61034
EN50575; B2ca s1a-d1-a1 ; DOP B6042

Technical Data

Cable designation	U/UTP Cat.6 250MHz 4PxAWG24
Packaging	Box 305 m
Outer diameter	Nominal 6.2 mm
Weight	43.2 Kg / km
Thermal Load	650MJ / Km
Segregation class	B
Tensile force	100 N

Mechanical Properties

Bending radius	≥ 28 mm during operation (without load)
	≥ 57 mm during installation (with load)
Temperature range	During operation -20°C…+ 60°C
	During installation 0°C…+ 50°C

Electrical Properties (at 20°C ± 5°C)

DC loop resistance		≤ 92 Ω / km
Resistance unbalance		≤ 2 %
Test voltage	DC, 1 min, core/core	1000 V
Insulation resistance	500 V	≥ 5000 MΩ * km
Capacitance		44 pF / m max.
Capacitance unbalance		≤1500 pF / km
Mean characteristic impedance @ 100 MHz		100 ± 15 Ω
Nominal velocity of propagation		Approx. 70 %
Propagation delay	At 1 MHz	≤ 535 ns / 100 m
Delay skew		≤ 40 ns / 100 m
Coupling attenuation		≥ 40 dB

Typical transmission characteristics (at 20°C)

f (MHz)	Attenuation (dB/100 m)		NEXT (dB)		PS-NEXT (dB)		ACR-F [1)] (dB/100m)		PS-ACR-F [1)] (dB/100 m)		Return loss (dB)	
	Max	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**
4	3.8	2.4	66.3	72.1	63.3	71.0	56	65.3	53	64.3	23	29.9
10	6.0	3.8	60.3	69.2	57.3	66.9	48	62.8	45	60.7	25	30.1
20	8.5	5.5	55.8	59.6	52.8	59.8	42	51.9	39	48.7	25	32.4
62.5	15.5	9.8	48.4	55.1	45.4	51.7	32.1	45.1	29.1	38.8	21.5	36.1
100	19.9	12.5	45.3	49.7	42.3	48.5	28	40.0	25	37.5	20.1	33.6
250	33	20	39.3	45.2	36.3	42.0	20	27.8	17	26.3	17.3	27.1

Recommended connection technique

Module		Perm. Link Class D	Perm. Link Class E	Channel Class E_A	Perm. Link Class E_A	Short Link Class E_A
	Cat.5e/u	✓	–	–	–	–
	Cat.6/u	✓	✓	–	–	–
	Cat.6 Real10/u	✓	✓	–	–	–
	Cat.6_A/u	✓	✓	–	–	–

Third party certificate

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