

CAT5e Product Specifications and Submittal

Connect with the Black Box guaranteed-for-life ETL-Verified structured cabling channel solution!

- » Patch Cable
- » Bulk Cable
- » Patch Panels
- » Wiring Blocks
- » Jacks



When it comes to a ETL-Verified CAT5e channel, come to Black

Guaranteed for life | Guaranteed best prices | Guaranteed performance

Guaranteed for life.

Our GigaBase[®] CAT5e Channel Solution is guaranteed for life! Our unbeatable Double Diamond[™] Warranty covers everything from manufacturing defects to accidental damage—including water and surge damage.

Plus, all Black Box[®] brand copper cables and most fibre cables and infrastructure components are also guaranteed for life.



Guaranteed best prices.

Our Best Price Guarantee means you can buy with confidence from Black Box. You probably won't find a lower price elsewhere. But if you do find another manufacturer's product at a lower price than the Black Box equivalent, provide us with a copy of the competitor's quote, and we'll beat it with our own Black Box[®] solution. (Certain custom products are excluded.) For more details, call Customer Service on 0118 965 6000 or go to www.blackbox.co.uk.



Guaranteed performance.

To ensure consistent top quality, Black Box participates in independent third-party testing by InterTek Testing Services/ETL Semko, Inc. Once a quarter, an Intertek inspector visits Black Box and randomly selects cable and cabling products for testing.

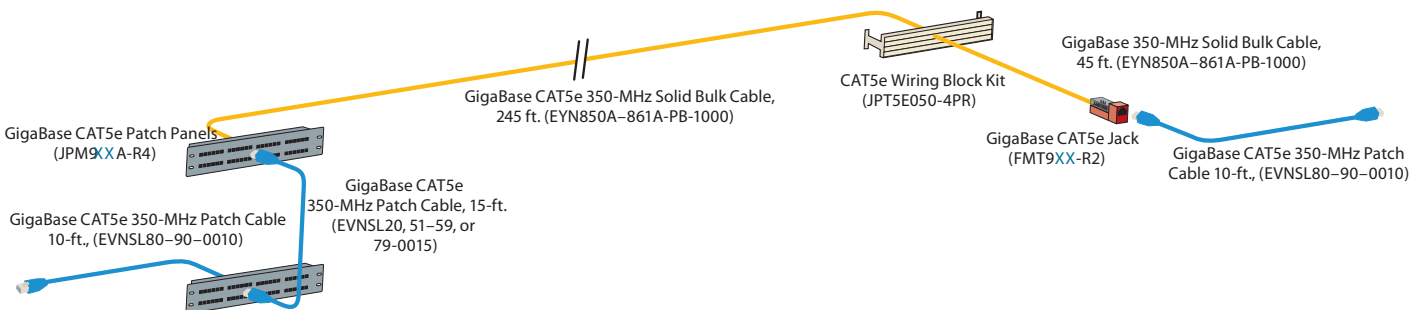
The GigaBase CAT5e Solid Bulk Cable is ETL Verified at the component level to verify that it conforms to the applicable industry standards.

The GigaBase CAT5e Channel, consisting of bulk cable, patch cable, jacks, patch panels, and wiring blocks, is tested and verified according to industry standards under InterTek's Cabling System Channel Verification Program.

For test results, see the next page or contact us on 0118 965 6000 or go to www.blackbox.co.uk.



ETL Verified GigaBase[®] CAT5e channel



Box for the best value anywhere—guaranteed.

ETL Verified GigaBase CAT5e Channel Solution Test Results



Buyer's Guide | ETL Verified* GigaBase ° CAT5e 4-Connector Channel Electrical Performance

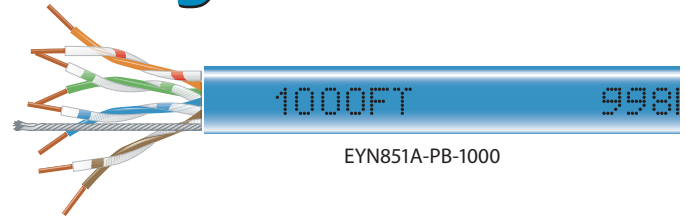
Frequency (MHz)	Attenuation dB/100 m (328 ft.)		Return Loss dB		NEXT dB/100 m (328 ft.)		PS-NEXT dB/100 m (328 ft.)		ACR dB/100 m (328 ft.)		PS-ACR dB/100 m (328 ft.)		ELFEXT dB/100 m (328 ft.)		PS-ELFEXT dB/100 m (328 ft.)	
	Worst Case	Spec	Worst Case	Spec	Worst Case	Spec	Worst Case	Spec	Worst Case	Spec	Worst Case	Spec	Worst Case	Spec	Worst Case	Spec
1	2.0	2.1	37.1	17.0	68.6	60.7	67.6	57.7	66.6	60.4	65.6	57.4	64.8	56.7	62.6	53.7
4	3.9	4.1	34.4	17.0	63.7	53.5	62.5	50.5	59.8	49.1	58.6	46.1	54.5	45.4	51.8	42.4
8	5.6	5.8	30.2	17.0	55.8	48.6	53.6	45.6	50.3	42.3	48.1	39.3	49.1	39.3	46.3	36.3
10	6.2	6.5	32.5	17.0	57.1	47.0	55.1	44.0	50.9	39.9	49.0	36.9	47.1	37.4	44.3	34.4
16	7.9	8.2	25.2	17.0	49.4	43.6	46.6	40.6	41.8	34.5	38.8	31.5	43.2	33.3	40.4	30.3
20	8.8	9.3	29.9	17.0	48.6	42.0	47.1	39.0	39.9	31.8	38.4	28.8	41.3	31.4	38.5	28.4
25	9.9	10.4	33.6	16.0	46.2	40.3	45.6	37.3	36.4	28.9	35.8	25.9	38.7	29.4	36.4	26.4
31.25	11.1	11.7	27.5	15.1	45.3	38.7	43.0	35.7	34.4	25.9	32.0	22.9	36.6	27.5	34.5	24.5
62.5	15.9	17.0	26.5	12.1	41.1	33.6	38.0	30.6	25.3	15.0	22.3	12.0	31.2	21.5	29.7	18.5
100	20.4	21.9	22.7	17.0	36.4	30.1	33.5	27.1	16.1	6.1	13.2	3.1	27.7	17.4	26.2	14.4
250	33.7	—	19.5	—	26.1	—	25.3	—	-7.3	—	-8.1	—	20.1	—	19.0	—
350	41.4	—	12.3	—	19.7	—	18.5	—	-21.6	—	-22.8	—	16.9	—	14.9	—

* Tests results based on TIA 568-C.2 standard. Test results reported in Quarter 3, 2010. For the latest test results, contact our FREE Tech Support on 01 18 965 6000.

Channel configuration consists of:

1. GigaBase 350 CAT5e Patch Cable, Snagless Boots, PVC, 10-ft. (20-ft. total: Near End and Far End) (EVNSL85-0010)
2. GigaBase2 CAT5e Jack (FMT921-R2)
3. GigaBase 350 CAT5e 350 Solid Bulk Cable, Plenum, 290 ft. total (EYN856A-PB-1000)
4. CAT5e Type 110 100-Pair Wiring Block (JPT5E100-4PR)
5. GigaBase CAT5e Patch Panel, 24-Port (JPM902A-R4)
6. GigaBase 350 CAT5e Patch Cable, Basic Connector, PVC, 15-ft. (EVNSL52-0015)

GigaBase 350 CAT5e, 350-MHz Solid Bulk Cable (UTP)



The backbone of your CAT5e channel

- This cable is part of our ETL Verified GigaBase® CAT5e channel solution.
- Sweep tested and characterized to 350 MHz.
- Guaranteed to meet or exceed ANSI/TIA/EIA-568-C.2 CAT5e specs.
- Every master pull box is tested for electrical performance.
- Easy-to-use pull box features Accu-Pull Measuring System.
- Cable is marked in descending two-foot increments so you always know how much cable is in the box.
- Low attenuation and power-sum crosstalk characteristics over an extended frequency range.
- **WARRANTY** — Lifetime

Construction facts

- Cable has polyolefin insulation and a flame-retardant jacket.
- Has a longitudinal rip cord for easy jacket opening.

Guaranteed for life

- You're covered. We guarantee—for life—this cable and all the products in our GigaBase line.

Proven performance

- InterTek Testing Services/ETL Semko, Inc. conducts quarterly tests on the this cable. (For test results, see page 3.)

Applications

- 10/100/1000BASE-T
- 100BASE-VG
- 155-Mbps and 622-Mbps ATM
- T1
- Other high-performance cable applications
 - Backbone
 - Floor-to-floor backbone
 - Horizontal cabling to desktop

Compliance

- TIA/EIA-568-C.2 Category 5e
- EN50173
- EN71-3
- EPA 3050B
- UL® 444; E196163-P, C; Safety Vol.1 Sec. 13; Plenum: also EN71-3
- ETL Verified
- RoHS: 2002/95 EC
- PVC: CMR; CSA, CMG, FT4

TECH SPECS

AC Leakage Current Throughout Overall Jacket — AC 1500V ≤ 10 mA
 ACR (Minimum at 100 m) — 13.3 dB at 100 MHz
 Attenuation (Minimum at 100 m) — 22.0 dB at 100 MHz;
 32.4 dB at 200 MHz;
 44.9 dB at 350 MHz
 Cable Type — 4-pair UTP, 300 V
 Capacitance Unbalance (Maximum) — 330 pF/100 m (pair to ground)
 Capacitance, Mutual (Maximum) — 56 pF/km
 Characteristic Impedance — 1–350 MHz: 100 ± 15 ohms
 Cold Bend Test — -4° F (-20° C) at 4 hrs; no crack
 Conductor — 24 AWG, solid, bare copper
 Conductor Resistance (Maximum) — 93.8 ohm/67° F
 Dielectric Strength — AC: 1.5 KV/2 sec
 DC Resistance Unbalance (Maximum) — 5%
 Delay Skew (Maximum) — 1–350 MHz: 40 nS/100 m
 EL-FEXT (Minimum at 100 m) — 23.8 dB at 100 MHz;
 17.7 dB at 200 MHz;
 12.9 dB at 350 MHz
 Input Impedance — 1–100 MHz: 100 ± 15 ohms
 Insulation Material —
 HDPE; Thickness⁹ Average and minimum: 0.007";
 Diameter: .035" ± 0.0007" (0.89 ± 0.02 mm);
 Insulation Shrinkback — 150 m/m; 249.8° F (121° C) at 1 hr. at 9.5m/m
 Jacket — 0.188" OD
 NEXT (Minimum at 100 m) —
 35.3 dB at 100 MHz;
 30.8 dB at 200 MHz;
 27.1 dB at 350 MHz
 Outside Diameter — 0.18" ± 0.007" (.48 ± 0.02 cm);
 Propagation Delay — 536 nS/100 m at 350 MHz
 PS-ACR (Minimum at 100 m) — 10.3 dB at 100 MHz
 PS-ELFEXT (Minimum at 100 m) — 20.8 dB at 100 MHz;
 14.7 dB at 200 MHz;
 9.9 dB at 350 MHz
 PS-NEXT (Minimum at 100 m) —
 32.3 dB at 100 MHz;
 27.8 dB at 200 MHz;
 24.1 dB at 350 MHz
 Rating Temperature Voltage — 167° F (75° C); 300V
 Return Loss — 20.1 dB at 100 MHz
 Spark Test — 2.5 KV
 Velocity of Propagation (Minimum) — 62.1% at 350 MHz
 Weight — 20.9 lb./1000 ft. (9.5 kg/304.8 m)

Item	Blue	Yellow	White	Grey	Violet
GigaBase 350 CAT5e 350-MHz Solid Bulk Cable (UTP), 24 AWG, 4-Pair, Pull Box 1000-ft. (304.8-m) PVC	EYN851A-PB-100 0	EYN855A-PB-100 0	EYN853A-PB-1000	EYN857A-PB-1000	EYN845A-PB-1000

Item	Green	Red	Orange	Black
GigaBase 350 CAT5e 350-MHz Solid Bulk Cable (UTP), 24 AWG, 4-Pair, Pull Box (Continued) 1000-ft. (304.8-m) PVC	EYN859A-PB-1000	EYN849A-PB-1000	EYN847A-PB-1000	EYN861A-PB-1000

GigaBase 350 CAT5e Patch Cables (UTP)



Your patch panel and desktop connection

- Tested to 350-MHz.
- Meet or exceed CAT5e T568B standards.
- Specially designed for use with our GigaBase® channel.
- Superior construction offers significant headroom.
- Tuned-plug design maintains a tighter twist and reduces noise.
- Enhanced performance parameters and electrical characteristics.
- Gold-plated contacts are designed for an insertion/extraction life of 1000 cycles.
- **WARRANTY** — Lifetime

Construction facts

- Cable features four stranded pairs, 24 AWG construction and a PVC jacket.
- Straight-pinned cables are available with snagless or basic connectors.
- Cross-pinned cables come with snagless boots.

Guaranteed for life

- You're covered. We guarantee—for life—this cable and all the products in our GigaBase line.

Proven performance

- InterTek Testing Services/ETL Semko, Inc. conducts quarterly tests on these cables as part of the GigaBase Channel Solution. (For test results, see page 3.)

Applications

- 10/100/1000BASE-T
- 100BASE-VG
- 155-Mbps and 622-Mbps ATM
- T1

Compliance

- ISO/IEC 11801
- TIA/EIA-568-C.2 Category 5e
- ETL Verified
- UL® Listed
- CM



TECH SPECS

Attenuation (Maximum) — 22.5 dB/100 m (328.1 ft.) at 100 MHz;
 45.8 dB/100 m (328.1 ft.) at 350 MHz
 Cable Type — 4-pair UTP
 Conductor Gauge — 24 AWG, stranded
 Frequency — Up to 350 MHz
 Impedance — 100 ± 15 ohms
 NEXT (Minimum) — 35.3 dB/100 m (328.1 ft.) at 100 MHz;
 27.1 dB/100 m (328.1 ft.) at 350 MHz
 PS-NEXT (Minimum) — 32.3 dB/100 m (328.1 ft.) at 100 MHz;
 24.1 dB/100 m (328.1 ft.) at 350 MHz
 Return Loss (Minimum) — 19 dB/100 m (328.1 ft.) at 100 MHz;
 4.56 dB/100 m (328.1 ft.) at 100 MHz
 Standards — TIA/EIA-568-C.2 Category 5e

Choose from as many as 11 colours!



Item	Single	25-Pack
GigaBase 350 CAT5e Patch Cable (UTP), Snagless Boots, Stranded, 24 AWG, RJ-45, 4-Pair, T568B, PVC, Straight-Pinned		
1-ft. (0.3-m)	EVNSLXX-0001	EVNSLXX-0001-25PA K
2-ft. (0.6-m)	EVNSLXX-0002	EVNSLXX-0002-25PA K
3-ft. (0.9-m)	EVNSLXX-0003	EVNSLXX-0003-25PA K
4-ft. (1.2-m)	EVNSLXX-0004	EVNSLXX-0004-25PA K
5-ft. (1.5-m)	EVNSLXX-0005	EVNSLXX-0005-25PA K
6-ft. (1.8-m)	EVNSLXX-0006	EVNSLXX-0006-25PA K
7-ft. (2.1-m)	EVNSLXX-0007	EVNSLXX-0007-25PA K
10-ft. (3.0-m)	EVNSLXX-0010	EVNSLXX-0010-25PA K
15-ft. (4.5-m)	EVNSLXX-0015	EVNSLXX-0015-25PA K
20-ft. (6.0-m)	EVNSLXX-0020	EVNSLXX-0020-25PA K
25-ft. (7.6-m)	EVNSLXX-0025	EVNSLXX-0025-25PA K
30-ft. (9.1-m)	EVNSLXX-0030	EVNSLXX-0030-25PA K
50-ft. (15.2-m)	EVNSLXX-0050	EVNSLXX-0050-25PA K
100-ft. (30.4-m)	EVNSLXX-0100	EVNSLXX-0100-25PA K
Custom Lengths	EVNSLXX	

To order, replace the "XX" with the number assigned to each colour.

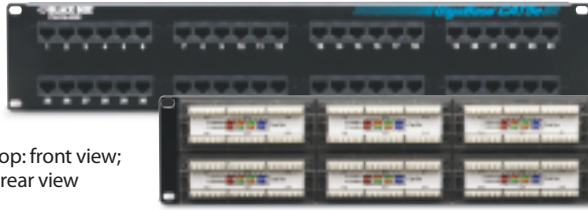
Grey = 80	Yellow = 84	Purple = 88
Blue = 81	Beige = 85	Orange = 89
Green = 82	Pink = 86	White = 90
Red = 83	Black = 87	

Item	Single	25-Pack
GigaBase 350 CAT5e Patch Cable (UTP), Basic Connectors, Stranded, 24 AWG, RJ-45, 4-Pair, T568B, PVC, Straight-Pinned		
1-ft. (0.3-m)	EVNSLXX-0001	EVNSLXX-0001-25PA K
2-ft. (0.6-m)	EVNSLXX-0002	EVNSLXX-0002-25PAK
3-ft. (0.9-m)	EVNSLXX-0003	EVNSLXX-0003-25PA K
4-ft. (1.2-m)	EVNSLXX-0004	EVNSLXX-0004-25PA K
5-ft. (1.5-m)	EVNSLXX-0005	EVNSLXX-0005-25PA K
6-ft. (1.8-m)	EVNSLXX-0006	EVNSLXX-0006-25PA K
7-ft. (2.1-m)	EVNSLXX-0007	EVNSLXX-0007-25PA K
10-ft. (3.0-m)	EVNSLXX-0010	EVNSLXX-0010-25PA K
15-ft. (4.5-m)	EVNSLXX-0015	EVNSLXX-0015-25PA K
20-ft. (6.0-m)	EVNSLXX-0020	EVNSLXX-0020-25PAK
25-ft. (7.6-m)	EVNSLXX-0025	EVNSLXX-0025-25PA K
30-ft. (9.1-m)	EVNSLXX-0030	EVNSLXX-0030-25PA K
50-ft. (15.2-m)	EVNSLXX-0050	EVNSLXX-0050-25PA K
100-ft. (30.4-m)	EVNSLXX-0100	EVNSLXX-0100-25PA K
Custom Lengths	EVNSLXX	

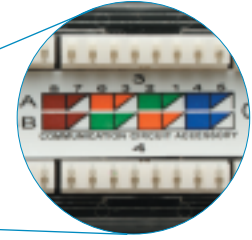
To order, replace the "XX" with the number assigned to each colour.

White = 20	Yellow = 54	Grey = 58
Blue = 51	Beige = 55	Orange = 59
Green = 52	Pink = 56	Purple = 79
Red = 53	Black = 57	

GigaBase CAT5e Patch Panels



JPM906A-R4: top: front view;
bottom: rear view



- ETL tested and verified CAT5e channel performance.
- Use in 350-MHz applications.
- Meet or exceed ANSI/TIA/EIA-568-C.2 Category 5e standards.
- The IDC-110 block features peaks to make lacing wires easier.
- Wide spacing between IDCs means increased room for cable.
- Stuffer caps hold the wires more securely.
- Rolled-edge construction provides superior panel rigidity to eliminate flex during termination.
- Universal wiring—panels are supplied with labeling for both T568A and T568B wiring.
- **WARRANTY** — Lifetime.

TECH SPECS

Connectors — RJ-45 female, 110 contacts
 Construction — Steel
 Wiring — Straight-through
 Dimensions — All: 48.3(W) cm
 JPM902A-R4: 4.4(H) x 3.2(D) cm;
 JPM906A-R4: 8.9(H) x 3.2(D) cm;
 JPM910A-R4: 17.8(H) x 3.2(D) cm
 Weight — JPM902A-R4: 0.7 kg;
 JPM906A-R4: 1.3 kg;
 JPM910A-R4: 2.6 kg

Item	Code
GigaBase [®] CAT5e Patch Panels, Universal Wiring	
24-Port 1U	JPM902A-R4
48-Port 2U	JPM906A-R 4
96-Port 4U	JPM910A-R 4

* Include (1) patch panel, (8) cable ties, (4) 10-32 cuphead screws; (4) 12-24 cuphead screws; and (1) bag of stuffer caps.

GigaBase CAT5e Jacks



FMT925-R2



- Meet TIA/EIA-568-C.2 CAT5e component-level standards.
- The termination retention stuffer cap provides strain relief.
- Make easy, tool-less terminations or use a 110 tool.
- High-density, compact design makes this jack ideal for multimedia applications.
- Data transmission rates up to 100 MHz.
- Universal wiring.
- Labeled with both T568A and T568B wiring schemes.
- Features a keystone style for snap-in installation.
- UL* certified.

Construction facts

- IDC contacts are phosphor bronze with tin plating.
- Nose contacts feature 50-micron gold plating over 100-micron nickel underplating.

Compliance

- TIA/EIA-568-B.2 Category 5e
- ETL Verified
- UL* Listed

- **WARRANTY** — Lifetime

TECH SPECS

Connector — Front: RJ-45; Rear: 110	Plug Insertion Life — 750 cycles (minimum)
Construction — ABS UL94V-0	Plug and Jack Contact Force — 0.22 pounds (minimum)
Contact — Phosphor bronze, tin plating (50 µm gold plating over 100 µm nickel under-plating)	Plug Retention Force — 30 pounds (minimum)
Contact Resistance — 20 mili ohms (maximum)	Temperature — -40 to +150°F (-40 to +68° C)
Current Rating — 1.5 Amps	Termination — 110 punch or IDC using stuffer cap
DC Resistance — 01 ohms (maximum)	Dimensions — 1.9(H) x 1.6(W) x 2.8(D) cm
Frequency — 100 MHz	Weight — <0.1 lb. (<0.1 kg)
Insulation Resistance — 500 million ohms (minimum)	
PCB — FR4, 1.0 mm thick	

Item	Single-Pack	25-Pack
GigaBase CAT5e Jacks, Universal Wiring		
Blue	FMT920-R 2	FMT920-R2-25PAK
Black	FMT921-R 2	FMT921-R2-25PAK
Electric Ivory	FMT922-R 2	FMT922-R2-25PAK
Gray	FMT923-R 2	FMT923-R2-25PAK
Green	FMT924-R 2	FMT924-R2-25PAK
Office White	FMT925-R 2	FMT925-R2-25PAK
Orange	FMT926-R2	FMT926-R2-25PAK
Red	FMT927-R2	FMT927-R2-25PAK
White	FMT929-R2	FMT929-R2-25PAK
Yellow	FMT930-R2	FMT930-R2-25PAK

Adapters, Wallplates and Back Boxes

- High-quality snap fittings.
- Standard UK sockets.
- **WARRANTY** — Lifetime



Item	Code	Item	Code	Item	Code
Adapters		Wallplates		Back Boxes	
Adapter plate with shutter	ADAPT	Wallplate Double (2 modules)	FPLASD	Single Gang Back Box	BACKBS
Adapters plate without shutter	ADAPT-U-S	Bevelled Wallplate Double (2 modules)	FPLASDBV	Dual Gang Back Box	BACKBD
<i>NOTE: ADAPT-U-S will not work with bevelled faceplates</i>		Wallplate Quad (4 modules)	FPLADQ		
		Bevelled Wallplate Quad (4 modules)	FPLADQBV		
		Quarter Blanking Panel	QUARB		

Comprehensive Cabling and Infrastructure Solutions

Let Black Box help you deliver
your next project under budget
and ahead of schedule.



© Copyright 2011. Black Box Corporation. All rights reserved. Printed in U.S.A. Black Box[®], the Double Diamond logo, and GigaBase[®] are registered trademarks of BB Technologies, Inc. Any third-party trademarks appearing in this publication are acknowledged to be the property of their respective owners.

0118 965 6000 | www.blackbox.co.uk