

COMPLEMENTARY PRODUCTS

IBDN GigaFlex 2412 Cable  
6.9.2-A

IBDN GigaFlex 2413 Cable  
6.9.2-B

IBDN GigaFlex 2424 Cable  
6.9.2-C

IBDN Copper Solutions

GigaBIX Cross-Connect System  
GigaBIX Basic Components

6.1.2-A

Labels LabelFlex

6.4.1-A

Patch Panels GigaFlex PS6+ Patch Panels

6.5.1-A

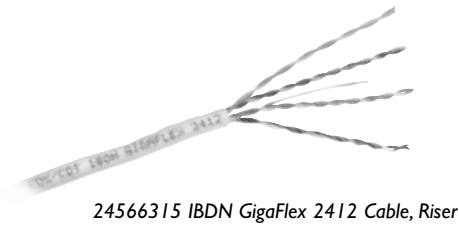
Workstation Outlets GigaFlex PS6+ Modules

6.7.1-A

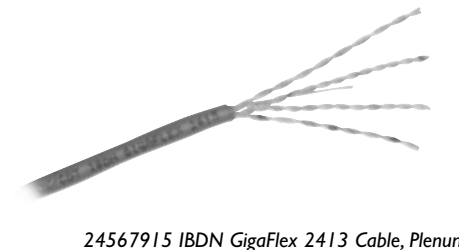
6.9.2-A IBDN GigaFlex 2412 Cable

6.9.2-B IBDN GigaFlex 2413 Cable

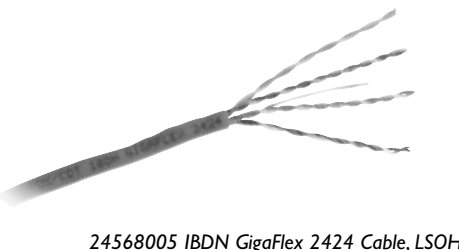
6.9.2-C IBDN GigaFlex 2424 Cable



24566315 IBDN GigaFlex 2412 Cable, Riser



24567915 IBDN GigaFlex 2413 Cable, Plenum



24568005 IBDN GigaFlex 2424 Cable, LSOH

DESCRIPTION

IBDN GigaFlex 2400 Cable Series consist of 4-pair UTP cables, that exceed Category 6 requirements per ANSI/TIA/EIA-568-B. When used as the horizontal cable in the IBDN System 2400, the channel provides at least 250 MHz of bandwidth.

FEATURES & BENEFITS

- Increased bandwidth and signal-to-noise margin
- Optimized balance of transmission performance for simultaneous parallel transmission protocols
- Size minimized for compactness of installations
- Materials selected to support 25 year performance warranties
- Descending distance marking for cable length reduces waste
- Matching tip and ring color code for ease of installation
- Available in Spool-in-Box packaging for ease of installation, handling and inventory management.

APPLICATIONS

IBDN GigaFlex 2400 Cable Series is intended to be used for horizontal cable installations of high speed Local Area Networks (LANs) for transmission speeds of up to 2.4 Gb/s. Specific applications include:

- 1000BASE-T Ethernet, and other LAN protocols operating up to 2.4 Gb/s transmission speeds
- ATM at all speeds up to 2.4 Gb/s
- 100 Mb/s TP-PMD, 100 Mb/s Ethernet (100BASE-T)
- Broadband video (77 channels at 550 Mhz).

TECHNICAL SPECIFICATIONS

- Minimum Recommended Installation Temperature: 5°C (40°F)
- Temperature Rating: 60°C (140°F).

Description	Nominal O.D.	Min. Bend Radius	Weight (Cable only)
IBDN GigaFlex 2412 Cable, 4-pair 24 AWG, <b>CMR</b>	5.44 mm (0.214 in.)	22.15 mm (0.872 in.)	3.9 kg/100 m (26.0 lb/kft)
IBDN GigaFlex 2413 Cable, 4-pair 24 AWG, <b>CMP</b>	5.33 mm (0.210 in.)	21.04 mm (0.828 in.)	3.6 kg/100 m (24.0 lb/kft)
IBDN GigaFlex 2424 Cable, 4-pair 24 AWG, <b>LSOH</b>	5.44 mm (0.214 in.)	23.28 mm (0.916 in.)	4.2 kg/100 m (28.0 lb/kft)

Physical Characteristics

Construction

- Conductors: 24 AWG solid copper
- Insulation:
  - CMR & LSOH: Polyolefin (PE)
  - CMP: Low Smoke Flame Retardant thermoplastic (FEP)
  - Color coding as per ANSI/TIA/EIA-568-B.
- Cable Core: 4 twisted pairs formed into a cable core, equipped with jacket splitting cord
- Jacket:
  - CMR: PVC
  - CMP: LSPVC
  - LSOH: Low Smoke & Fume Zero Halogen Polymer Alloy
  - Jacket printed at intervals indicating cable code, AWG, listings (NEC Code), verification, date, manufacturing traceability code
  - Descending length markings start at highest number and end at 0.

**Transmission Characteristics**

- Values up to 300 MHz are minimum guaranteed values
- Values above 300 MHz are for information only
- DC Resistance @ 20°C, max.: 9.38  $\Omega$ /100 m
- DC Resistance Unbalance, max.: 5%
- Mutual Capacitance, max.: 5.6 nF/100 m
- Capacitance Unbalance Pair to Ground, max.: 330 pF/100 m
- Input Impedance: 100  $\pm$  15  $\Omega$  from 1 MHz to 100 MHz ; 100  $\pm$  22  $\Omega$  from 101 MHz to 200 MHz ; 100  $\pm$  32  $\Omega$  from 201 MHz to 300 MHz
- Nominal Velocity of Propagation (NVP): - Plenum: 72% @ 10 MHz ; - Non-Plenum: 68% @ 10 MHz
- Propagation Delay (Skew), max.: 25 ns/100 m.

FREQUENCY (MHz)	INSERTION LOSS (dB/100m) (max.)	NEXT (dB) (min.)	PSNEXT (dB) (min.)	ACR (dB) (min.)	PSACR (dB) (min.)	ELFEXT (dB) (min.)	PSELFEXT (dB) (min.)	RETURN LOSS (dB) (min.)
0.772	1.8	77.0	75.0	75.2	73.2	73.0	70.0	19.7
1.0	2.0	75.3	73.3	73.3	71.3	70.8	67.8	20.0
4.0	3.7	66.3	64.3	62.6	60.6	58.8	55.8	23.0
8.0	5.2	61.8	59.8	56.6	54.6	52.7	49.7	24.5
10.0	5.8	60.3	58.3	54.5	52.5	50.8	47.8	25.0
16.0	7.4	57.2	55.2	49.9	47.9	46.7	43.7	25.0
20.0	8.3	55.8	53.8	47.5	45.5	44.8	41.8	25.0
25.0	9.3	54.3	52.3	45.1	43.1	42.8	39.8	24.3
31.25	10.4	52.9	50.9	42.5	40.5	40.9	37.9	23.6
62.5	15.0	48.4	46.4	33.4	31.4	34.9	31.9	21.5
100.0	19.3	45.3	43.3	26.0	24.0	30.8	27.8	20.8
200.0	28.3	40.8	38.8	12.5	10.5	24.8	21.8	18.7
250.0	32.1	39.3	37.3	7.3	5.2	22.8	19.8	18.0
300.0	35.6	38.1	36.1	2.6	0.5	21.3	18.3	17.5
350.0	38.9	37.1	35.1	-1.7	-3.7	19.9	16.9	17.0
400.0	42.0	36.3	34.3	-5.7	-7.7	18.8	15.8	16.6
450.0	45.0	35.5	33.5	-9.5	-11.5	17.7	14.7	16.2

**QUALIFICATIONS**

- Exceeds Category 6 requirements per ANSI/TIA/EIA-568-B
- Exceeds the Category 5e requirements per ANSI/TIA/EIA-568-A.5 or ANSI/TIA/EIA-568-B
- Exceeds the Category 5 requirements per ANSI/TIA/EIA-568-A, CSA T529-95 and ISO/IEC 11801-1995
- Exceeds the Category 5 requirements per NEMA Standard WC 63.1-1996
- Exceeds the Category 5 requirements of ICEA S-90-661-1997
- Non-Plenum: ITS/ETL Certified as CMR, and listed as NEC Type CMR per UL Standard 444
- Plenum: ITS/ETL Certified as CMP, and listed as NEC Type CMP per UL Standard 444
- LSOH : ISO/IEC 332-1, 754-2 and 1034-2.

**ORDERING INFORMATION**

The ordering information for the most frequently ordered IBDN GigaFlex 2400 Cable is given below. Alternative colors and packaging are also available, subject to Minimum Order Quantities. Please check with customer service for availability.

**6.9.2-A IBDN GigaFlex 2412 Cable**

DETAIL	COLOR	LENGTH	PACKAGING	NO OF PACKS PER PALLET	TOTAL PER PALLET	UPC	ORDERING NUMBER
4-Pair, 24 AWG, CMR, Cat 6	White	305 m (1000 ft.)	Spool-in-Box	45 boxes/pallet	13725 m (45000 ft.)	628575004591	24566315
4-Pair, 24 AWG, CMR, Cat 6	Yellow	305 m (1000 ft.)	Spool-in-Box	45 boxes/pallet	13725 m (45000 ft.)	628575107971	24566715
4-Pair, 24 AWG, CMR, Cat 6	Blue	305 m (1000 ft.)	Spool-in-Box	45 boxes/pallet	13725 m (45000 ft.)	628575004867	24566915
4-pair, 24 AWG, CMR, Cat 6	White	305 m (1000 ft.)	11-3/4N Spool	36 spools/pallet	10980 m (36000 ft.)	628575004652	24566345
4-pair, 24 AWG, CMR, Cat 6	Yellow	305 m (1000 ft.)	11-3/4N Spool	36 spools/pallet	10980 m (36000 ft.)	628575004737	24566745
4-pair, 24 AWG, CMR, Cat 6	Blue	305 m (1000 ft.)	11-3/4N Spool	36 spools/pallet	10980 m (36000 ft.)	628575004928	24566945
4-pair, 24 AWG, CMR, Cat 6	White	762 m (2500 ft.)	14N Spool	27 spools/pallet	20574 m (67500 ft.)	628575004621	24566336
4-pair, 24 AWG, CMR, Cat 6	Yellow	762 m (2500 ft.)	14N Spool	27 spools/pallet	20574 m (67500 ft.)	628575004706	24566736
4-pair, 24 AWG, CMR, Cat 6	Blue	762 m (2500 ft.)	14N Spool	27 spools/pallet	20574 m (67500 ft.)	628575004898	24566936

**6.9.2-B IBDN GigaFlex 2413 Cable**

DETAIL	COLOR	LENGTH	PACKAGING	NO OF PACKS PER PALLET	TOTAL PER PALLET	UPC	ORDERING NUMBER
4-Pair, 24 AWG, CMP, Cat 6	White	305 m (1000 ft.)	Spool-in-Box	45 boxes/pallet	13725 m (45000 ft.)	628575004973	24567315
4-Pair, 24 AWG, CMP, Cat 6	Yellow	305 m (1000 ft.)	Spool-in-Box	45 boxes/pallet	13725 m (45000 ft.)	628575107988	24567715
4-Pair, 24 AWG, CMP, Cat 6	Blue	305 m (1000 ft.)	Spool-in-Box	45 boxes/pallet	13725 m (45000 ft.)	628575005154	24567915
4-pair, 24 AWG, CMP, Cat 6	White	305 m (1000 ft.)	11N Spool	60 spools/pallet	18300 m (60000 ft.)	628575005024	24567345
4-pair, 24 AWG, CMP, Cat 6	Yellow	305 m (1000 ft.)	11N Spool	60 spools/pallet	18300 m (60000 ft.)	628575005093	24567745
4-pair, 24 AWG, CMP, Cat 6	Blue	305 m (1000 ft.)	11N Spool	60 spools/pallet	18300 m (60000 ft.)	628575005208	24567945
4-pair, 24 AWG, CMP, Cat 6	White	762 m (2500 ft.)	14N Spool	27 spools/pallet	20574 m (67500 ft.)	628575004997	24567336
4-pair, 24 AWG, CMP, Cat 6	Yellow	762 m (2500 ft.)	14N Spool	27 spools/pallet	20574 m (67500 ft.)	628575005079	24567736
4-pair, 24 AWG, CMP, Cat 6	Blue	762 m (2500 ft.)	14N Spool	27 spools/pallet	20574 m (67500 ft.)	628575005178	24567936

**6.9.2-C IBDN GigaFlex 2424 Cable**

DETAIL	COLOR	LENGTH	PACKAGING	NO OF PACKS PER PALLET	TOTAL PER PALLET	UPC	ORDERING NUMBER
4-pair, 24 AWG, LSOH, Category 6	Purple	305 m (1000 ft.)	11-3/4N Spool	36 spools/pallet	10980 m (36000 ft.)	628575005246	24568005