

Product Facts

- Low bit error rate and low skew for high signal integrity
- Flexible for easy routing
- A variety of high density, low profile connectors
- No NRE/NRT for standard configurations
- Quick turn on limited quantities



High-speed data transfer with low bit error

Build a Cable Online

The BLUE RIBBON Solution Builder is our online, interactive design process that configures a ribbonized coax cable assembly to suit your application. Go to: www.tycoelectronics.com/pi/blue

- Specify cable length
- Make connector selection
- View performance graphs
- Print engineering drawings
- View quotation and lead time

To provide the data integrity needed for today's high-end servers and networks, telecommunications and high performance test equipment, PRECISION INTERCONNECT BLUE RIBBON assemblies deliver digital data at high speeds with low bit error rates. At the same time they are compact for high density applications, extremely flexible for easy routing and durable for repeated mate/demates. BLUE RIBBON coax assemblies also solve interconnect challenges as extender cables during design and production validations, in field repair service and for test bench troubleshooting applications.

Performance Advantages

Today's ultra high bus standards require interconnect lengths and bandwidths that may not be supported by the dielectric of printed and flex circuit interconnects. The inherent electrical properties of coax

meets those needs. The ribbonized construction minimizes skew caused by conductor length differences for excellent performance in single-ended and differential applications. The controlled impedance through the connectors, termination boards and miniature coax provide high signal integrity throughout the interconnect system.

Flexible, robust and low profile, these coax assemblies require minimal clearance and withstand routing over small bend radii without impacting electrical performance. The ribbonized configuration aligns with the planar structure of circuit boards, is easy to route and exits cabinets where minimal clearance is required.

High speed, high density connectors reduce the board real estate required for the mating connector.

The housing which provides physical protection for the coax terminations is molded in UV stable,

impact resistant, high temperature engineering plastic for flex-relief and electrical isolation. Where space is severely limited, housings can be eliminated (on one or both ends) and replaced by conformal coating for protection.

Standard Configurations

BLUE RIBBON coax assemblies are available with 50 ohm (100 ohm differential) 38 or 34 AWG conductors in 0.1 to 10 meter lengths (in one centimeter increments).

Select either a Tyco Electronics MICTOR or Samtec connector to mate with your equipment's bulkhead or board connector. Both connectors are available in edge mount and surface mount styles.

For More Information

For the latest additions to the product family, access to technical data or to contact a product specialist go to:

www.tycoelectronics.com/pi/blue

Performance data and options

BLUE RIBBON assemblies using Samtec QTE/QSE and QTH/QSH connectors have plug compatibility with QTE/QSE-DP and QTH/QSH-DP differential series connectors.

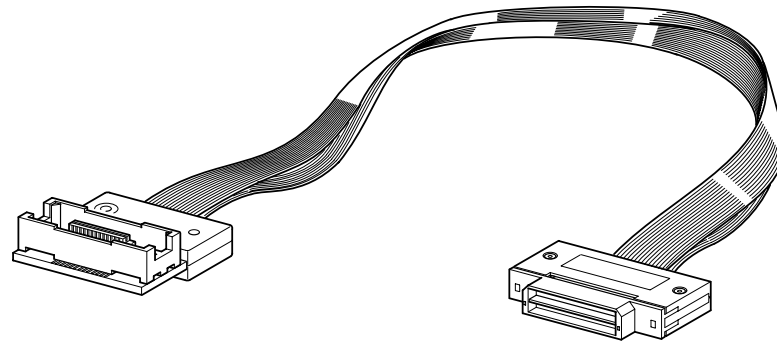
Assembly Performance

Typical characteristics of a 0.5 meter assembly with 38 AWG center conductor 50 ohm coax (100 ohm in differential applications) is shown in the charts at right.

Modifications and Options

Modifications such as 26 AWG conductors, 75 ohm coax, non-standard pinouts or other members of a connector family may be available on some configurations and will be quoted separately.

We are happy to design and quote custom solutions such as other connectors suitable for PCBs, protective sheaths, latching mechanisms, custom labeling and packing or a complete custom interconnect.



Connector Options

Pitch	Series	Total number of contacts
.8 mm	Samtec QTE/QSE	40, 80, 120, 160, 200
	Tyco Electronics MICTOR® SB	40, 80, 124, 160, 200
.635 mm	Tyco Electronics MICTOR	38, 76, 114, 152, 190
.5 mm	Samtec QTH/QSH	60, 120, 180

Electrical performance*

	Single-ended	Differentially driven
Center conductor DCR	1.93 Ω/m	1.93 Ω/m
Conductor ampacity	0.22 A	0.22 A
Shield DCR per coax	0.57 Ω/m	0.57 Ω/m
Shield ampacity per coax	0.57 A	0.57 A
Risetime	250 psec	160 psec
Insertion loss	-3 dB at 950 MHz	-3 dB at 1.2 GHz
Return loss	-14 dB at 1 GHz (VSWR 1.5)	-14 dB at 1 GHz (VSWR 1.5)
Propagation Delay	4.9 nsec/m	4.9 nsec/m
Skew	100 psec*	< 50 psec
Far-end crosstalk	-14 dB at 1 GHz	-21 dB @ 1 GHz

*Performance at ambient temperature 21°C Edge-mount to edge-mount configuration. The position of the connector and the placement of the chamfer determines conductor lengths and, therefore, may affect skew.

Mechanical performance

Tensile strength	>178N (40 lb) per two ribbon pair
Flex-life	>50,000 cycles with 2.2 N (8oz) load ± 90°C
Lateral flexure	>5,000 cycles with 2.2 N (8 oz) load ± 35°C
Crush resistance	>1000 cycles at 356 N (80 lb) load

Environmental performance

Temperature	operating	-10 to 90°C
	storage	-40 to 90°C
Humidity	operating	40°C at 90% RH for 3 days
	storage	50°C at 95% RH for 4 days
Shock/vibration	See manufacturer's specs	
Mate/demate	See manufacturer's specs	

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