

HIGH SPEED CABLE ASSEMBLIES

Performance up to 11Gb/sec, from 95mm to 3 meters long

Samtec High Speed Cable Systems

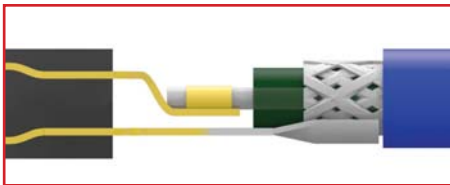
provide flexible solutions for a variety of applications. Samtec cable assemblies utilize high speed connectors, ribbonized micro coax and twinax cables, transitional PCBs, or “direct-to-lead” cable termination to achieve higher performance.

High speed cable assemblies should be considered when the application requires low crosstalk, low EMI emission and susceptibility, higher frequency and less loss, or lower voltage drop. High speed cable assemblies are ideal for applications with challenging mechanical routings, high flex life and crush life requirements, and for applications from 95mm to 3 meters.

Samtec High Speed Cable Systems are rated up to 11Gb/sec, at -3db insertion loss. These ratings do not represent the potential maximum performance of these cable assemblies. If your application appears to exceed these ratings, the cable solution may still work. Please contact Samtec’s Signal Integrity Group at SIG@samtec.com.

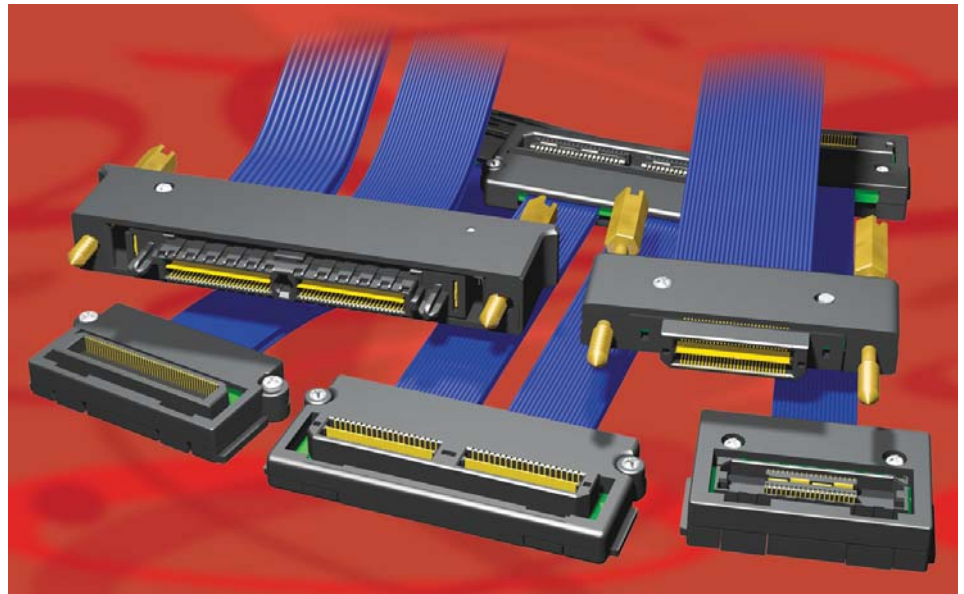
Samtec offers an assortment of Data Rate™ cable assemblies that provide excellent Signal Integrity performance.

Direct-to-Lead Coax Assemblies allow the cable to be terminated directly to the lead to optimize Signal Integrity. Direct-to-Lead assemblies contain high speed Edge Rate™

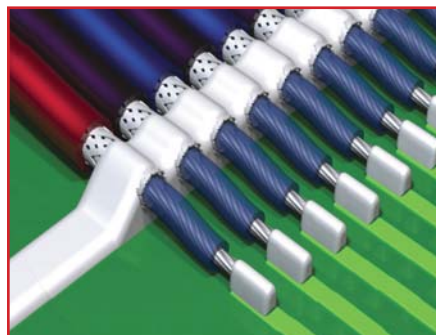


contact systems with rugged friction locks, or high speed Q2™ contacts with an integral ground plane, and standard guide post holes.

Micro Coax Cable Assemblies are available for 50Ω and 75Ω applications in .5mm, .635mm, and 8mm pitch, and are capable of vertical

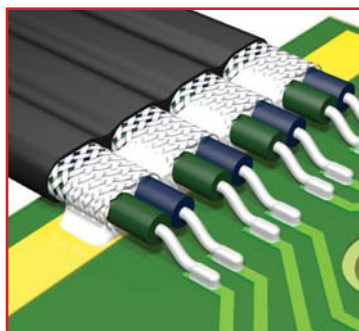


as well as edge mount termination to the cable. Coax cables assemblies are ideal for longer assemblies, more



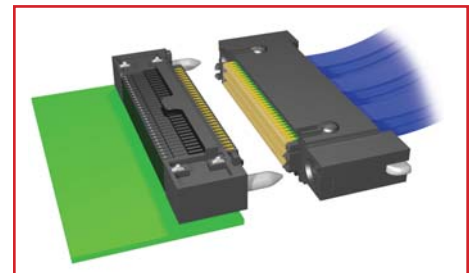
complex pinouts, and offer JTAG compatibility (IEEE 1149.1).

Twinax Cable Assemblies offer 100Ω differential pair signal impedance with a choice of edge card or high speed connectors on .5mm, .635mm, and .8mm pitch. These assemblies offer low skew (pair-to-pair < 10ps/



ft; within a pair < 5ps/ft), and superior EMI performance (FCC class A).

High Density Cables Assemblies offer 100Ω differential pair signal impedance, and are capable of optimizing Signal Integrity with direct



to lead technology ([GCCA Series](#)) or via direct contact transition boards ([SEAC Series](#)).

Custom Cable Assemblies – Samtec offers a variety of custom high speed cable assemblies, options, and modified standards. The High Speed Cable Group (HDR@samtec.com) is available to field questions and make recommendations on assembly design and performance.

Featured on the next page is a snapshot of Samtec’s High Speed Cable offering. Click on the series links, or visit our [High Speed Cable Builder](#) to find the solution that’s right for your application.

Edge Rate™ High Speed Cable Assemblies

Direct Attach Edge Rate™ Cable Assemblies

Specifications	Series
Pitch: .8mm (.0315")	ERCD – Edge Rate™ Assembly
Cable: 34 AWG Samtec high speed cable	ERF8 – Board Level Socket
Signal Routing: 50Ω Single-ended	
Performance @ 6": 7.90 GHz	

Edge Rate™ Cable Assemblies

Specifications	Series
Pitch: .8mm (.0315")	ERCD – Single-Ended Assembly
Cable: 34 AWG Samtec high speed cable	ERDP – Differential Pair Assembly
Signal Routing:	ERF8 – Board Level Socket
50Ω Single-ended	ERM8 – Board Level Terminal
100Ω Differential pair	
Performance @ 6":	
ERCD - 1.84 GHz	
ERDP - 6.33 GHz	

Q2™ High Speed Cable Assemblies

Direct Attach Q2™ Cable Assemblies

Specifications	Series
Pitch: .635mm (.025")	Q2DA – Direct Attach Q2™ Assembly
Cable: 36 AWG Samtec high speed cable	QMS – Board Level Socket
Signal Routing: 50Ω Single-Ended	
Performance @ 6": 1.15 GHz	

Q2™ Cable Assemblies

Specifications	Series
Pitch: .635mm (.025")	6QCD – Single-Ended Assembly
Cable:	6QDP – Differential Pair Assembly
38 AWG Samtec high speed coax	6QDPS – Shielded Differential Pair Assembly
30 AWG Samtec high speed twinax	QFSS-DP – Shielded Board Level Socket, Differential Pair
Signal Routing:	QMSS-DP – Shielded Board Level Terminal, Differential Pair
50Ω Single-ended	QFS – Board Level Socket
100Ω Differential pair	QMS – Board Level Terminal
Performance @ 6":	
6QCD – 1.46 GHz	
6QDP – 4.00 GHz	

Q Series® High Speed Cable Assemblies

Specifications	Series
Pitch:	HQCD – .5mm Single-Ended Assembly
.5mm (.0197")	HQDP – .5mm Differential Pair Assembly
.635mm (.025")	SQCD – .635mm Single-Ended Assembly
.8mm (.0315")	MICD – .635mm Single-Ended Assembly
Cable:	EQCD – .8mm Single-Ended Assembly
38 AWG Samtec high speed coax	EQDP – .8mm Differential Pair Assembly
30 AWG Samtec high speed twinax	EQSD – .8mm 75Ω Assembly
Signal Routing:	
50Ω Single-ended	
75Ω Single-ended	
100Ω Differential pair	
Performance @ 6":	
HQCD – 1.68 GHz	
HQDP – 5.94 GHz	
SQCD – 2.42 GHz	
MICD – 1.64 GHz	
EQCD – 2.52 GHz	
EQDP – 4.48 GHz	
EQSD – 1.54 GHz	

Blade and Beam Cable Assemblies

Specifications	Series
Pitch: .5mm (.0197")	HB CD – Single-Ended Assembly
Cable: 38 AWG Samtec high speed coax	BTH – Board Level Terminal
Signal Routing: 50Ω	BSH – Board Level Socket
Performance @ 6": 2.76 GHz	