

EdgeLine® High-Speed Edge Card Connectors



Low-profile EdgeLine® High-Speed Edge Card Connectors support data rates up to 25 Gbps and are available in multiple orientations and PCB thicknesses for use in high-signal transmissions and high-density signal applications

Features and Benefits

High-speed differential contact design	Provides excellent signal integrity; performance up to 25 Gbps, depending upon the application
Multiple PCB thicknesses (1.57 to 3.18mm)	Accommodates a variety of PCB thicknesses on complex product designs
Surface mount terminal options	Enables high-speed pick-and-place assembly, as well as back-to-back connector placement
Press-fit, compliant-pin terminal options	Allows easy board termination using flat-rock tooling
Common (singulated) ground	Optimizes connector performance with dedicated differential pairs, or provides the maximum flexibility of an open array
Center key available on certain circuit sizes	Improves PCB alignment during mating
Multiple circuit sizes available	Facilitates design flexibility for signal and power assignment
Low profiles: CoPlanar connector 6.44mm above PCB; CoEdge connector 3.50mm above and below PCB	Provides enhanced air flow and thermal management
Keying and locking features available (0.80mm pitch CoEdge connectors only)	Secures the connector to the PCB and improves board alignment during mating



EdgeLine® High-Speed Edge Card Connectors



EdgeLine® Vertical Edge Card Connector Application

Applications

Telecommunications

Storage

Networking

Computing systems

PCIe

SAS

SATA

Storage systems

Industrial

Signal

Connectivity

MIL/Aerospace

Computing systems

C4ISR



High-end servers



EdgeLine® CoPlanar Edge Card Connector Application

EdgeLine® High-Speed Edge Card Connectors



Specifications

REFERENCE INFORMATION

Packaging: Tray/Tube
 UL File No.: ECBT2.E29179
 Mates With: Plug-in Card
 Product Specification: CoPlanar:
 EdgeLine CoPlanar+: PS-170305-001
 EdgeLine CoPlanar: PS-76291-001
 EdgeLine CoEdge: PS-46720-001
 Product Specification: Vertical:
 EdgeLine 25: PS-171774-0001
 EdgeLine ESP: PS-76861-100
 EdgeLine Edge Card PS-75594-999

ELECTRICAL

Voltage (max.):
 EdgeLine CoPlanar+: 250V AC (RMS)/DC
 EdgeLine CoPlanar: 50V AC (RMS)/DC
 EdgeLine CoEdge: 240V AC
 EdgeLine CoBridge: 240V AC
 EdgeLine 25: 250V AC
 EdgeLine+ ESP: 250V AC(RMS)/DC
 EdgeLine Edge Card: 250V AC
 Current (max.):
 EdgeLine CoPlanar+ ESP: 0.5A
 EdgeLine CoPlanar+: 0.5A
 EdgeLine CoPlanar: 1.5A
 EdgeLine CoEdge: 1.0A
 EdgeLine CoBridge: 1.0A
 EdgeLine 25: 1.5A
 EdgeLine+ ESP: 3.0A
 EdgeLine Edge Card: 1.5A
 Contact Resistance (max.): 10 milliohms
 Dielectric Withstanding Voltage: 300V AC
 Insulation Resistance (min.): 10 Megohms

MECHANICAL

Durability (min.): 25 to 200 cycles options available

PHYSICAL

Housing: High Temperature Thermoplastic, 94-VO, Black
 Contact: Copper (Cu) Alloy
 Plating (min):
 Contact Area: 0.76µm Gold (Au)
 Solder Tail Area: 0.76 to 1.52µm Tin (Sn)
 Underplating: 1.27µm Nickel (Ni)
 Operating Temperature:
 EdgeLine CoPlanar+ ESP: -40 to +105°C
 EdgeLine CoPlanar+: -40 to +105°C
 EdgeLine CoPlanar: -40 to +85°C
 EdgeLine CoEdge: -55 to +85°C
 EdgeLine CoBridge: -55 to +85°C
 EdgeLine 25: -40 to +105°C
 EdgeLine+ ESP: -40 to +105°C
 EdgeLine Edge Card: -40 to +105°C

Ordering Information

Series No.	Product Name	Orientation	Data Rate	Pitch	PCB Thickness Recommended	Termination	Configuration	
170082	CoPlanar+	CoPlanar	15 Gbps	0.80mm	2.36mm	Press Fit	Differential Pair Open Array	
170305	CoPlanar+ ESP						Differential Pair Open Array 30.0A Power Module	
172066	CoPlanar+				Differential Pair Open Array			
76291	CoPlanar		6 Gbps	0.75mm	1.57mm		Differential Pair	
46720-0xxx	CoEdge 100 Ohm		25 Gbps	0.80mm	1.57mm 2.36mm	Mechanical	Open Array	
46810	CoEdge 85 Ohm				2.79mm 3.175mm		Open Array	
46720-9xxx	CoBridge				10 Gbps		1.57mm 2.36mm	Open Array Z-Axis Mate
171774	EdgeLine25	Vertical	25 Gbps	0.80mm	1.57mm	SMT	Differential Pair Open Array	
151046	EdgeLine25 ESP				2.36mm	SMT/Through Hole	Differential Pair Open Array 40.0A Power Module	
151038	EdgeLine+		15 Gbps	0.75mm	1.57mm	SMT	Open Array	
172050	EdgeLine+ ESP					SMT/Through Hole	Open Array 40.0A Power Module	
151041	EdgeLine+ ESP						Open Array 50.0A Power Module	
76691 170673	EdgeLine		12.5 Gbps	0.80mm		Press Fit		Open Array
76861	EdgeLine ESP							Open Array 30.0A Power Module
76693 170672	EdgeLine					Open Array		
171852	EdgeLine ESP					Open Array 50.0A Power Module Optional 3 Bay		
170545				Open Array 30.0A Power Module				

www.molex.com/link/edgeline.html