DIFFERENTIAL CONNECTOR

FCN-260(D) Series microGiGaCN™

INFINIBAND™ TRADE ASSOCIATION

Selected by InfiniBand as the I/O Interface Standard for the 4X and 12X

■ FEATURES

- I/O Connector designed for high speed differential signal applications.
- Matched Impedance (100 ohms ±10%)
- Low insertion loss
- Low cross talk
- Adopted by InfiniBand as 4x (4 channel) and 12x (12 channel) I/O Interface
- Meets Bellcor 1217

■ SPECIFICATIONS

Item	Specifications
Operating temperature range	-55° C to +105° C
Current rating	AC 0.5A (signal) AC 1A (ground)
Voltage rating	AC 30V
Contact resistance (with conductor resistance)	80 m ohms max. (signal) 35 m ohms max.(ground
Insulation resistance	1000M ohms minimum
Dielectric withstanding voltage	AC 500V for 1 minute
Durability	250 cycles
Insertion force	30 N max. (8 pair) 60 N max. (24 pair)
Withdrawl force	7 N min. (8 pair) 10.5 N min. (24 pair)

■ MATERIALS

Item	Materials
Insulator	LCP Resin (UL94V-0)
Conductor	Copper Alloy
Plating	Contact: Gold Plating (PAGOS) Terminal: Gold coat over Pd-Ni plating Cover: Zinc

Product Specification are subject to change, please check our website (www.fcai.fujitsu.com) for the latest specifications.

The MicroGigaCN offers a cost-effective I/O solution for high-speed applications in data and telecommunications convergence (voice, data, video and storage). It utilizes a 2.5 Gbit/sec wire speed connection with four or twelve wire link widths, offering a scalable performance range of 500Mbps to 6Gbps per link to meet the needs of entry-level and high-end enterprise systems. Forward crosstalk is less than 4% at 100 pico second pulse-rise time (four-pair switching).

Fujitsu Components designed the MicroGiGaCN to specifically address the emerging requirements for a high speed differential signal I/O connector. The MicroGiGaCN offers a unique solution to LVDS, InfiniBand TA, 10G Ethernet, 4x Fiber Channel, and other high speed I/O applications. InfiniBand has selected Fujitsu's connector for the 4x and 12x I/O connector interface.

The performance requirements of the connector system were tested with cable to simulate the actual requirements of an OEM System manufacturer. Our test data includes the parasitic effects of the PCB, along with measurements of a completed I/O cable assembly.

Electrical Performance in out testing:

- Matched Impedance: 93.6 to 109.9 ohms @ 100 ps Trise
- Low Cross Talk: NEXT 3.8% @ 100pc Trise (4 pairs switching, 2 connectors and 10 meters of cable)
- Low Insertion Loss: 2.3dB @ 2.5Gb/s (1.25GHz, 1 Meter Cable Assembly)
- Skew within Differential Pair: 14.2ps (2 connectors and 2 meter of cable)
- Skew pair to pair: 21.2ps (2 connectors and 2 meter of cable)

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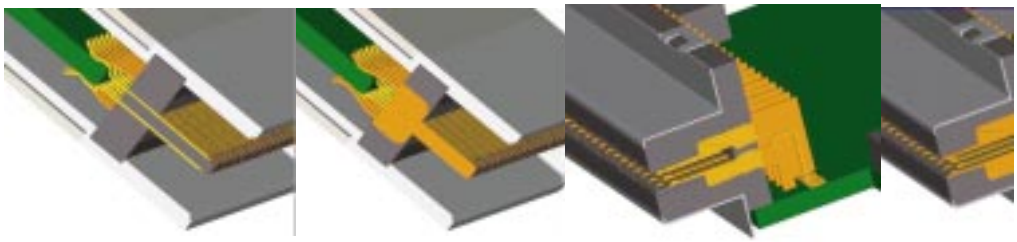
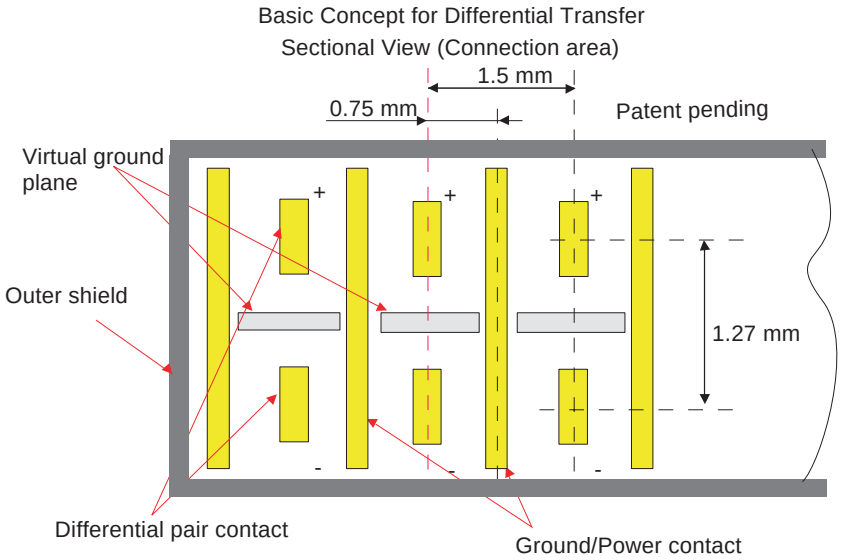
Connector Internal Struture



Basic Concept for Differential Transfer



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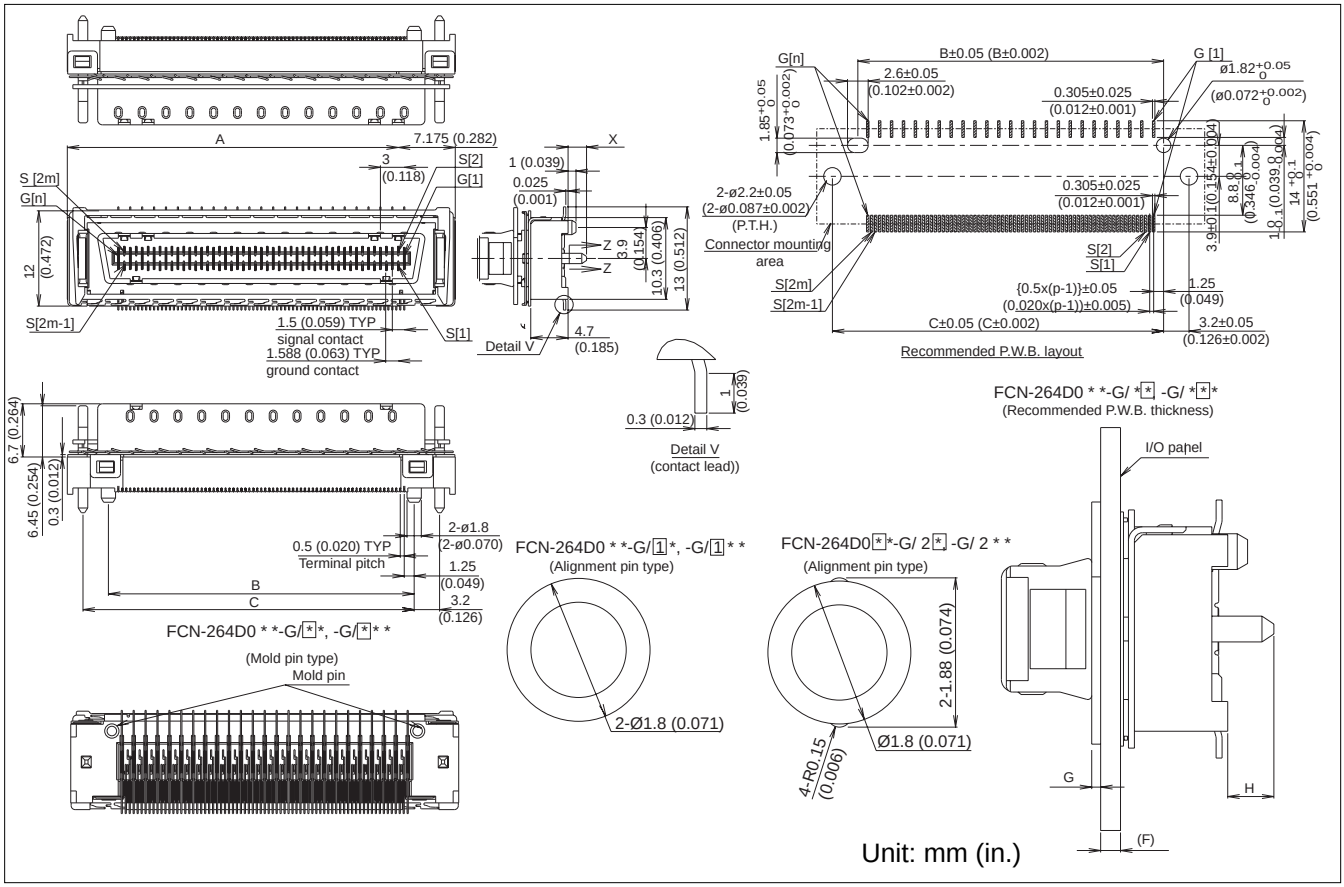
Fujitsu Components has designed the mechanical features of the connector to provide space saving footprint that will allow for 3 4x I/O connectors to mount onto a PCI form, or 2 12x. As RFI/EMI are critical elements in high performance cable assemblies, Fujitsu Components provides the surface mount sockets with an EMI Ground Spring on the face of the connector, to insure that the metal surface of the connector makes sufficient contact with the metal face of the card bracket.

The latching mechanism of the backshell offers a lanyard system for ease of un-mating the I/O plug connector/cable assembly from the SMT I/O socket. The die cast backshell offers excellent RFI/EMI characteristics. The backshell uses a ferrule and unique ground spring system to provide 360 degree contact of the cable shield to the backshell, which, combined with the solid interconnect of the socket to faceplate, offers low AC coupling termination.

The current version of the I/O plug comes with an attached paddlecard for wire termination. Fujitsu will offer the paddlecard in either an equalized or un-equalized version (see factory for details of the equalized version). Standard product offering will be un-equalized. As there are multiple applications for the paddlecard, with industry and customer specific wire termination, Fujitsu Components offers options to customers of providing the I/O plug connector with custom paddlecards (consult factory).

FCN-264D - VERTICAL MOUNT SOCKETS

■ DIMENSIONS



■ PART NUMBERS

Part Number	Pair	m	n	p	A	B	C	D	E
FCN-264D008-G/** FCN-264D008-G/***	8	1-8	1-9	1-25	17.675 (0.696)	14.5 (0.571)	17.7 (0.697)	22.7 (0.894)	19.7 (0.776)
FCN-264D024-G/** FCN-264D024-G/***	24	1-24	1-24	1-73	41.675 (1.641)	38.5 (1.516)	41.7 (1.642)	46.7 (1.839)	43.7 (1.720)

Lock Plate Thickness:

Part Number	F: Panel Thickness	G: Lock Plate Thickness
FCN-264D008-G/** FCN-264D024-G/**	1.0	0.5: FCN-260A622 FCN-260A626
FCN-264D008-G/**1 FCN-264D024-G/**1	1.2	0.5: FCN-260A632 FCN-260A636

Solder Post Length:

Part Number	P.W.B. Thickness	H
FCN-264D0**-G/*D FCN-264D0**-G/*D1	1.6	2.325
FCN-264D0**-G/*F FCN-264D0**-G/*F1	2.4	3.125
FCN-264D0**-G/*K FCN-264D0**-G/*K1	4.0	4.725

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