



► **COMMUNICATIONS, DATA, CONSUMER DIVISION**

## **CONNECTOR OVERVIEW**

## FCI: SETTING THE STANDARD FOR CONNECTORS

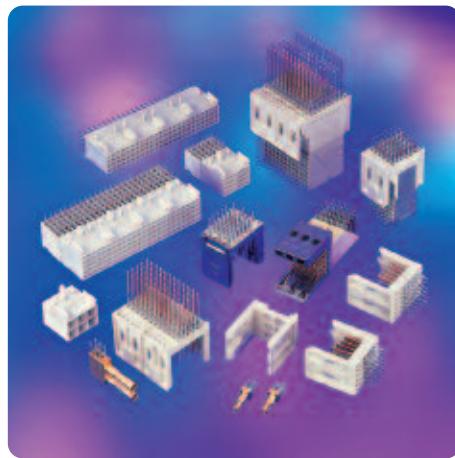
With operations in 30 countries, FCI is a leading manufacturer of connectors.

Our 13,500 employees are committed to providing customers with high-quality, innovative products for a wide range of consumer and industrial applications.

# COMMUNICATIONS, DATA

FCI's CDC (Communications, Data, Consumer) Division is a key supplier to companies that manufacture computing, networking, telecommunications, and personal communications equipment ranging from servers and storage devices to base stations and switches to cellular telephones, personal computers and cashless payment systems.

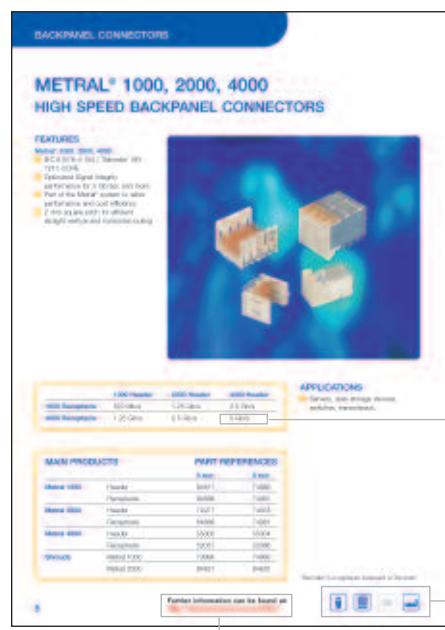
FCI is the leading innovator in the design, development and high volume manufacturer of Ball Grid Array (BGA) connectors for dense mezzanine board packaging operating at extremely high signal rates. In the field of smart cards, FCI provides both the micro-flex circuitry for semi-conductor packaging and the chip card connectors for applications that include pay phones, banking machines, health data applications, and toll payment systems. FCI is also a world leader in providing cost-effective and innovative backpanel, board-to-board, and I/O interconnect solutions that satisfy increasingly-demanding performance requirements in the converging Datacom and Telecom markets.



# AND CONSUMER

## HOW TO USE THIS GUIDE

Welcome to the Product Overview Guide for CDC (Communications, Data, Consumer) Division. In this guide, you will find an overview of each of our major product lines accompanied by a list of some of the most commonly used parts within that connector family. Using those references you can go directly to FCI's home page on the internet, enter the part number and see full data sheets and drawings for that part. We also indicate the link to the landing page in our interactive Catalog where you can obtain more information for these and other part numbers within each connector family.



[www.fciconnect.com](http://www.fciconnect.com)

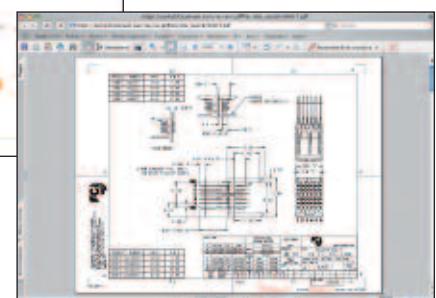
Enter the part reference in FCI web site

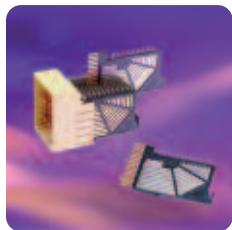
Use icon to find application

Or go directly to the landing page



View data sheet and drawings online





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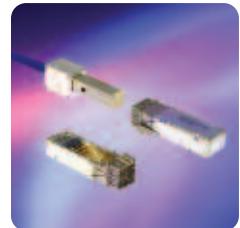
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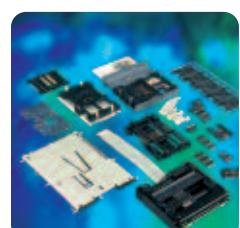
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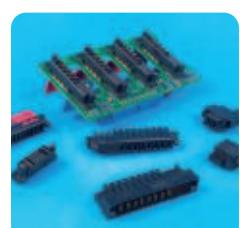
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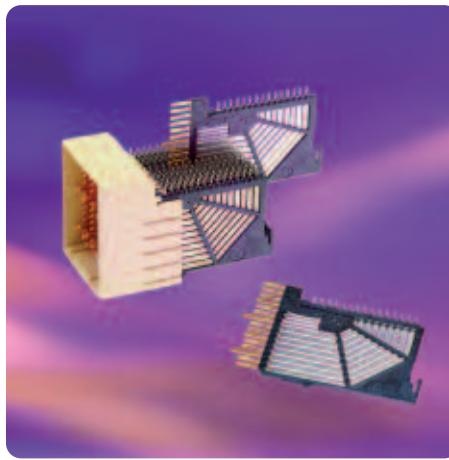
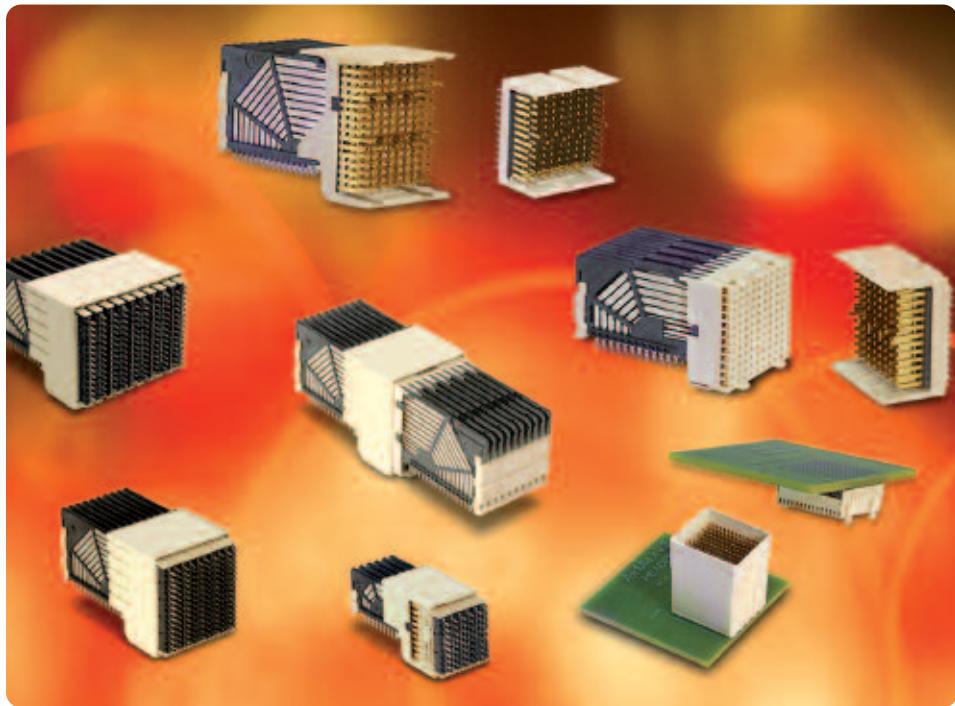


# AIRMAX VS®

## HIGH SPEED BACKPANEL CONNECTORS

### FEATURES

- ▶ A full set of building blocks for backplane, co-planar, mezzanine, and cable-to-board applications in Hard Metric building practices
- ▶ Innovative edge-coupling technology and air dielectric between adjacent conductors deliver lowest insertion loss and crosstalk
- ▶ High-speed serial data rates can scale from 2.5 Gb/s to beyond 12 Gb/s without requiring redesign of a basic platform
- ▶ Opposed dual-beam receptacle contact structure provides high reliability
- ▶ Contains no interleaving shields reducing connector weight, cost, and PCB routing complexity
- ▶ Allows for allocation of differential or single-ended signals or power within the same signal module connector
- ▶ Co-planar modules are available with 15 contacts (5 differential pairs), 12 contacts (4 pairs), or 9 contacts (3 pairs) per column
- ▶ 2 mm pitch, 5-pair configuration provides 63 differential pairs per linear inch on 25 mm (1.0 inch) card slot spacing
- ▶ Wider 3 mm column spacing offers the opportunity to reduce board cost by routing more traces on a single board layer
- ▶ Compact 12 mm-wide power modules provide increased current-carrying capacity of 80 Amps with 150 V voltage rating
- ▶ “Eye of the Needle” (EON)-compliant tail for press-fit PCB termination
- ▶ Available guidance modules provide alignment capability prior to connector engagement
- ▶ Lead-free and RoHS-compatible options are available



### APPLICATIONS

#### Data

- ▶ Servers
- ▶ Storage systems

#### Communications

- ▶ IP routers
- ▶ IP Switches & gateways
- ▶ ATM switches
- ▶ IP PBX's
- ▶ Enterprise routers
- ▶ 3G Base stations
- ▶ ATCA™ Zone 3

#### Industrial

- ▶ Medical
- ▶ Test & measurement

*AirMax* VS

\*Telcordia® is a registered trademark of Telcordia®.



## AIRMAX VS® QUICK SELECTOR GUIDE

	# Contacts per module	# Differential pairs per module	Nominal Plug In Unit pitch [mm]	Contact pitch (columns)	Header Drawing Number	Receptacle Drawing Number
<b>APPLICATION: BACK PANEL, GENDER: RIGHT ANGLE HEADER, VERTICAL RECEPTACLE</b>						
AirMax VS® "5 pair"	150	50	25	2 mm	10025613 / 10016527	10016537
	150	50	25	3 mm	10037324 / 10037323	10035146
	120	40	25	2 mm	10041460 / 10041746	10040993
AirMax VS® "4 pair"	120	40	20	2 mm	10028436 / 10029391	10028264
	120	40	20	3 mm	10035515 / 10035514	10035465
	96	32	20	2 mm	10052838 / 10052837	10052842
	72	24	20	2 mm	10052825 / 10052824	10052829
AirMax VS® "3 pair"	90	30	17	2 mm	10034249 / 10034264	10034251
	72	24	17	2 mm	10045267 / 10045266	10045271
	54	18	17	2 mm	10039851 / 10040862	10043546
<b>APPLICATION: BACK PANEL, GENDER: RIGHT ANGLE RECEPTACLE, VERTICAL HEADER</b>						
AirMax VS® "5 pair"	150	50	25	2 mm	10056098	10034475
	120	40	20	2 mm	10056100	10035754
AirMax VS® "4 pair"	120	40	20	3 mm	10056430	10045722
	90	30	17	2 mm	10056103	10056335
AirMax VS® "3 pair"	54	18	17	2 mm	10056101	10053656
<b>APPLICATION: COPLANAR, RIGHT ANGLE RECEPTACLE TO RIGHT ANGLE HEADER</b>						
AirMax VS® "5 pair"	150	50	25	2 mm	10025613 / 10016527	10034475
	150	50	25	3 mm	10037324 / 10037323	10057041
AirMax VS® "4 pair"	120	40	20	2 mm	10028436 / 10029391	10035754
	120	40	20	3 mm	10035515 / 10035514	10045722
AirMax VS® "3 pair"	90	30	17	2 mm	10034249 / 10034264	10056335
	54	18	17	2 mm	10039851 / 10040862	10053656
<b>APPLICATION: MEZZANINE, VERTICAL RECEPTACLE TO VERTICAL HEADER</b>						
AirMax VS® "5 pair"	150	50	12,5	2 mm	10056098	10016537
	150	50	26	2 mm	10056246	10016537
AirMax VS® "4 pair"	120	40	12,5	2 mm	10056100	10028264
	120	40	12,5	3 mm	10056430	10035465
AirMax VS® "3 pair"	90	30	12,5	2 mm	10056103	10034251
	54	18	12,5	2 mm	10056101	10043546
<b>APPLICATION: FRONT IO AND REAR PLUG UP</b>						
AirMax VS® "4 pair"	120	40	25	2 mm	10041268 vertical	na
	96	32	25	2 mm	10061399 right angle	na
	72	24	25	3 mm	10062319 right angle	na



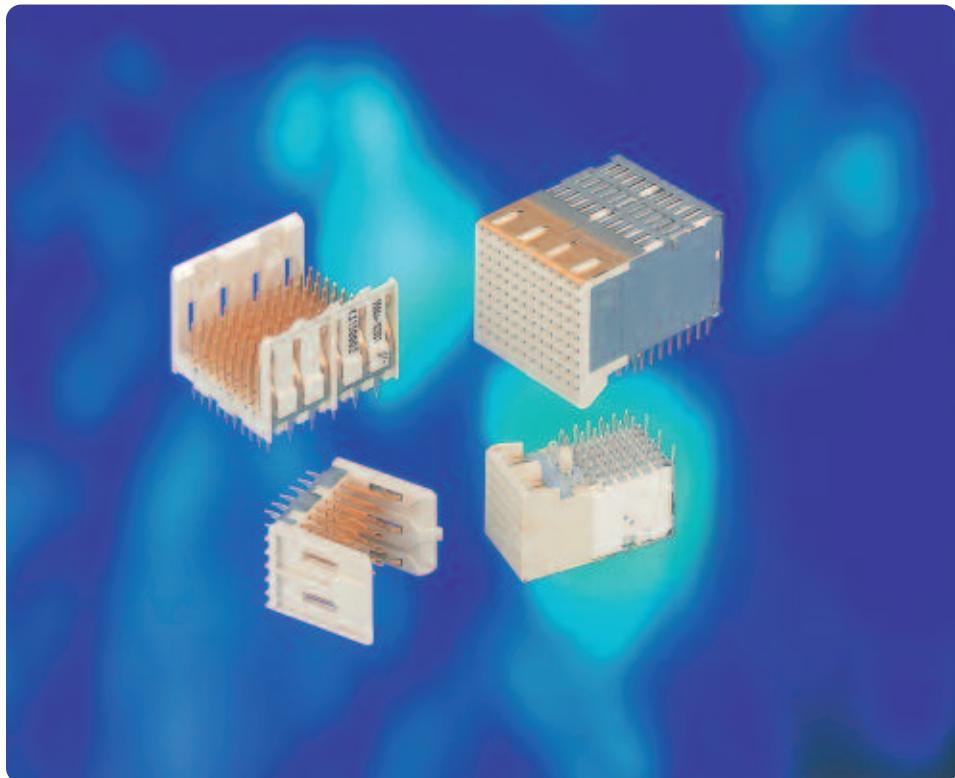
# METRAL® 1000, 2000, 4000

## HIGH SPEED BACKPANEL CONNECTORS

### FEATURES

#### Metral® 1000, 2000, 4000.

- ▶ IEC 61076-4-104 / Telcordia® GR-1217-CORE
- ▶ Optimized Signal Integrity performance for 5 Gb/sec and more
- ▶ Part of the Metral® system to allow performance and cost efficiency
- ▶ 2 mm square pitch for efficient straight vertical and horizontal routing



### APPLICATIONS

- ▶ Servers, data storage devices, switches, transmission.

### MAIN PRODUCTS

### PART REFERENCES

		5 row	8 row
<b>Metral 1000</b>	Header	84817	74983
	Receptacle	84688	74981
<b>Metral 2000</b>	Header	74977	74978
	Receptacle	84688	74981
<b>Metral 4000</b>	Header	55003	55004
	Receptacle	52057	52066
<b>Shrouds</b>	Metral 1000	73993	74993
	Metral 2000	84621	84625

\*Telcordia® is a registered trademark of Telcordia®.



# METRAL®

## 2 MM MODULAR INTERCONNECT SYSTEM

### FEATURES

#### Low-cost application solutions:

- ▶ Press-Fit termination for backplanes
- ▶ Pin-in-Paste terminations for daughter-cards

#### Scalability and flexibility:

- ▶ Mix low and high speed signal modules
- ▶ Mix signal and power modules

#### Power Distribution solutions:

- ▶ Ranging from 3 amps up to 60 amps
- ▶ Straight or inverse solutions

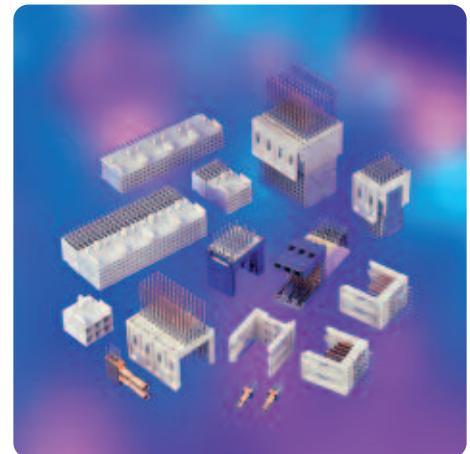
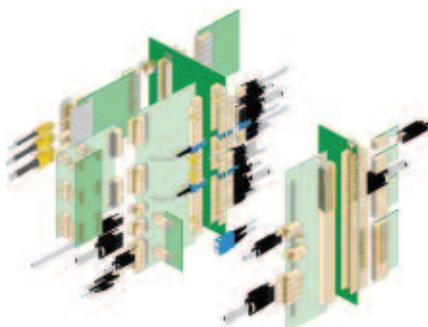
#### Complete I/O solutions:

- ▶ Rear-plug-up or front I/O
- ▶ Shielded or non-shielded
- ▶ Speeds from 2 Mb/s up to 5 Gb/s

- ▶ Designed in accordance with IEC 61076-4-104, performance according Telcordia® GR-1217-CORE

### APPLICATIONS

- ▶ Transmission & switching equipment for data & telecommunications, medical equipment.



### MAIN PRODUCTS

### PART REFERENCES

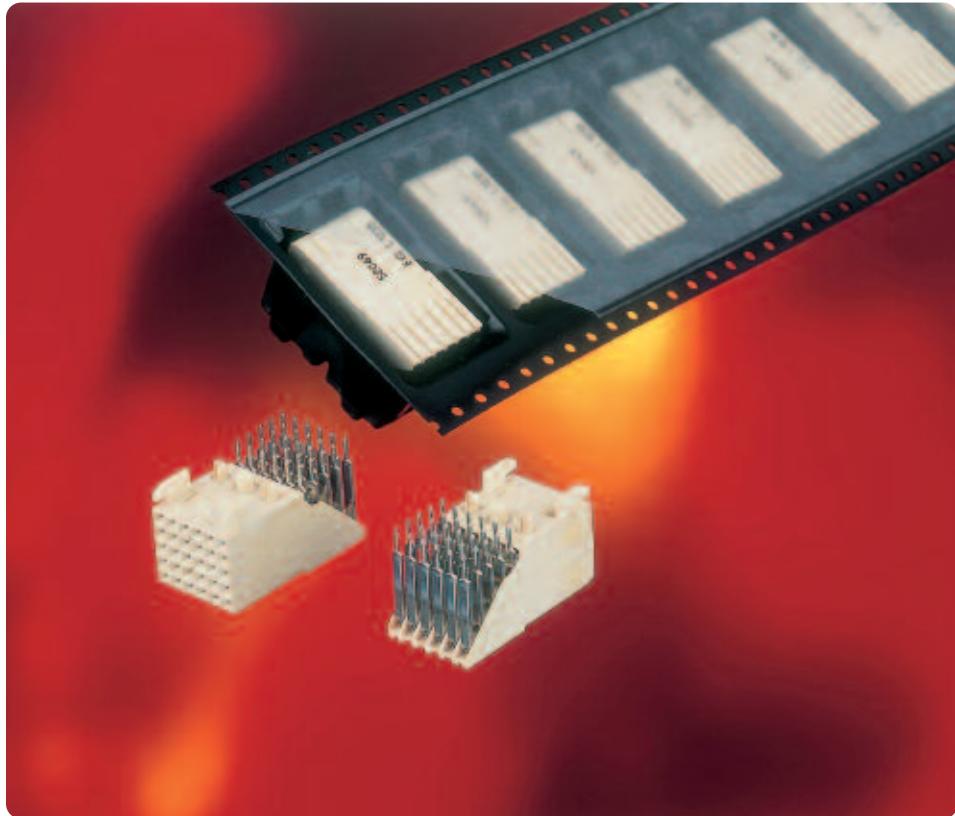
	4-row Signal	4-row Power	5-row Signal	5-row Power
<b>Headers</b>				
Press-Fit	70232	70236	89006	89099
<b>Right angle Receptacles</b>				
Pin-in-Paste	52048	72651	52049	63793
Solder	89035	89039	85863	85876
Press-Fit	HM1F41FDP000H6LF 88945	88949	HM1F51FDP000H6LF 89047	89096
<b>Straight Receptacles</b>				
Press-Fit	85757		85761	
<b>Right angle Headers</b>				
Pin-in-Paste	58361-101LF	Contact FCI	HM1L51LFP000H6LF	Contact FCI
Solder	HM1L41LAP000H6PLF	HM1K41DAP000H6PLF	HM1L51LAP000H6PLF	HM1K51DAP000H6PLF
Press-Fit	HM1L41LDP000H6LF	HM1K41LDP000H6PLF	HM1L51LDP000H6PLF	HM1K51DDP000H6PLF
<b>Cable Connectors</b>				
IDC	72476 / 72477	-	72478 / 72479	-



Further information can be found at:  
<http://www.fciconnect.com/metral>

**METRAL®****TINT PIN-IN-PASTE SIGNAL RECEPTACLES****FEATURES**

- Flat upper surface to enable pickup with vacuum nozzle
- Rigid one-piece housing to accommodate pickup using mechanical gripper
- Good true position of tails and pegs to enable easy mounting
- Available in standard tape and reel packaging

**MAIN PRODUCTS**

<b>4x6</b>	Right angle receptacle
<b>5x6</b>	Right angle receptacle

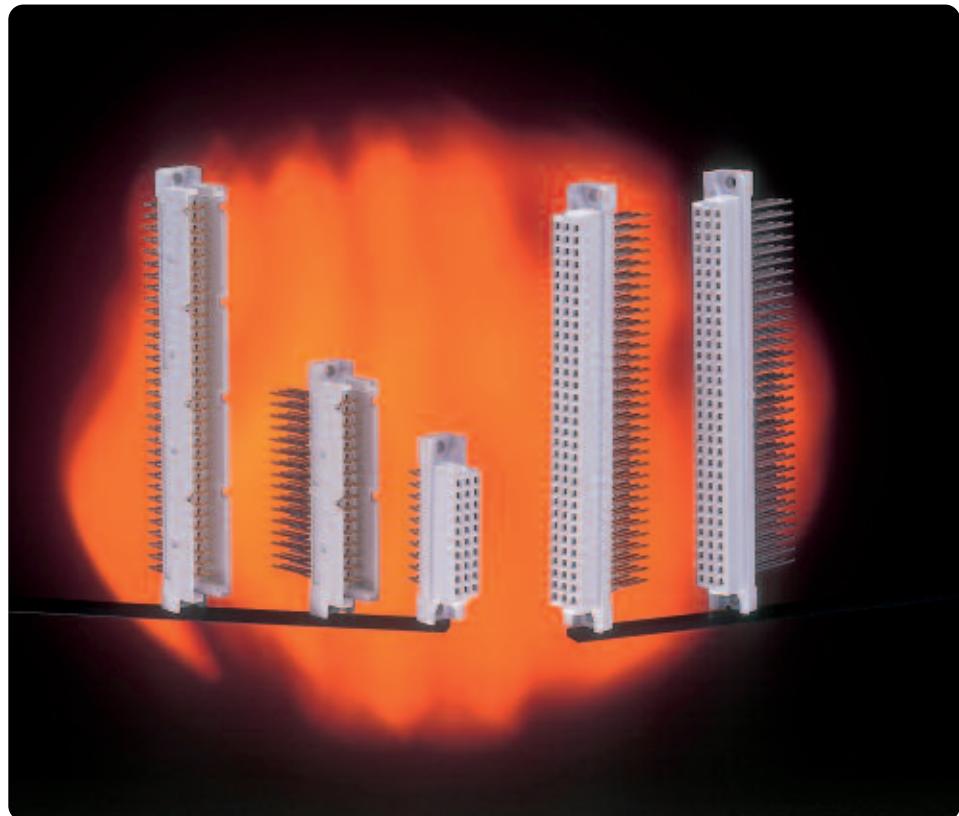
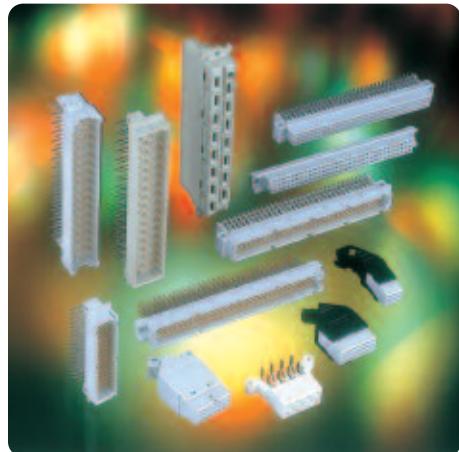
**PART REFERENCES**

52048-101LF
52049-101LF

# DIN 41612

## FEATURES

- Standardized per DIN 41612
- Full interconnect system
  - BTB and I/O solutions
  - Signal and power
- Low cost application solutions
  - Press-fit termination, receptacle and header
  - IDC cable termination



## MAIN PRODUCTS

Style B header	Solder to board	86092645113
Style C/2 header	Solder to board	86093487313
Style C header	Solder to board	86093967113
	Press fit	86093967194
Style R header	Solder to Board	86093967814
Style B receptacle	Solder to board	86092646114
Style C/2 receptacle	Solder to board	86093488314
Style C receptacle	Solder to board	86093968114
	Press fit	86093968194
Style R receptacle	Solder to Board	86093968813
IDC cable connector	3 x 3 pos	BPS8B09
	3 x 7 pos	BPS8B21
	3 x 32 pos	BPS8B96

## APPLICATIONS

- Switching & transmission, radio base stations, PBX's.



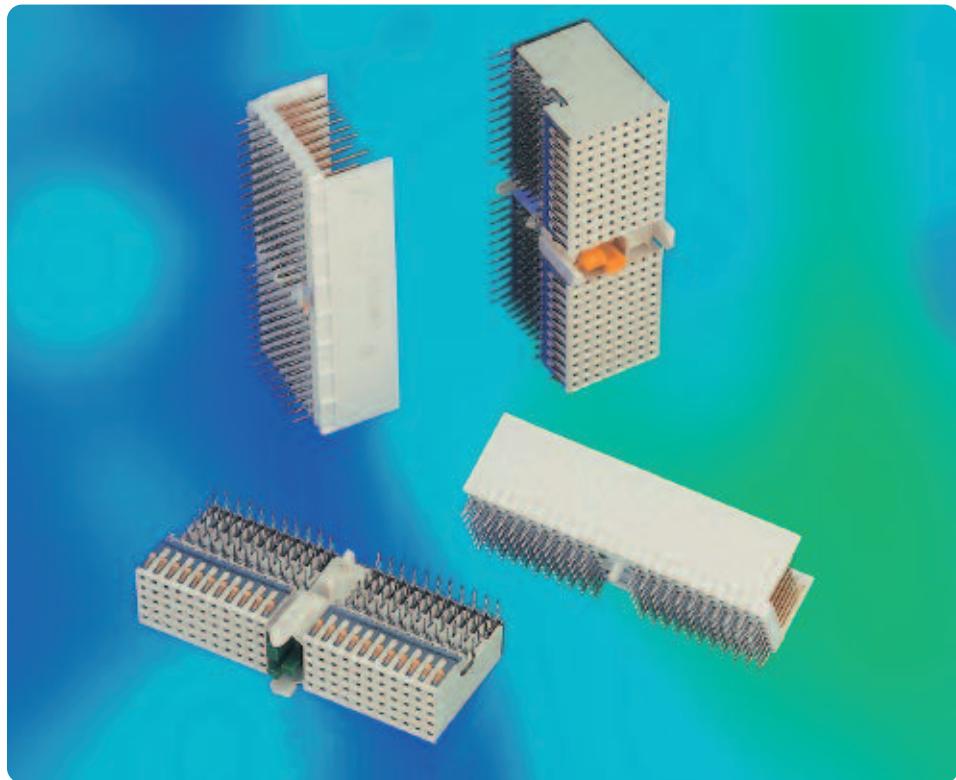
Further information can be found at:  
<http://www.fciconnect.com/din41612>

# MILLIPACS®

## HARD METRIC 2 MM CONNECTORS

### FEATURES

- Modular system with 5+2 row and 8+2 row high density connectors
- Designed in accordance with IEC 917 and IEC 61076-4-101 as well as CompactPCI
- Hard metric board and cable connector offering
- Extended functionalities: staggered contacts, shielding, keying, guiding, power and coax inserts, shrouds.



### MAIN PRODUCTS

#### BOARD CONNECTORS

5 row	straight headers	r/a receptacles	rear shrouds
Type A	HM2P07	HM2R01/HM2R10	HM2H07
Type B	HM2P08	HM2R02	HM2H08
Type B22	HM2P70	HM2R70	HM2H70
Type B19	HM2P71	HM2R71	HM2H71
Type AB	HM2P65	HM2R65	HM2H65
Type AB22	HM2P66	HM2R66	HM2H66
Type AB19	HM2P67	HM2R67	HM2H67
Type C	HM2P09	HM2R03/HM2R30	HM2H09
Type CR	HM2P80	HM2R20/HM2R21	HM2H80
Type L	HM2P10	HM2R04	
Type M	HM2P11	HM2R05/HM2R50	
Type N	HM2P12	HM2R06	

### PART REFERENCES

### APPLICATIONS

- Switches, base stations, embedded computers, medical testing, PLC's.
- All applications requiring high density connections

MAIN PRODUCTS		PART REFERENCES	
BOARD CONNECTORS			
<b>8 row</b>	<b>straight headers</b>	<b>r/a receptacles</b>	<b>rear shrouds</b>
Type D	HM2P87	HM2R87/HM2R81	HM2H87
Type E	HM2P88	HM2R88	HM2H88
Type DE	HM2P95	HM2R95	HM2H95
Type F	HM2P89	HM2R89/HM2R83	HM2H89
Type FR	HM2P82	HM2R82/HM2R90	HM2H82

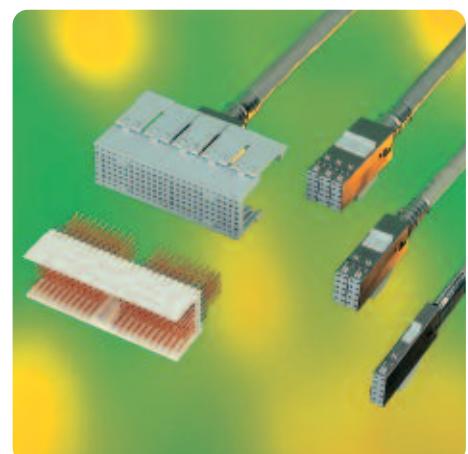
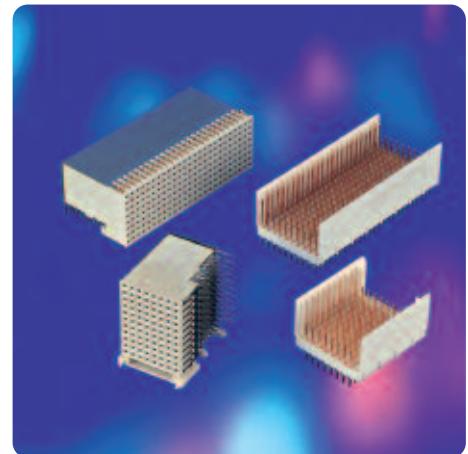
MAIN PRODUCTS		PART REFERENCES	
BOARD CONNECTORS			
<b>5 row</b>	<b>r/a headers (board extensions)</b>	<b>straight receptacles (mezzanine)</b>	
Type A	HM2J07	HM2S10	
Type B	HM2J08	HM2S02	
Type B22	HM2J70	HM2S70	
Type B19	HM2J71	HM2S71	
Type C	HM2J09	HM2S30	

CABLE CONNECTORS	
2x5 non-shielded	HM2C06
4x5 non-shielded	HM2C01
2x5 shielded	HM2C09
4x5 shielded	HM2C10
6x5 shielded	HM2C11
8x5 shielded	HM2C12

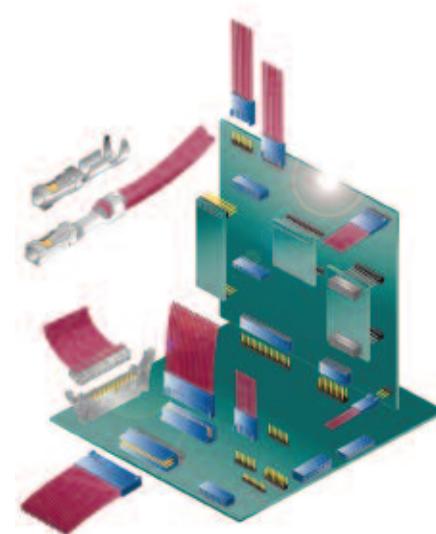
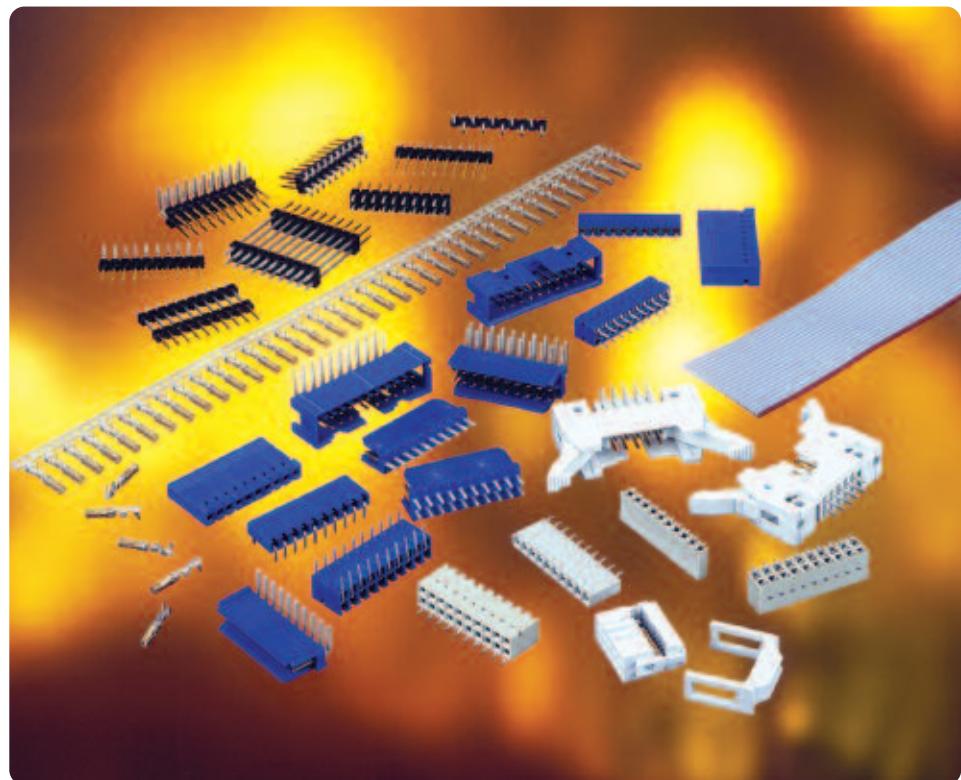
ACCESSORIES	
Coding devices	HM2DK
Esd and power guides	HM2G0
Power inserts	RC12/RM12



# BERGSTIK® / DUBOX™ / QUICKIE® / PV® 2.54 MM MODULAR SYSTEM

## FEATURES

- Versatile 2.54 mm modular system includes board-to-board, wire-to-board and flat cable interconnects, offering complete design flexibility
- Range: 1x2 to 2x36 positions
- Selective plating is reliable and economical
- Easy part number selection at FCI Basics+ web site
- Bergstik unshrouded headers available in custom configurations



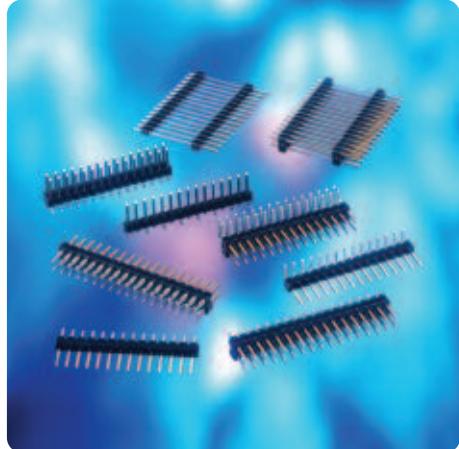
## APPLICATIONS

- Electronic equipment or devices requiring a parallel, planar or perpendicular board-to-board, wire-to-board or flat cable interconnects
- Uses span industry segments (e.g. base stations, measuring equipment, industrial control)

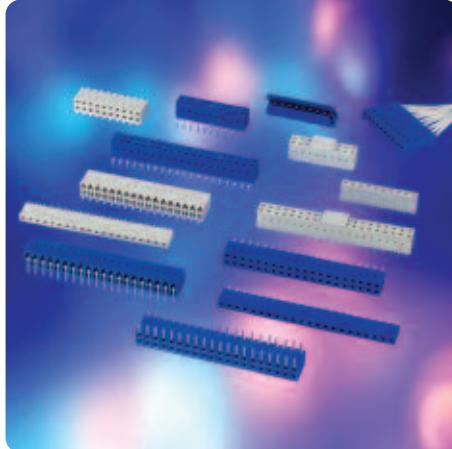


Further information can be found at:  
<http://www.fciconnect.com/basics>  
<http://www.fciconnect.com/bergstik>  
<http://www.fciconnect.com/dubox>  
<http://www.fciconnect.com/quickie>





BergStik®



Dubox™

## MAIN PRODUCTS

### BergStik® Unshrouded Headers

Straight	77311 / 77313 / 95293 / 95278 / 98401 / 67997 / 68000 / 68001 / 68002 / 67996 / 68602
Right-Angle	77315 / 77317 / 68015 / 68020 / 68016 / 68021
Stacking	54111 / 54121 / 54112 / 54122 / 54242

### Dubox™ Shrouded Headers

Straight	76384 / 76385
Right-Angle	76382 / 76383

### PV® Shrouded Headers

Straight	69167 / 69168
Right-Angle	78208 / 78207

### Dubox™ PCB-Mounted Receptacles

Vertical	91601 / 89898 / 91614 / 91615 / 91618 / 71991 / 87606 / 76341 / 76342 / 71991 / 75915 / 71920 / 89891
Horizontal	71607 / 71609 / 89882 / 89883

### Crimp-to-Wire Receptacles

Dubox™ contacts	76347 / 76357
Dubox™ housings	65239 / 65240
PV® contacts	48049 / 48231 / 48047 / 48048 / 48051 / 48045 48050 / 48052 / 48046 / 75543
PV® housings	65039 / 65043 / 65846 / 78211

### Quickie® IDC System

IDC receptacles	71600 / 69830
Eject latch headers	71918 / 71922
Low profile headers	75867 / 75869 / 10056844 / 10056845 / 72454

### Shunts

68786 / 69145 / 63429

## PART REFERENCES



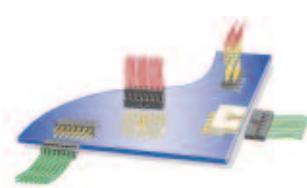
Further information can be found at:  
<http://www.fciconnect.com/basics>

# MINITEK™

## 2 MM MODULAR SYSTEM

### FEATURES

- ▶ Versatile 2 mm modular system includes board-to-board, wire-to-board and flat cable interconnects, offering complete design flexibility
- ▶ Up to 38% space saving compared to 2.54 mm pitch
- ▶ Range: 2x2 to 2x25 positions
- ▶ Early point-of-contact on low profile receptacles enhances reliability
- ▶ Selective plating is reliable and economical
- ▶ Easy part number selection at FCI Basics+ web site



### APPLICATIONS

- ▶ Electronic equipment or devices requiring a parallel or perpendicular board-to-board, wire-to-board or flat cable interconnects
- ▶ Uses span industry segments. For example: mobile base stations, measuring equipment, industrial control, computers

### MAIN PRODUCTS

Unshrouded Headers

### PART REFERENCES

57102 / 57202 / 98423 / 10072353 /  
10075024

Shrouded Headers

98414 / 98424 / 98464 / 10075025 /  
10072354

Stacking Headers

59112 / 59132 / 59202 / 59362

PCB receptacles (4.5 and 2.3mm)

55510 / 55508 / 91596 / 63453

IDC receptacles

89361 / 89947

CTW housings

69307 / 90311

CTW contacts

77138 / 77139

Shunts

86730



Further information can be found at:  
<http://www.fciconnect.com/basics>  
<http://www.fciconnect.com/minitek>



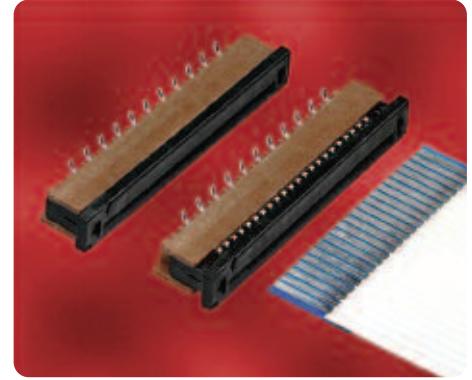
# FFC - FPC CONNECTORS

## FEATURES

- Suitable for FFC / FPC / CIC cable
- 0.30 - 0.40 - 0.50 - 1.00 - 2.54 mm pitch sizes
- Highly reliable Gas Tight High pressure (GTH) contact system
- Zero Insertion Force (ZIF) and Low Insertion Force (LIF) options
- Straight and Right-Angle versions
- Surface Mount and Through Hole

## APPLICATIONS

- LC Display to Board connections
- Interior Automotive electronics
- Membrane Switches
- DVD / HDD connection
- Mobile phone and Digital camera



## MAIN PRODUCTS

		TYPE	ORIENTATION	SERIES	CONTACT LOCATON	PART REFERENCES
<b>0.3 mm Pitch</b>	ZIF/LIF SMT	Right angle	SFY	Lower	62789	
		Right angle	SFYL	Lower	10013057	
		Right angle	SFYL	Upper	10017251	
		Right angle	YLL	Lower	10061122	
		Right angle	YLL	Upper	10064555	
<b>0.4 mm Pitch</b>	ZIF SMT	Right angle	GLH	Lower	10051806	
<b>0.50 mm Pitch</b>	ZIF SMT	Right angle	SFVL	Upper or Lower	59453	
		Right angle	SFV	Upper or Lower	SFVxxR	
		Straight	SFV-S		62674	
		Right angle	OPU	Upper or Lower	62684	
		Right angle	SFVA	Upper and Lower	10014265	
		Right angle	VLL	Lower	10051922	
		Right angle	VLH	Lower	10042867	
<b>1.00 mm Pitch</b>	ZIF SMT	Right angle	SFW	Upper or Lower	SFWxxR	
		Straight	SFW		SFWxxS	
	Non-ZIF SMT	Right angle	HFW	Upper or Lower	HFWxxR	
		Straight	HFW		HFWxxS	
	ZIF DIP	Right angle	SLW	Upper or Lower	SLWxxR	
		Straight	SLW		SLWxxS	
<b>2.54 mm Pitch</b>	Non-ZIF DIP	Right angle	HLW	Upper or Lower	HLWxxR	
		Straight	HLW		HLWxxS	
	Duflex contacts and housings					76785 / 67013 / 66987
	Clincher pre-assembled snap-shut system (mates to PCB headers)					66226 / 65801 / 10027313 / 10022753 / 67516 / 67368
	Shrouded PCB headers for 2.54 mm Clincher™ receptacle					95735 / 95736



Further information can be found at:  
<http://www.fciconnect.com/flex>

# MEG-ARRAY®

## HIGH SPEED MEZZANINE CONNECTORS

### FEATURES

- RoHS Compliant (Lead-Free)
- Ball Grid Array (BGA) termination for process friendly attachment
- .050" x .050" BGA interface pitch optimizes routing and electrical performance
- Stack Heights available from 4mm to 14mm (2mm increments)
- Connector sizes of 81 signals to 528 signals providing 80 usable signals per linear cm (205 signals per linear inch) allow for optimization of board space and signal requirements
- 10 Gb/s differential pair performance at less than 1% cross-talk meets the needs of high speed mezzanine applications
- Meets Telcordia GR-1217-CORE and NPS-25298-2 specifications for utilization in telecom applications

- Demonstrated solder joint reliability of greater than 22 years life (per IPC-SM-785) is unmatched for a BGA mezzanine connector
- Polarized design assures proper mating of the connector
- Back to Back testing connector (Interposer) available upon special request

### APPLICATIONS

#### Communications

- Transmission
- Access
- Switching
- Optics
- Networking

#### Data

- Servers
- Storage



#### I&I

- Industrial controls & equipment
- Analytical & diagnostic
- Medical

### MAIN PRODUCTS

### PART REFERENCES

Size	Type	Total Mated Height					
		4.0 mm	6.0mm	8.0 mm	10.0 mm	12.0 mm	14.0 mm
81 Position 9 x 9	Plug	55714					
	Receptacle	55715					
100 Position 10 x 10	Plug	84512					
	Receptacle	84513					
200 Position 10 x 20	Plug	84516	84516	84516	84530	84530	84530
	Receptacle	84517	55724	84535	84517	55724	84535
300 Position 10 x 30	Plug	84500	84500	84500	84578	84578	84578
	Receptacle	84501	84502 for 5.5 mm BTB	84553	84501	84502 for 11.5 mm BTB	84553
400 Position 10 x 40	Plug	84740	84740	84740	84520	84520	84520
	Receptacle	74221	74388	74390	74221	74388	74390
240 Position 8 x 30	Plug	74213	74213				
	Receptacle	74217	55755				
528 Position 12 x 44	Plug		10022671				
	Receptacle		10026846				

\*Telcordia® is a registered trademark of Telcordia®.

Further information can be found at:  
<http://www.fciconnect.com/megarray>



# GIG-ARRAY®

## HIGH SPEED MEZZANINE CONNECTORS

### FEATURES

- RoHS compliant (Lead-Free) options are available
- Optimized design for utilization in high-density, high-speed mezzanine applications
- Ball Grid Array (BGA) termination for process friendly attachment
- 1mm x 0.65mm BGA interface pitch optimizes routing and electrical performance
- Stack Heights available from 15mm to 40mm provide mezzanine design flexibility
- Connector sizes of 200 and 296 signals providing 62 signal contacts per linear cm (158 signal contacts per linear inch) allow for optimization of board space and signal requirements
- 100 Ohm differential pair matched impedance assures consistent high speed performance
- Up to 10 Gb/s differential pair performance

- Very low cross-talk (VLC) design of less than 1% allows for required signal integrity performance
- Dual beam signal contacts provide two points of contact increasing product reliability
- Polarized design assures proper mating of the connector

### APPLICATIONS

#### Communications

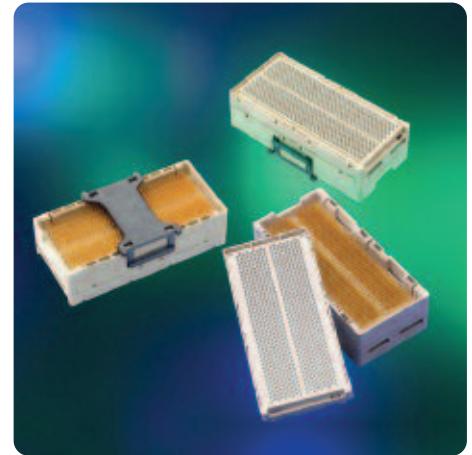
- Transmission
- Access
- Switching
- Optics
- Networking

#### Data

- Servers
- Storage

#### I&I

- Industrial controls & equipment



### MAIN PRODUCTS

### PART REFERENCES

#### 200 Positions\*

		Plug Height**					
		10 mm 55737	12mm 10026802	13mm 10060910	15mm 55738	20mm 55739	25mm 10054783
Receptacle Height**	5mm 55740	15 mm	17mm	18mm	20mm	25mm	30mm
	15mm 10060912	25 mm	27mm	28mm	30mm	35mm	40mm

#### 296 Positions\*

		Plug Height**					
		10 mm 55720	12mm 10026804	13mm 10060911	15mm 55700	20mm 55727	25mm 10054784
Receptacle Height**	5mm 55701	15mm	17mm	18mm	20mm	25mm	30mm
	15mm 10060913	25 mm	27mm	28mm	30mm	35mm	40mm

\*Signal contacts only, ground contacts not included

\*\*Base part number listed under connector height

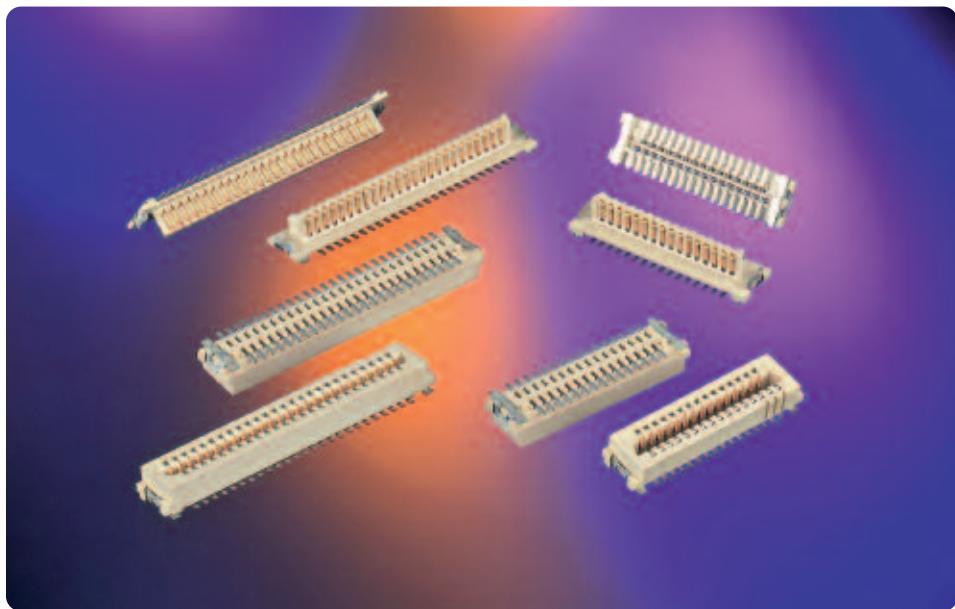


Further information can be found at:  
<http://www.fciconnect.com/gigarray>

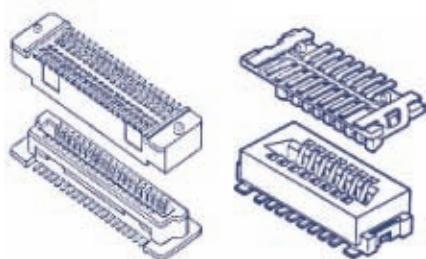
# CONAN® 1.0 MM AND BERGSTAK® 0.8 MM HIGH DENSITY, BOARD-STACKING CONNECTORS

## FEATURES

- ▶ Parallel board-to-board interconnects
- ▶ Surface mount
- ▶ Blade-on-beam contacts allow “peeling” and prevent “stubbing”
- ▶ BergStak® 0.8 mm pitch connectors offer 5 mm-16 mm stack heights and 40-200 contacts (in increments of 20)
- ▶ Conan® 1.0 mm pitch connectors offer 4.15 mm-7 mm stack heights with options for 9, 11, 15, 21, 25, 31, 41, 51 or 69 contacts. Snap together for sure mating
- ▶ Reliable & economic selective plating
- ▶ Tape & reel or tube packing (with or without cap)



Conan® 1.0 mm system



BergStak® 0.8 mm system

## APPLICATIONS

- ▶ Mobile phones, PDA's, Pagers
- ▶ Digital cameras, scanners
- ▶ Mobile, personal and high end computing
- ▶ Servers and routers
- ▶ Office equipment
- ▶ Measuring equipment, Industrial control

## MAIN PRODUCTS

### BergStak® system

Receptacle

## PART REFERENCES

61082

Header

61083

### Conan® system

Receptacle

91921 / 91931

Header

91901 / 91911

Further information can be found at:  
<http://www.fciconnect.com/conan>  
<http://www.fciconnect.com/bergstak>



# RIB-CAGE™

## HIGH DENSITY .050" PITCH CONNECTOR SYSTEM

### FEATURES

- Exclusive Rib-Cage™ multi-point receptacle contacts provide optimal reliability in high vibration and shock-prone applications.
- High density 1.27mm (.050 in.) x 1.27mm (.050 in.) system for connecting parallel PCBs
- Multiple stack height options
- Polarization option prevents mis-mating
- Surface mount and through-hole attachment options



### MAIN PRODUCTS

Headers	Vertical Surface Mount	87409 / 90098 / 87849 / 93221
	Right Angle Through Hole	87402
Receptacles	Vertical, Surface Mount	87021 / 87022 / 87023 / 87024

### PART REFERENCES

### APPLICATIONS

- Shock resistant and vibration-resistant electronics
- Medical and Instrumentation
- Handheld testing
- Electronic subassemblies attached to motors, fans and mechanical devices

Reference to data sheet: 950521-010



Further information can be found at:  
<http://www.fciconnect.com/ribcage>

# COMPRESSION CONNECTORS

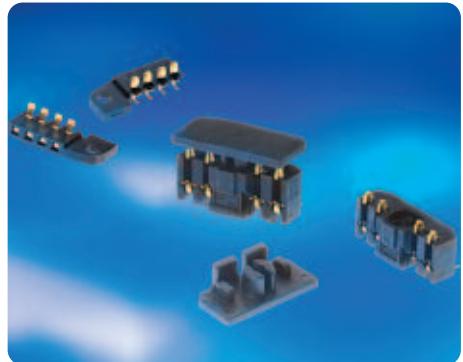
## ONE-PIECE BOARD TO BOARD

### FEATURES

- FCI provides a wide range of SMT miniature compression connectors.
- With different pitches, stacking heights and number of contacts, the one-piece board-to-board connector range from FCI will cover most of your needs.
- RoHS compliant

### APPLICATIONS

- Mobile Phones, PDA, Smart Phones: LCD and keypad
- Digital Camera, PVR
- Applications involving spin motor: HDD, DVD, CD-drives



### MAIN PRODUCTS

### PART REFERENCES

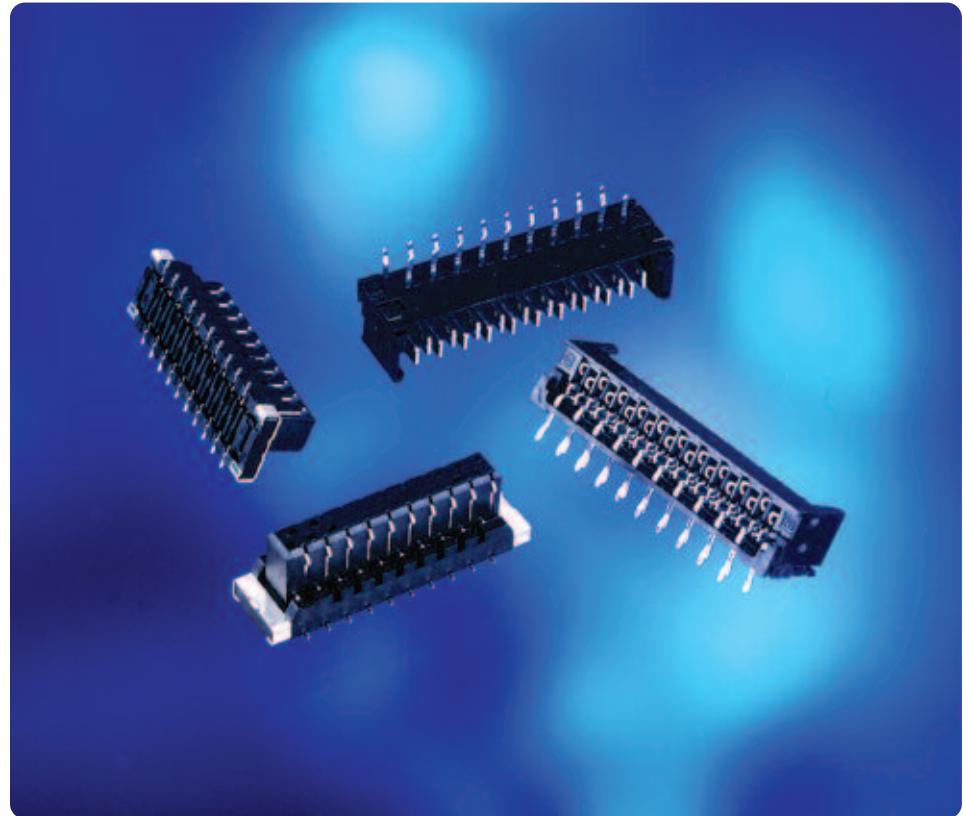
	HEIGHT (mm)	PITCH (mm)	NUMBER OF CONTACTS	PART REFERENCES
	2.38	1.1	4	10044351
	1.00	1.1	4	10038772
	1.5	1.2 staggered	4	10032069 /
	2.65	0.625 staggered	8;18 - 22	55527 10014599 / 10035434
	2.1	1.8 staggered	12 ; 14	10044398
	0.6	1.4	20	10041423



# FLOATING BOARD-TO-BOARD

## FEATURES

- ▶ BTFN (1.25 mm pitch) and BTFW (1.0 mm)
- ▶ Surface mount and Through mount versions
- ▶ Straight and Right Angle versions
- ▶ Reliable mechanical performance due to wide floating allowance (in pitch, width and Z direction)
- ▶ Easy handling due to rigid guiding design



## MAIN PRODUCTS

			SERIES*
<b>BTFN</b>	Plug	Right Angle, Through Hole	BTFN
		Right Angle, Through Hole & Mounting Latch	BTFN
	Receptacle	Vertical, Through Hole	BTFN
		Vertical, SMT	BTFN
<b>BTFW</b>	Plug	Vertical, SMT	BTFWXXP-3SSTE1LF
	Receptacle	Vertical, SMT	BTFWXXR-3SSTE1LF
		Right Angle, SMT	BTFWXXR-3RSTE1LF
		Right Angle, Through Hole	BTFWXXR-3RD7LF

"XX" is a placeholder for the number of positions

## APPLICATIONS

- ▶ Consumer Electronics: e.g. Automobile AV systems and navigation systems, Automobile CD and MD players, including chargers, VCRs, DVD and CD players, Set-top boxes, Satellite tuners
- ▶ Computer Peripherals: CRT and LCD monitors
- ▶ POS terminals, barcode scanners, other handheld equipments



Further information can be found at:  
<http://www.fciconnect.com/boardmate>

# DDR2 MEMORY MODULE SOCKETS

## FEATURES

- Support convenient, add-on memory expansion with standard memory module assemblies
- Connectors provide mechanical voltage keying and end latches for module retention and ejection.
- DDR2 FB-DIMM connectors accept module assemblies that conform to JEDEC MO-256
- DDR2 DIMM connectors accept assemblies that conform to JEDEC MO-237.
- 240-position FB-DIMM and DIMM connectors feature a low insertion-force socket design that requires less than 24 pounds force for module installation.
- Available solder tail options for vertical DDR2 DIMM connectors support use on 1.58mm (.062") or 2.36mm (.093") thick motherboards, while press-fit options extend use to thicker motherboards.
- Contact design protects against stubbing and supports high-speed serial differential signaling at data rates extending to 4.8 Gb/s for FB-DIMM.
- DDR2 SO-DIMM connectors offer keying options for standard and reverse module orientation. The 200-position horizontal sockets accept modules that conform to JEDEC MO-224.
- RoHS-Compliant and "Lead-free" process-compatible options are available to aid compliance with lead elimination initiatives.



## APPLICATIONS

### Data

- Servers
- Workstations
- Desktop PCs
- Notebook PCs

### Communications

- Routers
- Switches
- Base Stations

### Industrial

- Embedded systems

## MAIN PRODUCTS

<b>240 position</b>	Vertical DDR2 DIMM	10005639 / 10023061
	Vertical DDR2, press-fit	10034542
	Vertical DDR2, low-profile	10052286
	DDR2 FB-DIMM	10037402 / 10057443
<b>200 position</b>	DDR2 SO-DIMM	10033853 / 10033854
<b>144 position</b>	16b/32b SO-DIMM	10062086

## PART REFERENCES

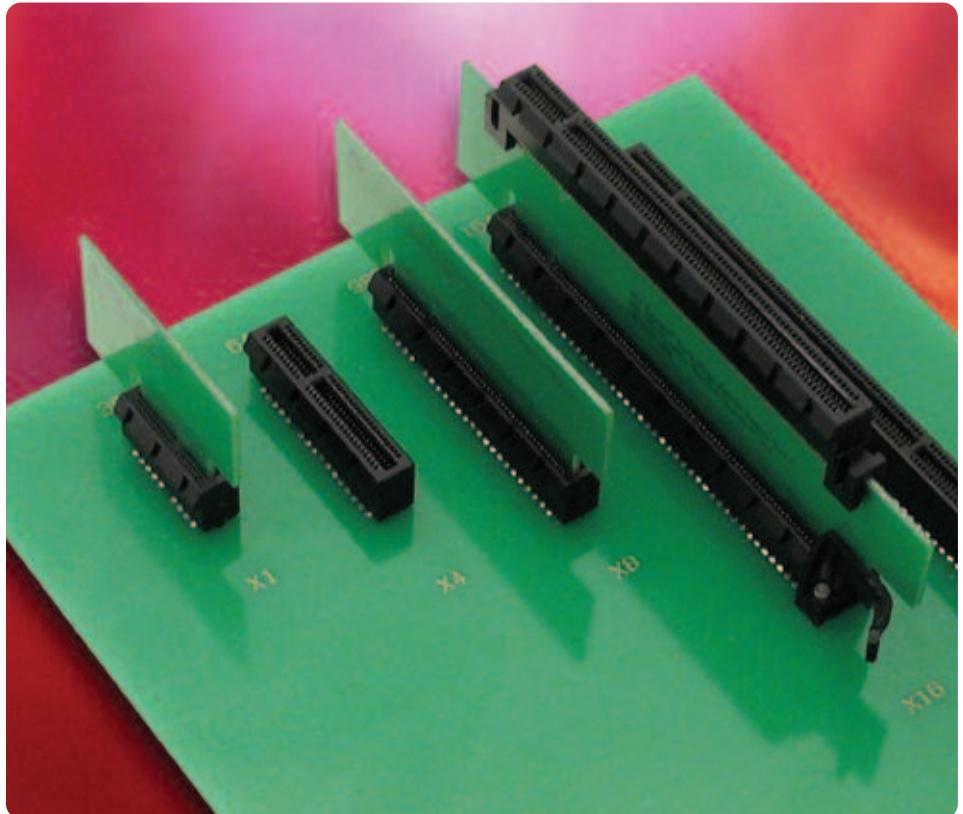
Further information can be found at:  
<http://www.fciconnect.com/ddr>



# CARD EDGE CONNECTORS FOR PCI EXPRESS® TECHNOLOGY

## FEATURES

- Base connector range offers 1, 4, 8, or 16 serial PCI Express links to scale to different bandwidth requirements
- Each serial link supports 2.5 Gb/s (per direction) in 100Ω Gen1 systems and 5.0Gb/s in 85Ω PCI Express Gen2 systems
- Options for through-hole solder, press-fit, or surface-mount termination
- Straddle-mount connectors feature mounting ears for additional mechanical support and a molded post to assure proper alignment to the host PCB
- Options for rugged stand-alone mechanisms or a x16 connector with an integrated retention arm to retain graphics cards during shipping and handling
- Larger 200, 230 (x24), and 280-position vertical connectors accept server riser cards
- ExpressModule™ versions provide an expanded lead-in window for blind-mate server applications
- RoHS-compliant connector versions are available



## MAIN PRODUCTS

MAIN PRODUCTS	PART REFERENCES
x1, x4, x8 or x16 suitable for wave soldering	10018784
x1, x4, x8 or x16 suitable for reflow soldering	10018783
x1, x4, x8 or x16 vertical, press-fit	10039755
x1, x4, x8 or x16 surface-mount (SMT)	10061913
x1, x4, x8 or x16 straddle-mount for extender cards	10025026
200-position vertical, solder version	10054652
230-position (x24) vertical, solder version	10063960
280-position vertical, solder version	10027747 / 10037901/ 10057596 / 10066356
280-position vertical, press-fit	10044013
x8 vertical to mount on x16 PCB layout	10036767
x16 Integrated Type PCI Express*	10046742
Graphics card retention mechanism	10035991 / 10042618

## APPLICATIONS

### Data

- Desktop PCs
- Servers
- Workstations

### Industrial

- SHB Express backplanes per PICMG 1.3 specification

PCI Express® and ExpressModule™ are trademarks of PCI-SIG. SHB Express™ is a trademark of PICMG

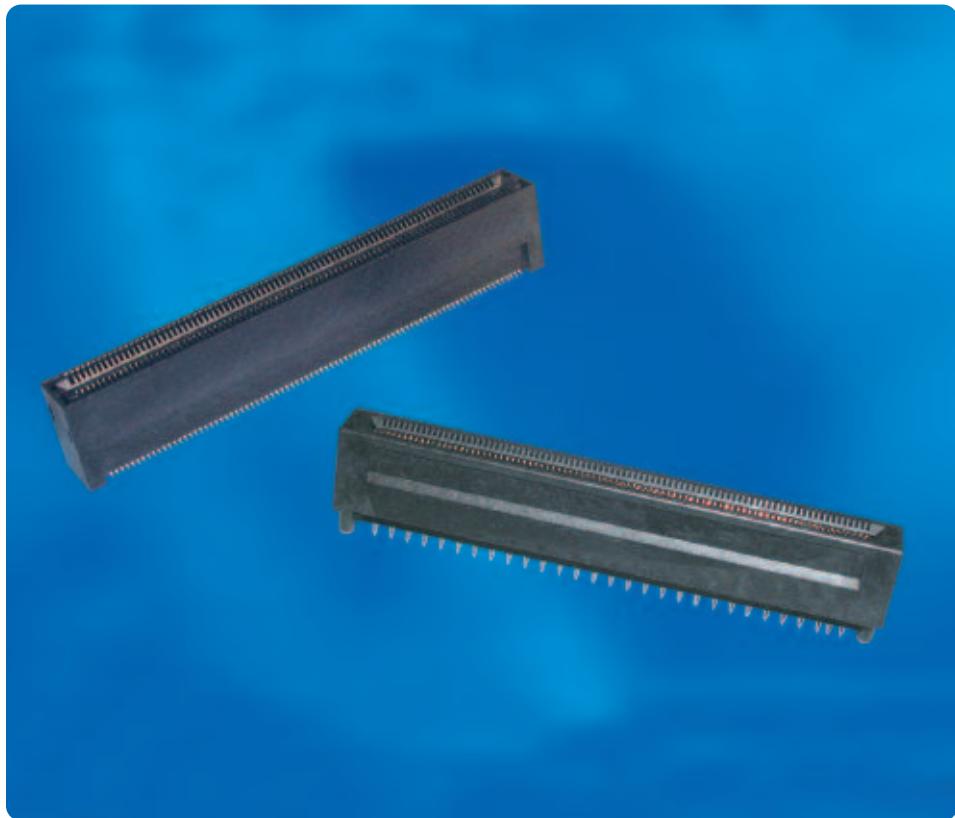


Further information can be found at:  
<http://www.fciconnect.com/pciexpress>

# CARD EDGE CONNECTORS FOR MICRO**TCA**™ APPLICATIONS

## FEATURES

- FCI connectors are in full compliance with the MicroTCA standard developed within PICMG®
- Designed to enable AdvancedMC™ (AMC™) modules to plug directly to a backplane
- 170 position card edge interface with 0.75mm contact pitch
- Options for press-fit or surface-mount (SMT) termination
- Metal retention clips at ends of SMT connector provide additional mechanical strength after soldering
- Very low loss and crosstalk for low-voltage differential signaling at data rates up to 12.5 Gb/s per lane
- SMT footprint allows for increased flexibility in routing PCB traces
- Telcordia UE compliant
- Lead-free and RoHS-compatible



## MAIN PRODUCTS

### Termination style

Surface Mount	10058835
Press Fit	10058831

### Additional support materials

SPICE models	visit <a href="http://fciconnect.com">fciconnect.com</a>
3D view models	visit <a href="http://fciconnect.com">fciconnect.com</a>
Test back planes	contact FCI

## PART REFERENCES

## APPLICATIONS

### Telecommunications

- Radio Base Stations
- RF antenna units
- IP gateways

### Datacommunications

- Enterprise switches
- Customer premises equipment (CPE)

PICMG®, AdvancedMC™, AMC™, and MicroTCA™ are trademarks of the PCI Industrial Computer Manufacturers Group.

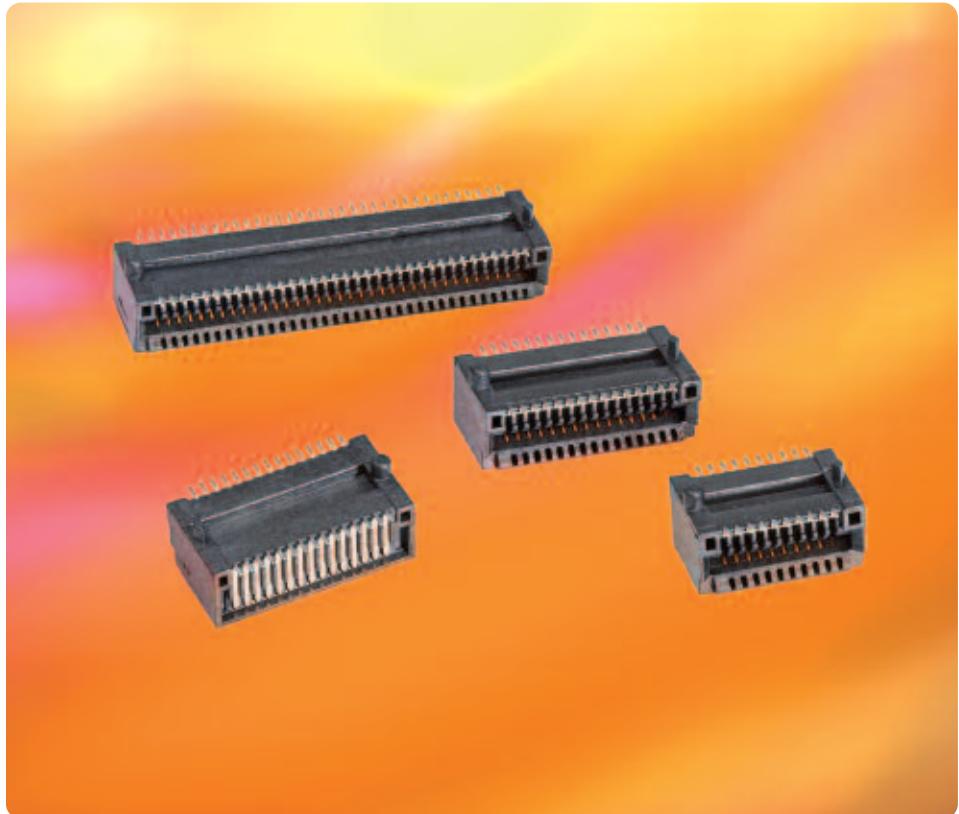
Further information can be found at:  
<http://www.fciconnect.com>



# CARD EDGE CONNECTORS FOR SFP, XFP AND XENPAK APPLICATIONS

## FEATURES

- 0.8mm pitch connectors accept 1.0mm thick PCBs used in MSA-compliant pluggable transceiver modules
- Available 20, 30 and 70-position sizes provide interfaces for SFP, XFP, XENPAK, X2 or XPAK modules
- Surface-mount (SMT) termination
- Excellent electrical performance to 6 GHz
- Formed contacts provide smooth contact surfaces for improved reliability
- Alignment posts aid placement during board assembly
- SMT design and short posts enable connectors to be placed "belly-to-belly" on opposite sides of a host board
- Tape-on-reel packaging to support automated placement
- RoHS-compatible



## MAIN PRODUCTS

<b>SFP</b>	20 position
<b>XFP</b>	30 position
<b>XENPAK, X2, XPAK</b>	70 position

## PART REFERENCES

10056847-XY1LF
10056847-XY2LF
10056847-XY3LF

## APPLICATIONS

### Communications

- Switches
- Routers
- Network interface cards (NICs)
- Host bus adapters (HBAs)

### Data

- Servers
- Storage systems
- Storage controller cards



Further information can be found at:  
<http://www.fciconnect.com>

# SAS

## SERIAL ATTACHED SCSI

### FEATURES

- 29-position SAS receptacle and plug connectors enable the high-speed, Serial Attached SCSI (SAS) hard disk drive (HDD) interface that is replacing the SCSI
- designed to support differential signaling, initially at speeds of 3 Gb/s and evolving to 6 Gb/s
- Connectors conform to SFF-8482
- Provide dual signal ports (7 contacts/ port) and 15 contacts for power
- SAS receptacles also accept SATA drives
- Designed to support hot-plugging and blind-mating of HDDs
- Connector retainers provide additional mechanical strength after soldering
- RoHS-compliant and compatible with lead-free processing temperatures

### APPLICATIONS

- Data**
  - Servers
  - Server and storage blades
  - External storage systems
  - HDDs
  - HDD carriers
- Communications**
  - Processor and storage blades
  - Mezzanine cards
- Industrial, Instrumentation & Medical**
  - Embedded system boards



### MAIN PRODUCTS

		PART REFERENCES
Drive Device Plug	Straddle Mount	10054761 Contact FCI for customization
Adapter Plug	Vertical, SMT	10031193
	Vertical, SMT (With Rivet Holes)	10045105 (Also: see SATA 10045103)
	Right-angle, SMT	10034524
Host Receptacle	Vertical, Wide Base, Hybrid Footprint	10036876
	Vertical, Wide Base, Thru Hole	10039748
	Vertical, Press Fit	10031077
	Vertical, Wide Base, SMT	10039845
	Vertical, SMT	10031567
	Vertical, Wide Base, Press Fit	10038064 / 10045782
	Right-Angle, SMT	10035202
	Right-Angle, SMT, Reversed	10036587
	Right-Angle, High Rise, SMT	10044002
4 Lane Internal Plug	Vertical, Press Fit	10028542
	Vertical, SMT	10045646
	Vertical, Thru Hole	10044625
	Vertical, Thru Hole (Half-Moon Peg)	10053670
4 Lane External I/O		See FCI EyeMax family - thumbscrew version



# SATA

## SERIAL ATA I/O

### FEATURES

- For implementation of high-speed Serial-ATA storage interface
- Designed to support differential signaling, initially at speeds of 1.5 Gb/s and evolving to 3.0 Gb/s
- Connectors meet requirements of Serial ATA Specification
- 22-position connectors provide 7 contacts for signal port and 15 contacts for power
- Designed to support hot-plugging and blind-mating of HDDs
- 7-position signal plugs for internal cable connections
- Connector retainers provide additional mechanical strength after soldering
- RoHS-compliant and compatible with lead-free processing temperatures

### APPLICATIONS

- Data**
  - Notebook & Desktop PCs
  - Servers
  - Server and storage blades
  - External storage systems
  - HDDs
  - HDD carriers
- Communications**
  - Processor and storage blades
  - Mezzanine cards
- Industrial, Instrumentation & Medical**
  - Embedded system boards
- Consumer**
  - Audio/video storage



### MAIN PRODUCTS

#### 7-Position Signal Plug, 2 Wall

Right-Angle, SMT	59335
Vertical, Thru Hole	59333 / 10028860
Vertical, SMT	59334

#### 7-Position Signal Plug, 4 wall

Vertical, Thru Hole	10035690
Vertical, SMT	10035691

#### 7-Position Signal Plug, 3 wall

Right-Angle, SMT	10035692
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#### External Signal Plug, 7-Position

Right-Angle, Thru Hole	10067172
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#### 22-Position Device Plug

Straddle Mount, SMT	10035541
Right-Angle, SMT (Interposer)	10039651
Right-Angle, SMT (4 Wall Latch Feature)	10052369
Right-Angle, Thru Hole (4 Wall Latch Feature)	10038031
	Contact FCI for customization

#### 22-Position Host Receptacle

Vertical, SMT	10029065
Vertical, SMT (With Rivet Holes)	10045103
Vertical, Thru Hole	10017660
Vertical, Press Fit	10022676
Vertical, Cable Solder Tab	10043820
Right-Angle, SMT	10029364 / 10031659 / 10034814

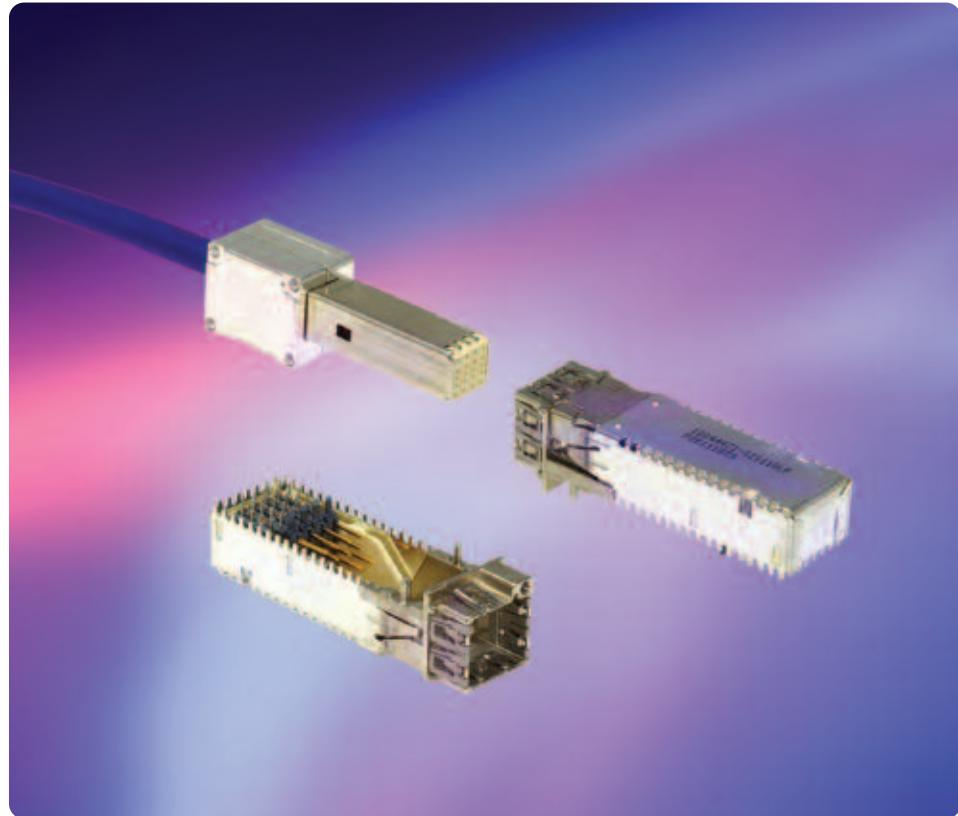
### PART REFERENCES



## DENSISHIELD™ I/O SYSTEM

### FEATURES

- 8-pair connectors can be mounted side by side on 12.5mm pitch enabling multiple I/O ports along a card edge
- Robust strain relief with short cable exit enables close spacing between chassis panel and cabinet door or wall
- Low vertical profile allows use in systems having 15mm pitch card slot spacing
- Low crosstalk between differential pairs with controlled 100-ohm impedance to match 100-ohm shielded pair cable
- Crimp ferrule system reliably terminates EMC shield of cable to connector covers
- Connects EMC shield to chassis panel and provides shielding to PCB level
- Signal ground is isolated from EMC ground
- SMT reflow-compatible PCB connector
- Dual-beam contact system provides redundancy and long term reliability
- RoHS-compliant



### MAIN PRODUCTS

PCB Mount Board Connector

### PART REFERENCES

10044471

Cable Mount Plug Kit

10044473

Cable assemblies

10054999

### APPLICATIONS

#### Data

- Servers
- Storage systems

#### Communications

- Switches
- Routers
- Base stations

#### Medical

#### Instrumentation

#### Test equipment



# EYEMAX®

## HIGH SPEED I/O SYSTEM

### FEATURES

- Selected as the external I/O copper link for Infiniband®, 10G Fibre4 Channel, 10G Base-CX4 Ethernet, and SFF-8470 for Serial ATA or Serial-Attached SCSI (SAS)
- Die-cast shells for enhanced EMI shielding performance
- Latch or thumbscrew locking versions
- 4x (8 differential pairs) and 12x (24 pairs) versions available
- High-speed data rates of >2.5 Gb/s per link/channel
- Custom paddle-card design for improved crosstalk performance
- Impedance-controlled paddle card with capability to upgrade for equalization
- Cable assembly offering available with various high-speed raw cable sources
- Right-angle, surface-mount PCB receptacles with choice of board and panel mounting options
- RoHS compliant



### MAIN PRODUCTS

#### Receptacles

4x Latch type, clip mount	58368
4x Latch type, screw mount	58369
4x Thumbscrew version, screwlock mount	10009629
12x Latch type, clip mount	58366
12x Latch type, screw mount	58367
12x Thumbscrew version, screwlock mount	10009626

#### Plug Kits for cable assemblies

4x Latch type	58441
4x Thumbscrew version	10013923
4x Un-equalized plug component	58638-001
4x Equalized plug component	10026692
12x Latch type	58442
12x Thumbscrew version	10014004
12x Un-equalized plug component	58638-004
12x Equalized plug component	10026694

### PART REFERENCES

### APPLICATIONS

#### Data

- Servers
- Server clusters
- Storage systems
- HPC and data centers

#### Communications

- Switches
- Routers

#### Industry standards

- Infiniband architecture
- Infiniband DDR
- 10G Fibre Channel
- 10G Base-CX4 Ethernet (IEEE 802.3ak)
- SFF-8470 for SATA or SAS



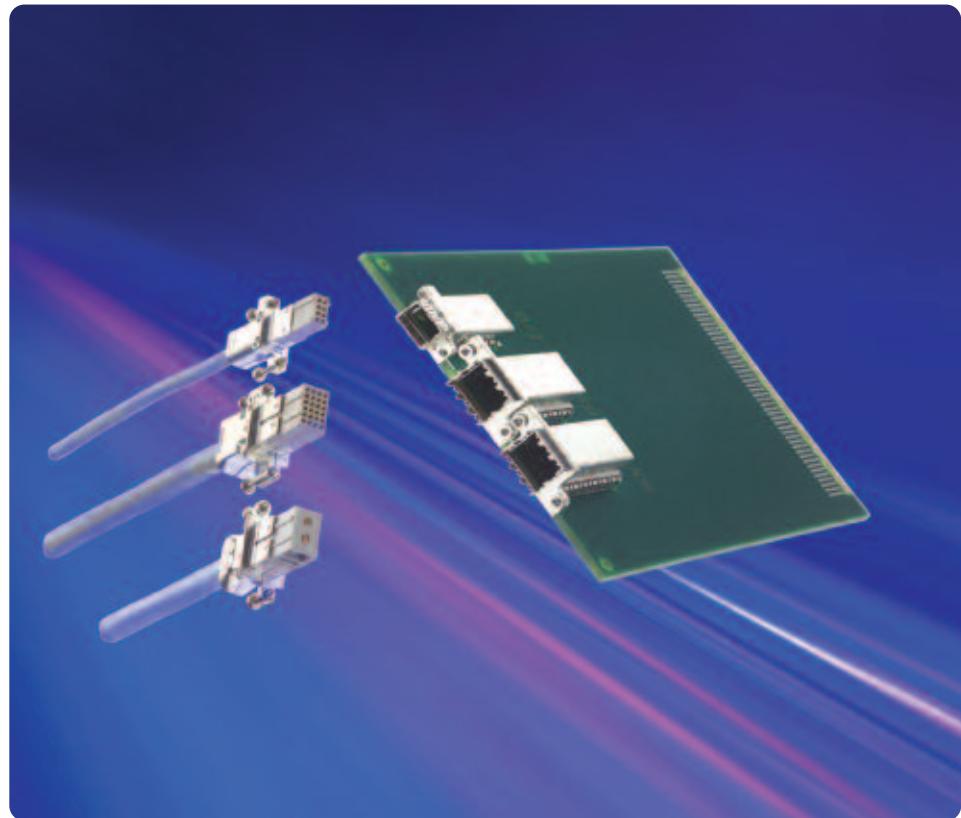
Further information can be found at:  
<http://www.fciconnect.com/eyemax>

# SOFIX®

## FRONT I/O INTERCONNECTION SYSTEM

### FEATURES

- Complies with standard telecom building practices (IEC 60917-2-2 & IEC 60297-3)
- Signal and power modules
- Both 10/100 BaseT and 1000 BaseT 8 position solutions
- Hot plugable
- Robust design
- 15mm slot pitch
- RoHS design allows for environmental friendly end application



### MAIN PRODUCTS

**2x4** Sofix Board Connector

### PART REFERENCES

72860

Sofix Cable Connector 10/100 BaseT

72861

Sofix Cable Connector 1000 BaseT

53389

**4x6** Sofix Board Connector

72844

Sofix Cable Connector Coax Twisted pair

HM1C16D2J110EBLF

Sofix Cable Connector Coax Quad

72817

### APPLICATIONS

- Wireless, (mobile) switching, transmission (Ethernet & GbE line lines, E1/T1, 2 Mb).

# LATCH-N-LOK™ I/O CONNECTOR SYSTEM

## FEATURES

- Versatile cable-to-board system includes PCB headers and cable connector kits for signal, power, grounding and shielding applications.
- Supports high speed, serial data transmission
- Quick disconnect system provides positive latching with an audible "click."
- High reliability design features FCI PV® receptacle contacts mating to phosphor bronze .025"sq pin contacts in single and double row configurations.
- Polarized housings prevent mis-mating; Keying options prevent the mating of incorrect cables.
- Cable connectors accommodate a wide variety of cable diameters and wires ranging from 20AWG to 32AWG



## MAIN PRODUCTS

<b>PCB Receptacle</b>	Right angle, Single Row	69273 / 69913 / 78304
	Right angle, Double Row	69958 / 78097 / 78098, 79610 / 74355 / 69901
<b>Cable plug kits</b>	Enhanced shielding	74901 through 74903 / 98028
	Standard shielding	91481 through 91489

## PART REFERENCES

## APPLICATIONS

- Medical Instrumentation
- Handheld devices
- POS Equipment
- Test and Measurement
- Inventory Equipment
- USB Plus Power
- Telecommunications

Reference to data sheet: 950503-001



Further information can be found at:  
<http://www.fciconnect.com/latchnlok>

# D-SUBMINIATURE PCB APPLICATIONS

## FEATURES

- Signal: 9 to 50 way connectors - standard density
- Signal: 15 to 78 way connectors high density
- Power: wide range of layouts from 2V2 to 36W4
- Solder to board and press-fit and Pin-in-Paste (THR) terminations available
- Dedicated website



## MAIN PRODUCTS

### Standard application

Signal	Right angled solder-to-board Right angle press-fit Right angle pin-in-paste Straight solder-to-board Straight press-fit Straight pin-in-paste	Delta D
Full and mixed power	Straight and Right angle solder-to-board and press-fit	DW series

### Demanding application

Signal	Right angle solder-to-board, Wire-wrap and Straight solder-to-board	DP series
--------	--	-----------

### Severe environment application

Signal and Power	DM series
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## SERIES

## APPLICATIONS

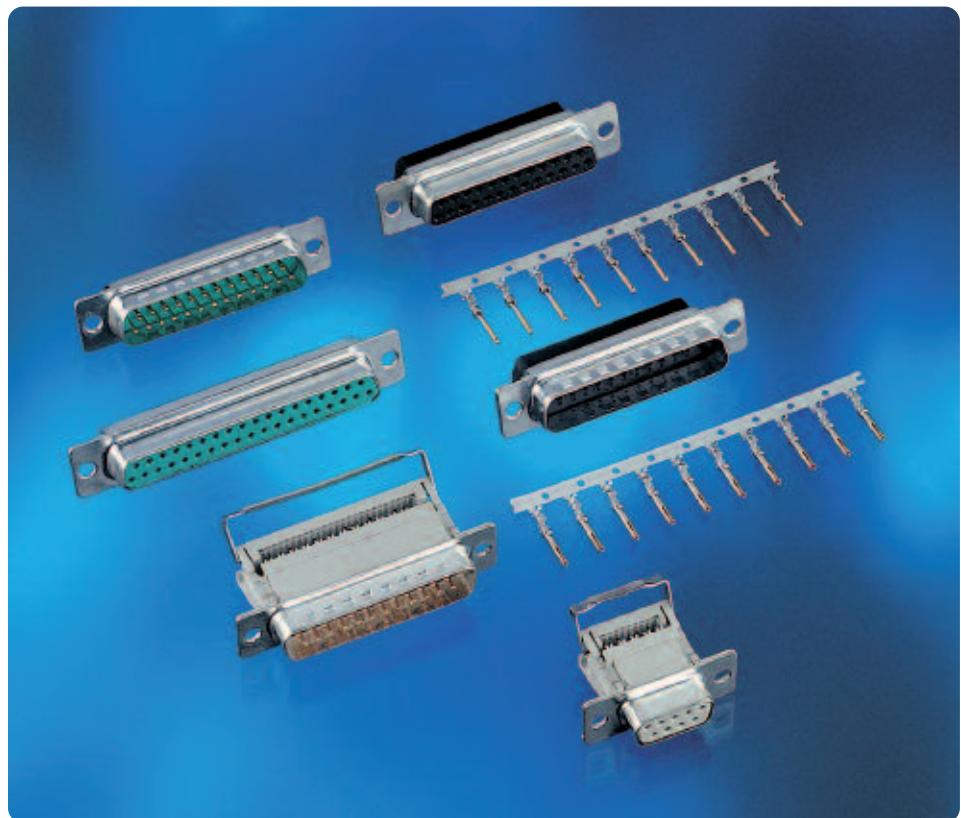
- Our D-Sub connectors are suitable for every type of equipment including those in harsh environments



# D-SUBMINIATURE CABLE APPLICATIONS

## FEATURES

- Signal: 9 to 50 way connectors
- Power: wide range of layouts from 2V2 to 36W4
- Solder bucket, crimp and IDC available



## MAIN PRODUCTS

### Standard application

Signal	Solder bucket	D series
	Crimp connectors and contacts	8656 series
	IDC flat cable connector	8657 series
Full and mixed power	Solder bucket	DW series
	Crimp connectors and contacts	DW series

### Demanding application

Signal	Solder bucket	DP series
--------	---------------	-----------

### Accessories

Hoods	Plastic, metallized and metalic
Locking devices	

## PART REFERENCES

## APPLICATIONS

- Our D-sub connectors are suitable for almost every type of equipment including those in demanding environments



Further information can be found at:  
<http://www.fciconnect.com/dsub>

# HDMI

## HIGH DEFINITION MULTIMEDIA INTERFACE

### FEATURES

- Type A receptacle with 19 positions.  
Meets HDMI spec1.1
- Metal shield for better EMI
- Speed to 5Gbps uncompressed single transmit rate.
- Backward compatible with DVI
- SMT with a panel-mount flange or without panel-mount flange option.
- Low impedance mismatch
- RoHS compatible, 30u" Au plating in contact area, 100u" pure tin plating in solder tail
- Simple & flexible design



### MAIN PRODUCTS

#### Type A

Receptacle SMT without flange

### PART REFERENCES

10029449-001TLF

Receptacle SMT with flange

10029449-002TLF

### APPLICATIONS

- Plasma Displays&TVs
- LCD Display&TVs
- Set-Top-Boxes
- DVD Players/Recorders
- Audio/Video Receivers
- D-VHS Players
- High-Definition Monitors
- Entertainment PC

# USB

## UNIVERSAL SERIAL BUS

### FEATURES

- USB 2.0 compliant, speed to 480 Mb/sec
- Type A (Host) receptacles, 4 position
  - Through hole and SMT versions
  - PCB mount options: Position, orientation, hold-down.
  - Panel fixing and grounding options
  - Additional sensor contact versions
  - Double deck, 8 position version
- Type B (peripheral) receptacles, 4 position
- Mini USB receptacles, 5 position
- Plug kits for overmold cable assembly
- USB + power versions available



### MAIN PRODUCTS

<b>Type A</b>	Rec. right angle TMT	87520 / 73725 / 74552
	Rec. right angle SMT	87583 / 74626
	Rec. small body TMT	52319
	Double Deck.	72309 / 52454
<b>Type B</b>	Rec. right angle TMT	61729
<b>Mini B</b>	Rec. right angle SMT	10033526
<b>Mini AB</b>	Rec. right angle SMT	10033527
<b>Type A</b>	Plug, straight	74033
<b>Type B</b>	Plug, straight	61730
<b>Type A</b>	USB+Power Rec.	55917 / 57489 / 10011029
	USB+Power Plug	74233/57496

### APPLICATIONS

- Computers, laptops, servers
- Printers, external drive units, monitors
- Digital cameras, TV's, set-top box
- Modems, keyboards, instrumentation
- Point-of-sale equipment.



Further information can be found at:  
<http://www.fciconnect.com/usb>

# MODULAR JACKS

## FEATURES

- Right angle or straight
- Through mount or SMT
- Cat3, Cat5 performance category
- 4, 6, 8 positions, fully or selectively loaded
- Single to Stacked Multi-ports
- Shielded or non-shielded
- Magnetic option
- Inverted latch options
- Standard, raised or low profile versions
- Snap or diamond pegs options



## APPLICATIONS

### Networking

- Network servers
- Hubs
- Routers
- Ethernet switches

### Computers and Peripherals

- Laptops
- Modems

### Telecom

- PBX systems
- Fax machines
- Phone line security systems
- Telephones
- Cellular and mobile phones

### Office and Home Equipment

- ATM machines
- Point of sales terminals
- Vending machines
- Security systems
- Set-top boxes
- Medical analysis equipment



## MAIN PRODUCTS

## PART REFERENCES

Single Port Cat3		Positions	Pegs	
Right angle	SMT	4 positions		73306/73327
		6 positions		73305/73326/73334
		8 positions		73304/73325/73333
	Through mount	4,6,8 positions - Low profile		87180
		4 positions - Standard profile	Snap	88400
			Diamond	68897
		6 positions - Standard profile	Snap	88400
			Diamond	68898
		8 positions	Diamond	68899
Straight	SMT	4 positions		98431
		6 positions		98432
		8 positions		98435
	Through mount	4 positions	Snap	90511
			Diamond	69253
		6 positions	Snap	90512
			Diamond	69254
		8 positions	Diamond	69255
Net-Jack	W/LED	Single Port		10062070 / 10017802 / 10019407 / 10038628

Multiport Cat3		Positions	Shield	
Right angle	Through mount	4x8, 8x8	Yes	94910
		2x8, 4x8, 7x8, 8x8	No	94911
		8x8 (Stacked)	Yes	94633
Straight	Through mount	3x(4P+4P+6P)	No	92266

Multiport Cat5		Positions	Shield	
Right angle	Through mount	4x8, 8x8 (filter)	Yes	95672
		4x8, 8x8	Yes	95678



# SMART CARD CONNECTORS

## FEATURES

- Through mount, SMT or Flex mounted
- Sliding or landing contact technology
- Durability: From 10 to 500000 cycles
- Vandalism-proof designs
- Suitable for friendly, harsh, portable or automotive environments
- EMV, NDS approved
- Blade or sealed switch available
- 6, 8 or 16 data contacts available
- SIM, SAM or full size card connectors available
- Customization available upon request

## APPLICATIONS

- Networking**
  - Analog or digital set-top box
  - Internet decoder
  - Laptops
- Telecom**
  - Mobile phones
  - Public phones
- Automotive**
  - Car radio
  - GPS
  - Tachograph
- Others**
  - Point of sale terminals
  - Vending machines
  - Access control
  - Customer loyalty equipment
  - E-purse
  - Gas, water, electricity meters



## MAIN PRODUCTS

PRODUCT	NUMBER OF CYCLES	CARD SIZE		SOLDERING		CONTACT TECHNOLOGY		SWITCH TYPE		SERIES
		Full	SIM	Through mount	SMT	Sliding	Landing	Blade	Sealed	
F series	500k	■		■		■		■	■	
E series	200k	■		■ + Flex	■	■	■	■	■	
V series	12k		■		■	■	■	■	■	
S series	10k	■	■	■	■	■	■	■	■	
L series	100k	■		■		■		■	■	
L26 series	30-100k	■		■		■		■	■	
Z series	30-100k	■		■ + Flex		■		■	■	
C series	100k	■		■		■		■	■	
P series	100k	■		■	■	■		■	■	

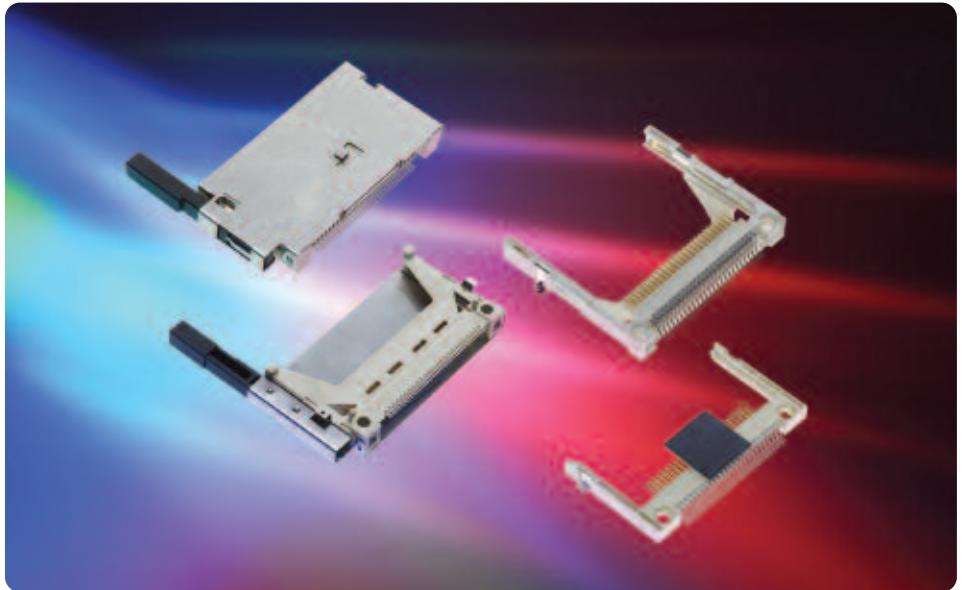


# FLASH MEMORY CARDS

## FEATURES

FCI offers a wide range of connectors suitable for:

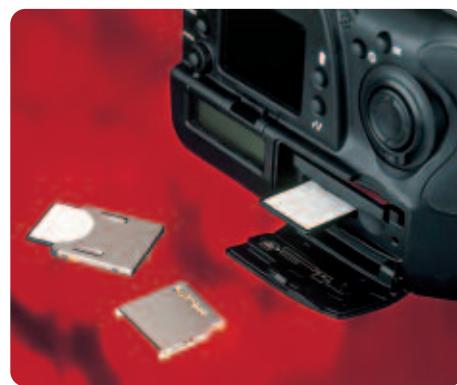
- CompactFlash: Headers and card kits, wireless options
- Secure Digital: Headers, push-push, normal type
- Multi-Media Card: Headers, push-push, normal type
- Mini Secure Digital: Headers
- Combo connectors:
  - 4 in 1: Secure Digital, Multi-Media Card, Memory Stick, Smart Media
  - 2 in 1: CompactFlash (CF), Secure Digital



CompactFlash (CF)      Card Kit and Headers



Mini SD Card Headers



SD Card Headers

## APPLICATIONS

- PDA's
- Notebooks
- Point of sales terminal
- Set-top box
- MP3 players
- Cellular phones
- Digital cameras
- DVD players
- High-end TVs
- Hand-held devices utilizing socketed flash memory

## MAIN PRODUCTS

SD Card Header, Push-Push Type	10022711
SD Card Header, Manual Type	10026206
MiniSD Card Header, Push-Push Type	10034050
CF Header Assembly	10017963/10017964
CF Receptacle Assembly	10014748
CF Card Kit	10022679/10022680
Micro SD Card Header	10056619

## PART REFERENCES



Further information can be found at:  
<http://www.fciconnect.com/cardsystems>

# PC CARD HEADERS

## FEATURES

- Conform to PCMCIA and CardBus standards
- CardBus PC Cards can meet high signal transmission requiring bandwidth (32 bits) and clock rate (33 MHz)
- Suitable for type I, II, III, 3.3 and 5V Standard and CardBus PC Cards
- Various stand-off options available
- Single and double deck
- Eject and non eject mechanism available
- Through Mount, SMT In-Line, SMT Staggered, Flex or patented SMT Vertical Transition Board versions available
- Optional EMI metal shield cover (CardBus)



## MAIN PRODUCTS

### PCMCIA

None E-plate 3.3V, SMT or R/A, Single Deck	84648
None E-plate 5.0V, SMT or R/A, Single Deck	92789
4mm Push Rod 5.0V, SMT or R/A, Single Deck	74362
4mm Push Rod 5.0V, R/A, Double Deck	92194 / 95635
5.0V, Vertical to Board, Double Deck	61124 / 95562
5.0V, R/A, 50 mm Short Mech., Single Deck	10074595
3.3V, Vertical to Board, Single Deck	61125
3.3V, R/A, 50 mm Short Mech., Single Deck	10067972

### CardBus I

Push Rod, Vertical to Board, Double Deck	71240
Push Rod, Vertical to Board, Single Deck	71299
Non-ejector, Vertical to Board, Single Deck	72305

## PART REFERENCES

## APPLICATIONS

- Notebooks, portable PCs, industrial PCs, network PCs
- Set-top boxes, digital TV, home entertainment devices
- Telecom, datacom equipments (switches, routers, remote access servers)
- Machine control systems
- Test & measurement devices, medical instrumentation



# ROCARD™ AND WIRELESS ROCARD™ PC CARD CONNECTORS

## FEATURES

- Hermaphroditic stainless steel material with (matt) surface finish
- Conform to CardBus and PCMCIA standards
- Snap fit design allows easy assembly and low applied cost (no welding or adhesive)
- Optional label recess & insulator
- Variable I/O configurations (4pos, 15 pos) available
- Standard and customized antenna covers for wireless application
- 0, 0.3, 0.6 mm or custom PCB offset for receptacle connector
- 3.3 or 5V keyed
- Compliance to PC Card standard torque and bend tests
- Extreme ruggedness
- Easy pre-positioning of shields and simple parallel closing movement
- Suitable for manual, semi-automated or automated assembly



## MAIN PRODUCTS

PCMCIA card shield	57924 / 83818 / 83808
CardBus card shield	10017657
68 position SMT receptacle - CardBus	10014747
68 position SMT receptacle - PCMCIA	10014744
Bottom antenna cover (1)	53534
Top antenna cover (1)	53537

(1): Please consult your FCI rep for customizations and availability

## PART REFERENCES

## APPLICATIONS

- Notebooks, portable PCs, industrial PCs, network PCs
- Set-top boxes, digital TV, home entertainment devices
- Telecom, datacom equipment (switches, routers, remote access servers)
- Machine control systems
- Test & measurement devices, medical instrumentation
- Digital cameras and printers



Further information can be found at:  
<http://www.fciconnect.com/pmcia>

# EXPRESSCARD™ SYSTEMS

## EXPRESSCARD MODULE CARD KITS

### FEATURES

- Meet high-speed electrical requirements as outlined in ExpressCard™ Standard
- Simple beam-on-blade contact interface is rated for up to 10,000 cycles
- Single-row, in-line solder tail configuration for easy soldering
- Longer power and ground contacts on the module connector provide first-mate and last-disconnect in relation to signal contacts.
- Snap-together module design enables card assembly without requiring the use of adhesives or ultrasonic equipment
- Modules provide EMI/ESD contact areas, notches to facilitate optional security lock, and a finger grip ridge for manual module removal
- ExpressCard™ technology will replace PC Card and CardBus technology in desktop and notebook PCs
- RoHS compliant



### MAIN PRODUCTS

ExpressCard Module Card Kit Connector	10030570
ExpressCard/34 Module Card Kit Top Shield	10030573
ExpressCard/34 Module Card Kit Bottom Shield	10030574
ExpressCard/34 Module Card Kit Assembly	10030580
ExpressCard/54 Module Card Kit Top Shield	10030581
ExpressCard/54 Module Card Kit Bottom Shield	10030582
ExpressCard/54 Module Card Kit Assembly	10030590

### PART REFERENCES

### APPLICATIONS

- Communications - Wireless and wired cards
- Storage - SFF optical and magnetic drives
- I/O - Additional ports and legacy I/O
- Multimedia - TV tuners, PVR
- Security - Identity cards and sensors
- Adapters - Consumer memory cards

Note: ExpressCard™ is a registered trademark of PCMCIA



# EXPRESSCARD™ SYSTEMS

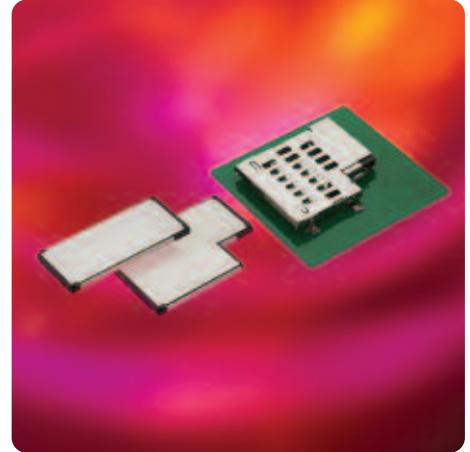
## EXPRESSCARD HOST SYSTEMS

### FEATURES

- Meet high-speed electrical requirements as outlined in ExpressCard™ Standard
- Simple beam-on-blade contact interface is rated for up to 5,000 cycles
- Single-row, in-line solder tail configuration for easy soldering
- Longer power and ground contacts on the corresponding module connector provide first-mate and last-disconnect in relation to signal contacts.
- Available with either card push or push rod ejection mechanism and with various standoff heights
- ExpressCard™ technology will replace PC Card and CardBus technology in desktop and notebook PCs
- RoHS compliant

### APPLICATIONS

- Notebooks, portable PCs, industrial PCs, network PCs
- Set-top boxes, digital TV, home entertainment devices
- Telecom, datacom equipments (switches, routers, remote access servers)
- Machine control systems
- Test & measurement devices, medical instrumentation



### MAIN PRODUCTS

### PART REFERENCES

#### ABOVE MOUNT

#### Standoff height

	2.2 mm	1.8 mm	1.0 mm	0.0 mm	0.0 mm
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#### ExpressCard/34 module components

Host Connector		10062618	10058937	10065051
Host System (Card Push)		10075123	10065483	10073907

#### ExpressCard/54 module components

Host Connector	10056265	10047129	10055606	10053826	10055262
Host System (Card Push)	10038774	10047130	10055607	10053827	10055263

Note: ExpressCard™ is a registered trademark of PCMCIA

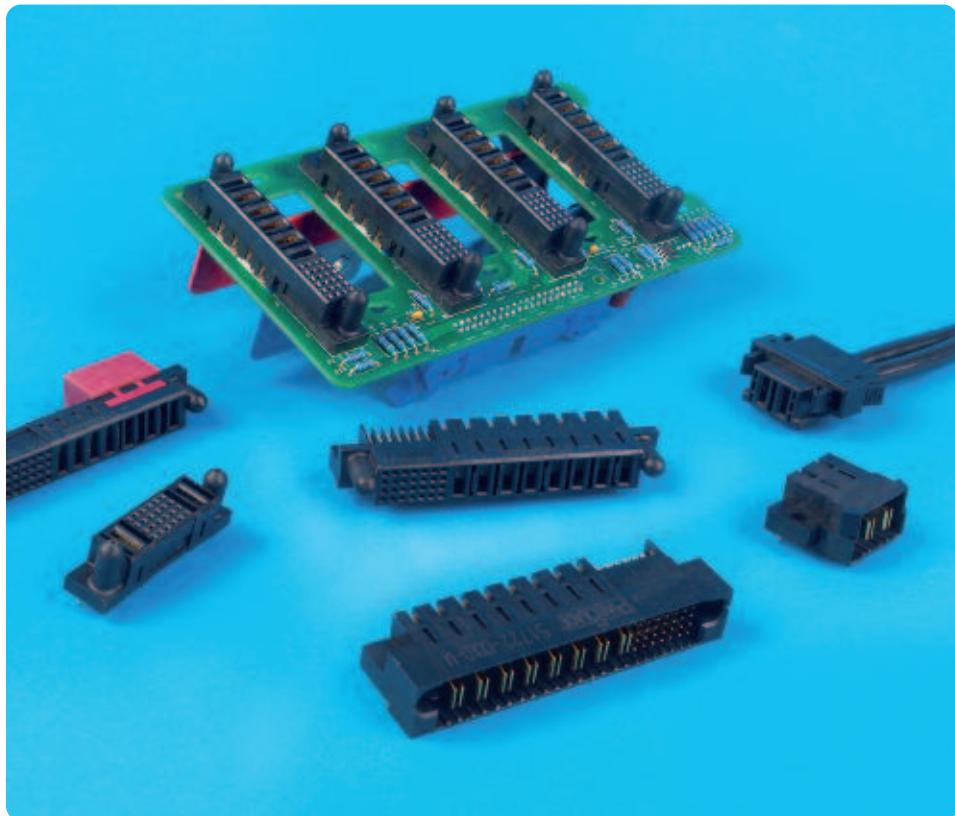


Further information can be found at:  
<http://www.fciconnect.com/expresscard>

# PWR BLADE® POWER DISTRIBUTION CONNECTOR SYSTEM

## FEATURES

- Provides contacts for power distribution and power control
- Robust 0.100" (2.54mm) pitch for signal contacts and 0.200", 0.250", or 0.300" spacing for power contacts
- Rugged blind-mate design
- 48A/individual power contact; 30A/contact for 10 contacts at 30°C rise in still air
- 60A per UL test guidelines
- Capability for up to 20 power contacts and 148 signal contacts in up to 8 inches
- Up to 3 levels of sequential contact: 2 for power and 2 for signals
- Options for solder or press-fit termination
- Board retention devices provided to secure connectors during processing
- AC cable port option (cable pass-through)



## APPLICATIONS

- Servers, storages
- Uninterruptible power systems (UPS)
- Fault-tolerant computers
- Hot-swap redundant N+1 power distribution systems

## MAIN PRODUCTS

## PART REFERENCES

### SERVER SYSTEM INFRASTRUCTURE (SSI STANDARD)

#### Distributed Power Supply (1 Power + 24 Signal + 1 Power Configuration)

		Tin/Lead	Lead-Free
Server	Right Angle Receptacle	51416-001	51416-001LF
	Vertical Press-Fit Receptacle	51666-001	51666-001LF
Power Supply	Right Angle Header	51415-001	51415-001LF
	Vertical Header	51952-001	51952-001LF
	Vertical Press-Fit Header	51952-002	51952-002LF

#### High-End Power Supply (12 Power + 24 Signal Configuration)

		Tin/Lead	Lead-Free
Server	Vertical Receptacle	51261-XX001	51261-XX001LF
	Vertical Press-Fit Receptacle	51617-XX002	51617-XX002LF
Power Supply	Right Angle Header	51219-XX002	51219-XX002LF

#### Mid-Range Power Supply (6 Power + 24 Signal + 5 Power Configuration)

		Tin/Lead	Lead-Free
Server	Right Angle Receptacle	51625-XX001	51625-XX001LF
	Vertical Press-Fit Receptacle	51667-XX001	51667-XX001LF
Power Supply	Right Angle Header	51624-XX001	51624-XX001LF
	Vertical Header	51860-001	51860-001LF
	Vertical Press-Fit Header	51860-002	51860-002LF

### AC CABLE PORT RIGHT ANGLE RECEPTACLE

Power+Signal+Power+Cable	51894-YYY	51894-YYYLF
Power+Cable	51919-YYY	51919-YYYLF
Signal+Power+Cable	51921-YYY	51921-YYYLF
Power+Signal+Cable	51923-YYY	51923-YYYLF

### AC CABLE PORT VERTICAL RECEPTACLE

Power+Signal+Power+Cable	51897-YYY	51897-YYYLF
Power+Cable	51925-YYY	51897-YYYLF
Signal+Power+Cable	51927-YYY	51927-YYYLF
Power+Signal+Cable	51929-YYY	51929-YYYLF

Note: The XX and YYY utilized in the part numbers above are placeholders for certain product specific criteria. Reference the product drawings to obtain detailed dimensions and complete part numbers. For non-SSI applications other configurations are available upon request.



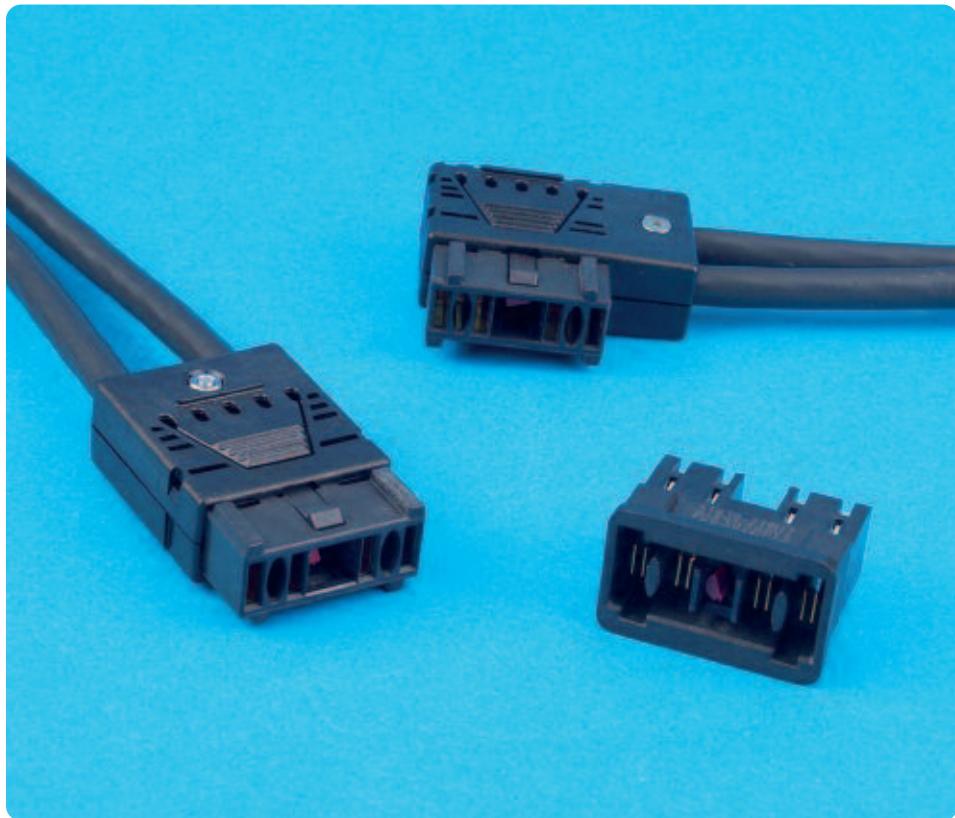
Further information can be found at:  
<http://www.fciconnect.com/pwrblade>

# PWR TWINBLADE™

## I/O CABLE ASSEMBLIES

### FEATURES

- Modular system providing right angle and straight cable connectors
- Right angle board connector for front IO application
- Robust connector design provides touch proof system
- Four different cable entry directions possible
- Active latch system assures retention of the cable assembly
- Polarized design ensures proper mating
- Four coding options
- Supports multiple wire sizes
- Capable of supporting currents up to 100 Amps per twin contact



### MAIN PRODUCTS

Right Angle Entry Cable Connector	10056526
Straight Entry Cable Connector	10066104
Right Angle Board Connector	51939-219

### PART REFERENCES

### APPLICATIONS

Telecom and datacom;

- Wireless base stations;
- aDSL/ vDSL Access equipment;
- Servers
- Storage



# HCI™ CONNECTOR SYSTEM

## FEATURES

- Integrated power, signal and guides in a single connector housing
- Housing vented in two planes to dramatically improves airflow and thermal performance while maintaining touch-proof design
- Lowest product height in the industry for a cost-effective, stamped-and-formed power connector providing over 85 amps of current for one blade at 30°C temperature-rise with zero airflow
- Single short detect contact is available as an option to 'power-on' the application once all other pins are fully mated.
- Flexible, expandable product platform and tooling permit variation in the number and placement of signal and power contacts within the molded housing
- Integrated, industry-standard molded-in guidance system compensates for four degrees of radial misalignment for predictable cost effective blind mating
- Hard Metric mating compatibility (12.5mm from card-edge to backplane)
- Available options for either perpendicular or coplanar board-to-board configurations
- Press-fit termination of vertical backplane receptacle and through-hole solder termination of right-angle headers and receptacles are available to meet application requirements
- Simple flat rock tooling for simple press-fit application within the manufacturing environment



## APPLICATIONS

### Markets

- Data
- Telecommunications
- Datacom/Networking
- Industrial/Instrumentation



Further information can be found at:  
<http://www.fciconnect.com>

# AIRMAX VS® POWER CONNECTORS

## FEATURES

- Current rating to 80 amps for 1x2 or 2x2 modules
- Hard Metric (HM) Equipment Practice
- Layout compatible with AirMax VS® and Millipacs® connector series
- 1x2, 2x2 or 2x3 contact configurations for backplane applications
- Standard-profile 1x2 and 2x2 right-angle modules extend 14.7mm above the PCB (compatible with 4 and 5 pair AirMax VS® modules)
- Lower-profile 2x2 and 2x3 modules stand only 11.5mm above board (compatible with 3 pair AirMax VS® modules)
- Options for first-mate/last-break sequencing, 2 mating lengths available
- Protected Backplane connector  
UL 60950 Compliant (Finger Probe)
- Options for 1x2 or 2x2 Co-planar applications
- Press-fit termination
- Compatible with lead-free processing temperatures

## APPLICATIONS

- Data**
  - Servers
  - Storage Devices
  - Computing Platforms
- Communications**
  - Switches
  - Routers
  - Internet Equipment
- Medical**
- Instrumentation**



## MAIN PRODUCTS

## PART REFERENCES

	NUMBER OF CONTACTS	CONTACT ARRAY	HEIGHT ABOVE PCB	PART NUMBERS	
<b>Backplane Application</b>	2	1x2	14.7mm	10028916-xxxxP00LF**	10028918-001LF
	4	2x2	14.7mm	10028916-xxxxP00LF**	10028917-001LF
	4	2x2*	11.5mm	10028916-xxxxP00LF**	10073379-001LF
	6	2x3*	11.5mm	10061290-xxxxxxPLF**	10061289-001LF
<b>Co-planar Application</b>	2	1x2	14.7mm	10052620-P00LF	10028918-001LF
	4	2x2	14.7mm	10052620-P00LF	10028917-001LF
	4	2x2*	11.5mm	10052620-P00LF	10073379-001LF

Notes: \* indicates the connector set matches the above-board height of an AirMax VS 3-pair signal connector.

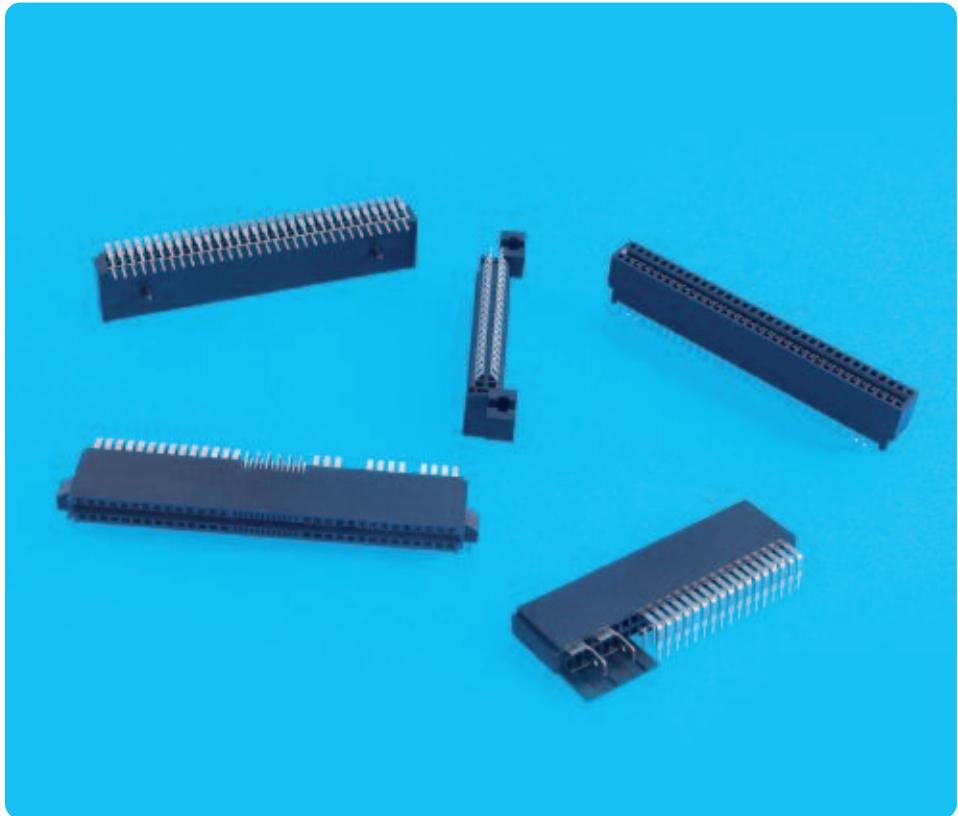
\*\* xxxx and xxxxxx are placeholders for contact mating length combinations. Reference the product drawings for available options.



# POWER CARD EDGE

## FEATURES

- One-piece card edge design provides cost-effective power delivery with capacity for up to 7 Amps per power contact
- Narrow connector body enables use in 1U servers and power supplies
- Low-profile design reduces obstruction to airflow for system cooling
- Option for integration of signals and power in a single right-angle connector supports both power control and power distribution
- Integrated connector design simplifies board assembly
- Right angle product range includes version with molded posts or metal fork locks for retention
- Straddle-mount connectors feature mounting ears for secure PCB attachment
- An optional AC cable port enables a cable pass-through solution
- RoHS compatible design enables compliance with environmental regulations



## MAIN PRODUCTS

### Right Angle Solutions

5 power + 12 signal + 5 power	
7 power + 12 signal + 7 power	10028886
10 power + 12 signal + 10 power	
14 power + 12 signal + 14 power	
With AC Power port	10055090
2x14, 2x17, 2x22, 2x25 power	10035388
2x28, 2x29, 2x31, 2x32 power	

### Vertical Solutions

2x19, 2x31, 2x32, 2x35 power	10046971
2x8 power	10046972

### Straddle-Mount Options

2x19, 2x23 power	10034908
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## APPLICATIONS

- Servers
- Storage
- Telecommunications
- Datacom/Networking



Further information can be found at:  
<http://www.fciconnect.com/powercardedge>

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