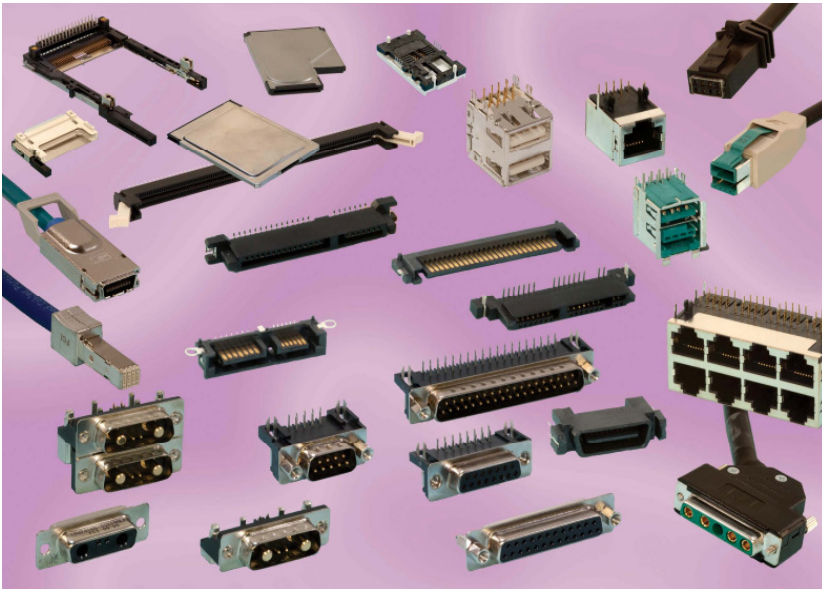


CONNECTI/ONS

D- Subminiature High Density Range

February 2010

Where does IO-connections stand for?



- FCI's I/O connector solutions:
 - high-density
 - high-speed interfaces
- Applications:
 - networking, storage, and memory, power distribution, media card systems, etc
- Industry standards:
 - Ethernet, SFF, Infiniband, USB, PCMCIA™ or HDMI™, Compact Flash™, SAS, SATA, etc.
- Custom solutions:
 - Cable assemblies.

CONNECTI/ONS

What products is IO Connections comprised of?



Data & Multimedia I/O's



- ▶ HDMI™
- ▶ USB
- ▶ Modular Jacks
- ▶ Latch-N-Lok™

High Speed I/O's



- ▶ DensiShield™ Systems
- ▶ Eyemax®
- ▶ Multilane SAS and SATA Connectors

D-Sub



- ▶ Standard Density
- ▶ High Density
- ▶ Cable Connectors
- ▶ Power Connectors
- ▶ **see more**

Cable Assemblies



- ▶ DensiShield™ I/O System
- ▶ Eyemax® - Infiniband Cable Assembly
- ▶ Fiber Optics
- ▶ Metral® Cable Assembly
- ▶ **see more...**

CONNECTI/ONS

Memory & Media Card Systems



- ▶ Smartcard
- ▶ PCMCIA™
- ▶ ExpressCard™
- ▶ DDR Memory
- ▶ Flash memory products

Storage Interface



- ▶ Serial Attached SCSI (SAS) Connectors
- ▶ Serial-ATA (SATA) Connectors
- ▶ eSATA Connectors
- ▶ iVDR Connectors
- ▶ **see more...**

- ▶ More information can be found on a dedicated website at www.fciconnect.com/io
 - ▶ Product selector tables;
 - ▶ Data sheets;
 - ▶ Product presentations;
 - ▶ 3D view models & 2D drawings;
 - ▶ Product specifications;
 - ▶ Distributor inventory information;
 - ▶ etc

High Density D-Sub - Description



FCI's D-Subminiature connectors are part of an industry standard for applications requiring robust and reliable connectors. These D-Subminiature connectors are one of the most popular Input - Output interconnects, addressing a wide variety of applications in Telecommunications, Data, Consumer, Industrial, Military, Instrumentation and Medical markets. Since many years FCI offers a wide range of D-Subminiature connectors **to meet all design requirements**, and to address increasing needs **for high density packaging**, FCI developed the D-Subminiature **High Density Range**.



Electrical Performance

Current rating	2.5A
Rated Voltage	250V
Contact Resistance	25 mΩ (Max) Initial & 40 mΩ (Max) After
Insulation resistance	5000 MΩ Min. at 500V DC
Dielectric Strength	750 Vrms
Operating temp range	-55°C to + 105°C



Material

Insulator	Glass filled thermoplastic (UL94V-0) Black
Contact	Copper Alloy
Shell	SPCC Steel

Mechanical Performance

Mating/Un Mating cycles	200 / 500
Insertion/Extraction force per contact	5 NMax / 0.2 NMin.

High Density D-Sub – Product advantages



- Higher connector density
 - Stay with a robust D-sub IO connector for applications requiring more signal density:
 - Higher density with same space usage

	Standard density	High density	
Shell size E	9 contacts	15 contacts	+ 67%
Shell size A	15 contacts	26 contacts	+ 73%
Shell size C	25 contacts	44 contacts	+ 76%
Shell size C	37 contacts	62 contacts	+ 67%
Shell size D	50 contacts	78 contacts	+ 56%

High Density D-Sub Straight



Series

- 10090928: Male Straight
- 10090929: Female Straight

Sizes Available - 15, 26, 44, 62 & 78 Positions

Termination - Straight (PCB mounting)

Mounting options

- X: UNC 4-40 Clinch nuts with Board lock
- L: M3 clinch nuts with Board lock
- V: UNC 4-40 Screw locks with Board lock

Durability

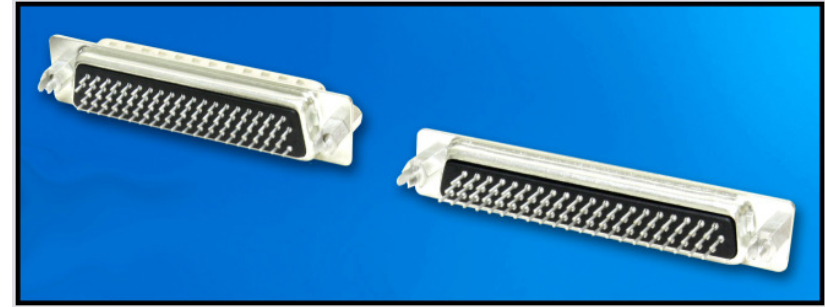
- 200 / 500 mating cycles

RoHS Status

- RoHS Compliant

Packaging Pattern

- Tray Packing



High Density D-Sub Right Angle



Series

- 10090926: Male Right Angle
- ICD: Female Right Angle (15, 26 & 44)
- 10090927: Female Right Angle (62 & 78)

Sizes Available - 15, 26, 44, 62 & 78 Positions

Termination - Right Angle (PCB mounting)

Mounting options

- X: UNC 4-40 Clinch nuts with Board lock
- L: M3 clinch nuts with Board lock
- V: UNC 4-40 Screw locks with Board lock

Durability

- 200 / 500 mating cycles

RoHS Status

- RoHS Compliant

Packaging Pattern

- Tray Packing



High Density D-Sub Solder Bucket



■ Series

- 10090769: Male Solder bucket
- 10090770: Female Solder bucket

■ Sizes Available - 15, 26, 44, 62 & 78 Positions

■ Termination - Solder bucket (Cable mounting)

■ Mounting option

- Standard Hole

■ Durability

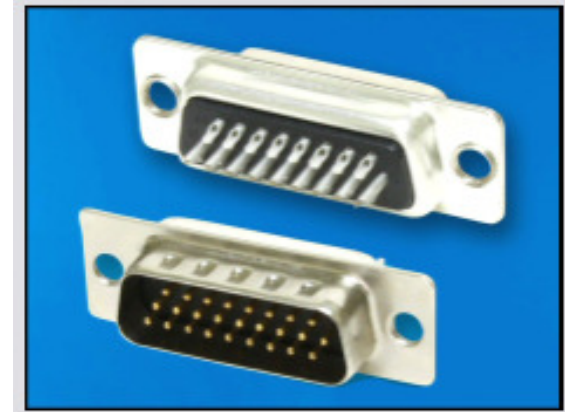
- 200 / 500 mating cycles

■ RoHS Status

- RoHS Compliant

■ Packaging Pattern

- Tray Packing

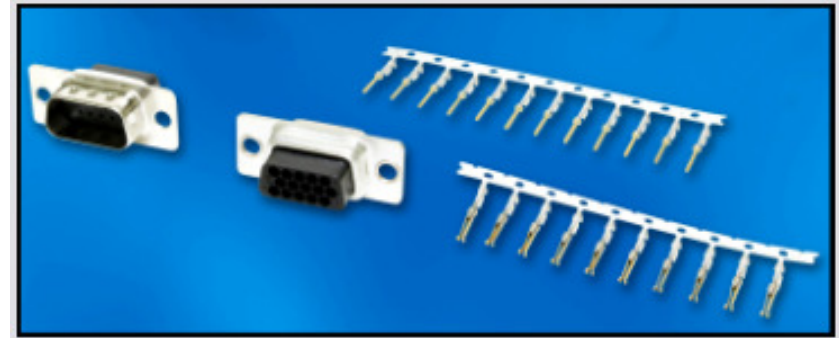


High Density D-Sub Crimp



Series

- 10090930: Male Crimp Housing
- 10090931: Female Crimp Housing
- 10090932: Male Crimp contact
- 10090933: Female Crimp contact



Sizes Available - 15, 26, 44, 62 & 78 Positions

Termination - Crimp (Cable mounting)

Mounting option

- Standard Hole

Durability

- 200 / 500 mating cycles

RoHS Status

- RoHS Compliant

Packaging Pattern

- Connector: Tray Packing
- Contacts: Box / Reel

High Density D-Sub Press - Fit



Available Press-fit range:

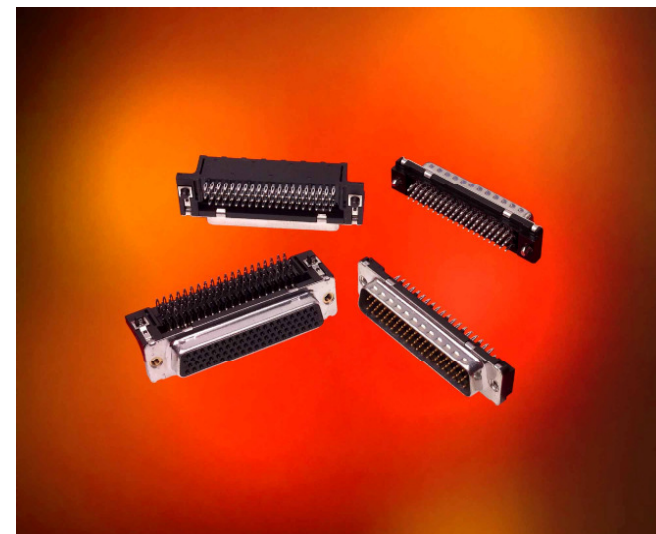
- 62 Way - Straight female
 - Ex: CD62S91C6GV00LF
- 78 Way - Straight male
 - Ex: CD78P91C6GV00LF
- 78 Way - Right angle female
 - Ex: CD78S80C6GV00LF



Segment : Mainly Telecom

Applications :

- Applications requiring Thick multilayer PCB's and Large backplanes





- Higher connector density

- Stay with a robust D-sub IO connector for applications requiring more signal density :

Higher density with same space usage

	Standard density	High density	
Shell size C	37 contacts	62 contacts	+ 67%
Shell size D	50 contacts	78 contacts	+ 56%

- Compatible with any thick multilayer PCB

- The FCI D-sub press-fit terminations are compatible with any PCB thickness starting from 1.6 mm

- No soldering and easy to assemble

High Density D-Sub Pin in Paste (PiP)

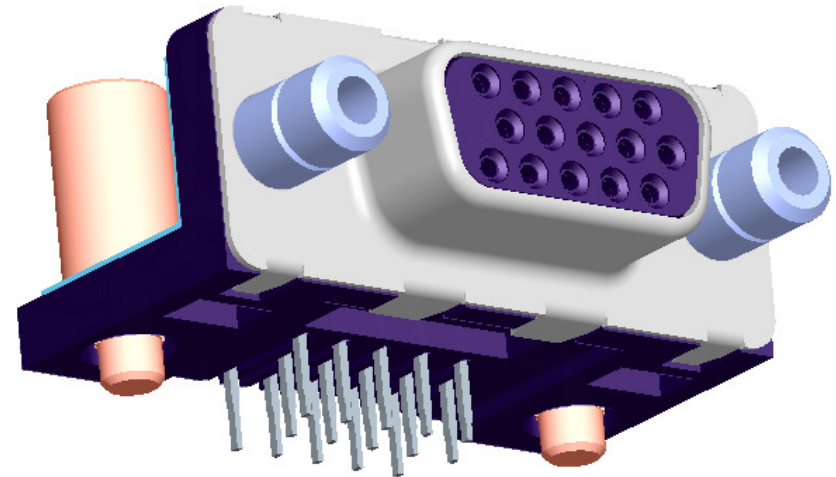


What is Pin in Paste?

- Pin in Paste is a through hole technology to solder connectors on boards by using a reflow process (SMT) instead of a traditional wave soldering or press-fit.

Available Pin in paste range:

- 15 Way - Right angle female
 - Ex: CD15S13E6RX09LF
- 26 Way - Right angle female
 - Ex: CD26S13E6RV12LF
- 44 Way - Right angle female
 - Ex: CD44S13E6RX12LF



- Segment :** Mainly Telecom, Industrial & Instrumentations

Applications :

- Daughter card applications

High Density D-Sub PiP: Product advantages



Product advantages

- **Time saving** - can be automatically positioned on PCB
 - no manual additional operation
- **Higher quality** - more stabilized process
 - Easier control and repairing possible
- **Cost advantage** - connector price is lower by 20% on an average in PiP V/s SMT
 - the total applied cost for a PiP is lower than SMT
 - no significant re-design of the board for PiP

Packaging

- Standard tray for manual positioning
- Tape and Reel packaging for vacuum nozzle and gripper

Typical Std P/Ns and Description



FCI Part Number	Part Description
10090928-P154VLF	Dsub High density straight 15 way solder pin
10090928-P264VLF	Dsub High density straight 26 way solder pin
10090928-P444VLF	Dsub High density straight 44 way solder pin
10090928-P624VLF	Dsub High density straight 62 way solder pin
10090928-P784VLF	Dsub High density straight 78 way solder pin
10090929-S154XLF	Dsub High density straight 15 way solder socket
10090929-S264XLF	Dsub High density straight 26 way solder socket
10090929-S444XLF	Dsub High density straight 44 way solder socket
10090929-S624XLF	Dsub High density straight 62 way solder socket
10090929-S784XLF	Dsub High density straight 78 way solder socket
10090926-P154VLF	Dsub High density right angle 15 way solder pin
10090926-P264VLF	Dsub High density right angle 26 way solder pin
10090926-P444VLF	Dsub High density right angle 44 way solder pin
10090926-P624VLF	Dsub High density right angle 62 way solder pin
10090926-P784VLF	Dsub High density right angle 78 way solder pin
ICD15S13E4GX00LF	Dsub High density right angle 15 way solder socket
ICD26S13E4GX00LF	Dsub High density right angle 26 way solder socket
ICD44S13E4GX00LF	Dsub High density right angle 44 way solder socket
10090927-S624XLF	Dsub High density right angle 62 way solder socket
10090927-S784XLF	Dsub High density right angle 78 way solder socket
10090769-P154ALF	Dsub High density 15 way solder bucket pin
10090769-P264ALF	Dsub High density 26 way solder bucket pin
10090769-P444ALF	Dsub High density 44 way solder bucket pin
10090769-P624ALF	Dsub High density 62 way solder bucket pin
10090769-P784ALF	Dsub High density 78 way solder bucket pin

FCI Part Number	Part Description
10090770-S154ALF	Dsub High density 15 way solder bucket socket
10090770-S264ALF	Dsub High density 26 way solder bucket socket
10090770-S444ALF	Dsub High density 44 way solder bucket socket
10090770-S624ALF	Dsub High density 62 way solder bucket socket
10090770-S784ALF	Dsub High density 78 way solder bucket socket
10090930-P150ALF	Dsub High density 15 way crimp pin
10090930-P260ALF	Dsub High density 26 way crimp pin
10090930-P440ALF	Dsub High density 44 way crimp pin
10090930-P620ALF	Dsub High density 62 way crimp pin
10090930-P780ALF	Dsub High density 78 way crimp pin
10090931-S150ALF	Dsub High density 15 way crimp socket
10090931-S260ALF	Dsub High density 26 way crimp socket
10090931-S440ALF	Dsub High density 44 way crimp socket
10090931-S620ALF	Dsub High density 62 way crimp socket
10090931-S780ALF	Dsub High density 78 way crimp socket
10090932-P2448LF	Dsub crimp loose contact gold flash pin
10090932-P2449LF	Dsub crimp 10000 contact reel gold flash pin
10090932-P2468LF	Dsub crimp loose contact 0.8 μm gold pin
10090932-P2469LF	Dsub crimp 10000 contact reel 0.8 μm gold pin
10090933-S2448LF	Dsub crimp loose contact gold flash socket
10090933-S2449LF	Dsub crimp 10000 contact reel gold flash socket
10090933-S2468LF	Dsub crimp loose contact 0.8 μm gold socket
10090933-S2469LF	Dsub crimp 10000 contact reel 0.8 μm gold socket
CD62S91C6GV00LF	Dsub High density straight 62 way press-fit socket
CD78P91C6GV00LF	Dsub High density straight 78 way press-fit pin
CD78S80C6GV00LF	Dsub High density right angle 78 way press-fit socket
CD15S13E6RX09LF	Dsub High density right angle 15 way Pin in Paste socket
CD26S13E6RV12LF	Dsub High density right angle 26 way Pin in Paste socket
CD44S13E6RX12LF	Dsub High density right angle 44 way Pin in Paste socket

ACCESSORIES

▀ Straight Exit Hoods

	Plastic	Metalised	Metallic
Position	Standard PNs	Standard PNs	Standard PNs
09 Way	86303637BLF	10039449-00002LF	8655MH0901BLF
15 Way	86303638BLF	10039450-00002LF	8655MH1501BLF
25 Way	86303639BLF	10039451-00002LF	8655MH2501BLF
37 Way	86303640BLF	10039452-00002LF	8655MH3701BLF



Screw locks

P/N	Description
863005ATLF	Male screw locks UNC 4-40
863001TLF	Female screw lock M3 (4.6 + 8.3 mm)
863001060TLF	Female screw lock UNC 4-40 (4.6 + 8.3 mm)
863001061TLF	Female screw lock M3 (4.6 + 13.0 mm)



FCI High Density - Commercial information



- X-ref to Tyco, Amphenol and many others loaded in FCI site
- New product brochure to be released along with launch
- GPS, MFG Pro, PDM and Web updates completed
- Drawings and 3D models available in PDM
- Product presentation loaded in Intranet
- Lead time: 6 weeks
- Friendly MOQ's: 400 to 990 pcs depending on size
- Samples ready in sample rooms
- Promotional conf-calls with Distributor sales team ongoing
- Sample box under preparation
- Product launch scheduled for Mar, 2010

THANK YOU!

