

# Small in size, big on speed.

**HSSDC**.com

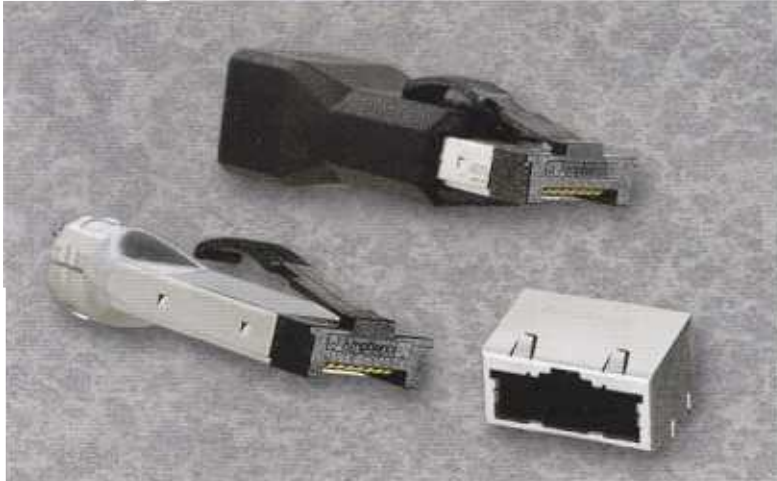
Amphenol's HSSDC series  
can provide you with  
what you need.  
Small yet fast, up to 5 Gbps  
bandwidth and meets SFF-8420.

FIBRE CHANNEL  
1 GB ETHERNET

**Amphenol**<sup>®</sup>  
Data / Telecom Products

# HIGH SPEED SERIAL DATA CONNECTION

## DESCRIPTION



Amphenol's High Speed Serial Data Connection (HSSDC) interconnection system was developed to meet high speed differential communication protocols with speeds exceeding 1 Gbps such as IEEE 802.3z and Fibre Channel. This system is being used by both Fibre Channel and NGIO (Next Generation Input Output) and is designed to conform with the SFF-8420 specification.

In addition to the standard HSSDC product line Amphenol offers variations with any or all of the following options:

- EMI common mode filtering in the plug
- EMI common mode filtering in the receptacle
- ESD differential pair protection in the plug
- Full ESD protection in the plug
- Keyed plugs and receptacles

## FEATURES

- Handles data transfer rates exceeding 1 Gbit/sec
- Keyed plugs and receptacles available
- Meets SFF 8420 specifications
- Common mode filtering available in both plug and receptacles
- Plugs available with integral 30 meter equalization
- Differential and full ESD protection for 15 kV ESD transients available to meet IEEE 1000-4-2 waveforms
- Receptacles are high temperature IR re-flow compatible
- Fully shielded receptacles for improved EMI suppression
- Plug in PCB simplifies and speeds up plug assembly

## PRODUCT SPECIFICATIONS

- Ambient temperature range: -10 C to 50 C
- Rated Voltage: 30 VDC
- Insulation resistance: 100 megaohms min
- Mating Cycles: 500
- Signal Contact Resistance: 35 milliohms maximum initial
- Shield Contact Resistance: 42 milliohms maximum initial
- Current Rating: 1 Amp per contacts (2 non adjacent contacts energized)
- Crosstalk Near End: 3% maximum

## ORDERING INFORMATION RECEPTACLE

U45- A 0 1 - 0 1 0

### Style

A-R/A Through Hole  
B-SMT Contacts Through Hole Shield  
D-PCI Version, R/A Through Hole  
E-PCI Version, SMT Contacts Through Hole Shield

### Polarization

0-None      2-Right  
1-Left      3-Both

### Contact Plating

1-30 micro inches gold  
2-2 micro inches gold over Pd-Ni

### Modifier

0-Standard

### Number of Ports

1-1 port  
2-2 port only for PCI version  
3-3 port only for PCI version  
4-4 port only for PCI version

### Filtering

0-No Filtering  
1-Ferrite Block

Amphenol®

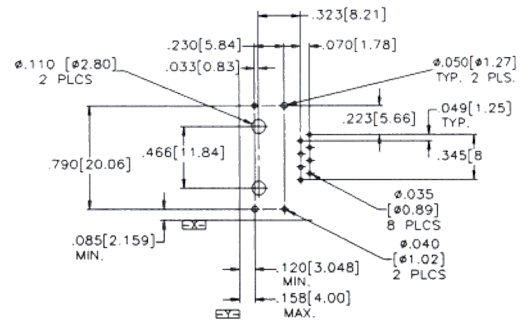
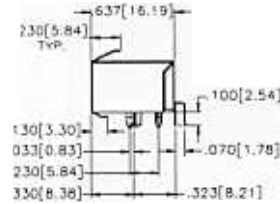
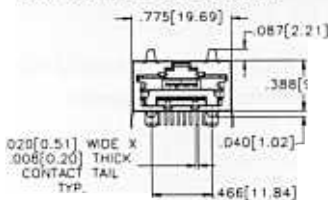
# RECEPTACLE MATERIAL SPECIFICATIONS

# HSSDC SERIES

Shield	Brass Alloy, Tin plated
Insulation Material	High temperature glass filled thermoplastic UL 94V-0
Contact Material	Phosphor Bronze
Contact Plating	30 micro inches gold minimum over 50 micro inches Ni in mating area, Tin lead over 50 micro inches Ni on contact tails
PCI Bracket	Zinc Die-Cast

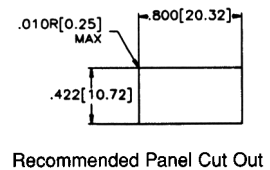
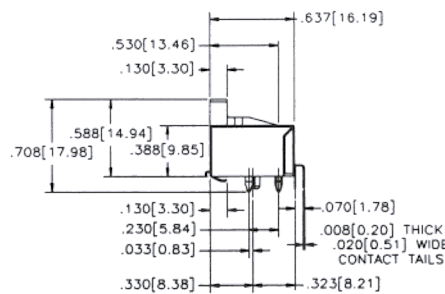
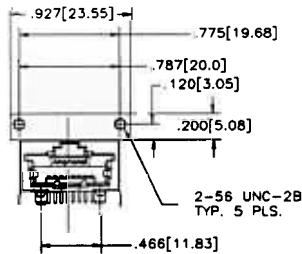
## RECEPTACLE THROUGH HOLE

### PART NUMBER U45-Ax1-x10



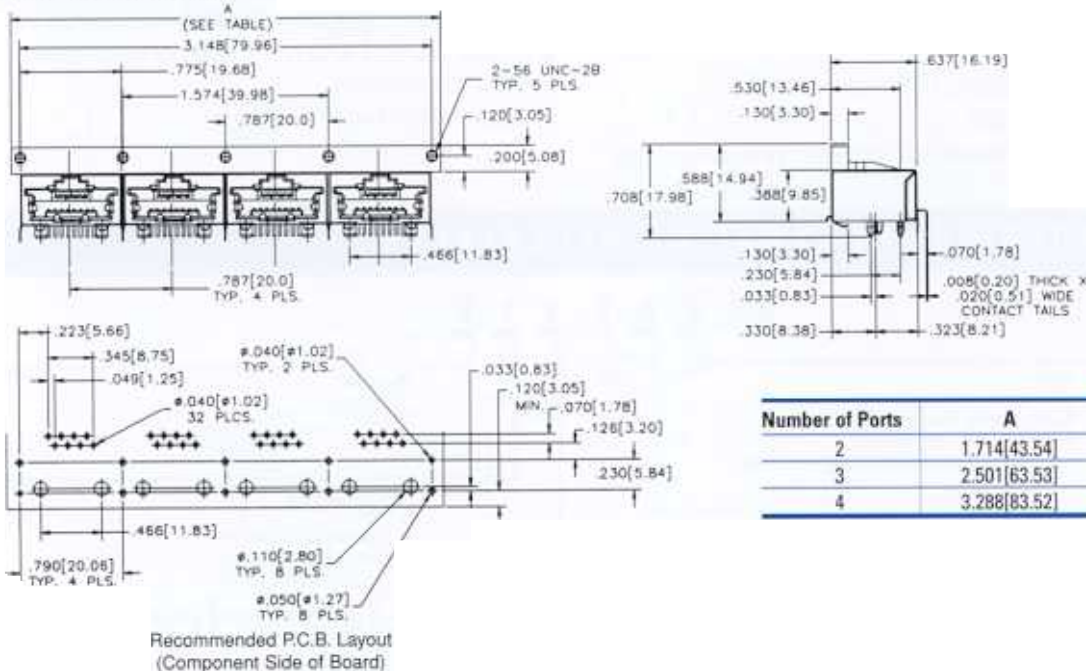
Recommended P.C.B. Layout  
(Component Side of Board)

### PART NUMBER U45-Dx1-x10



Recommended Panel Cut Out

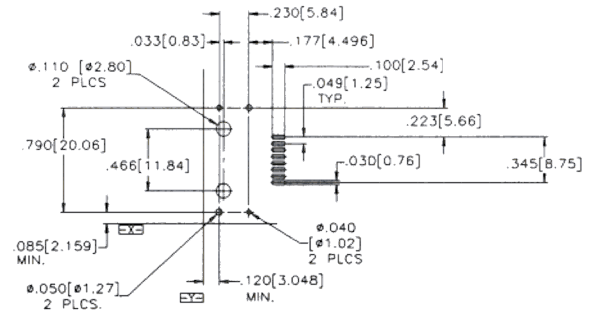
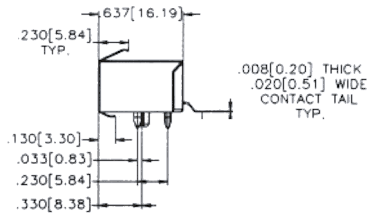
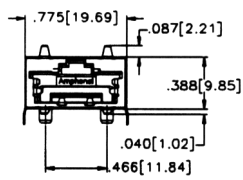
### PART NUMBER U45-Dx1-xx0



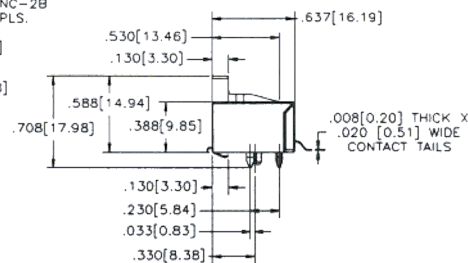
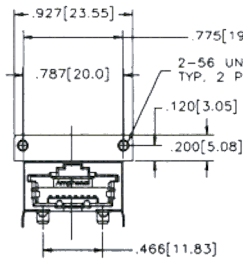
Number of Ports	A
2	1.714 [43.54]
3	2.501 [63.53]
4	3.288 [83.52]

Recommended P.C.B. Layout  
(Component Side of Board)

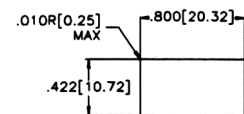
**PART NUMBER U45-Bx1-x10**



**PART NUMBER U45-Ex1-x10**

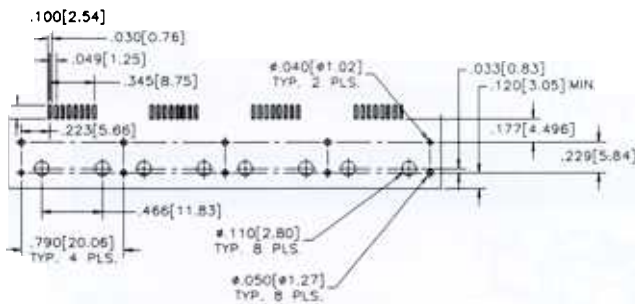
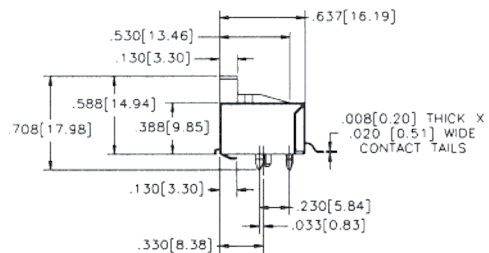
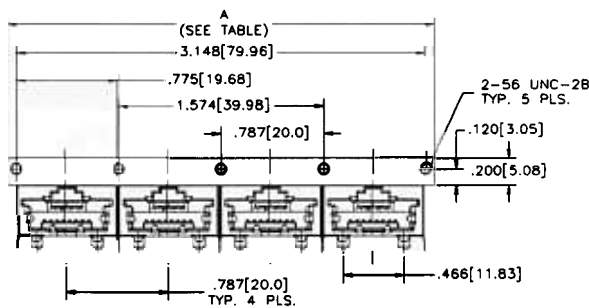


Recommended P.C.B. Layout  
(Component Side of Board)



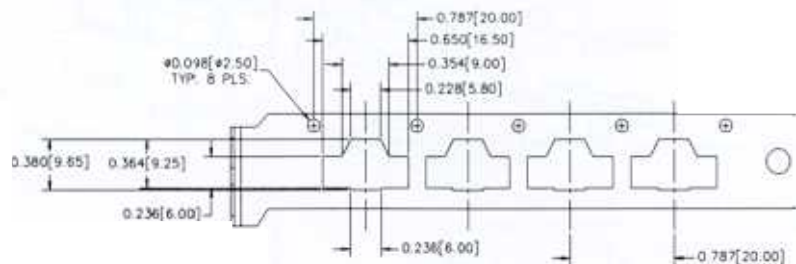
Recommended Panel Cut Out

**PART NUMBER U45-Ex1-xx0**



Recommended P.C.B. Layout  
(Component Side of Board)

Number of Ports	A
2	1.714[43.54]
3	2.501[63.53]
4	3.288[83.52]



Recommended Panel Cut Out

U46- 1 0 1 - 0 0 0

**Equalization Style**

- 0-Non Equalized
- 2-Equalized 30 meters
- 3-Non Equalized with differential ESD protection
- 4-Non Equalized with full ESD protection
- 5-Equalized 30 meters with differential ESD protection
- 6-Equalized 30 meters with full ESD protection

**Polarization**

- 0-None
- 1-Left
- 2-Right
- 3-Both

**Contact Plating**

- 1-30 micro inches gold
- 2-2 micro inches gold over Pd-Ni

**Special**

- 0-Standard
- 1-Filtered (ferrite block)

**Cable size**

- 0-no Ferrule or Boot
- A-.180" - .194"
- B-.195" - .209"
- C-.210" - .224"
- D-.225" - .239"
- E-.240" - .254"
- F-.255" - .269"
- G-.270" - .284"
- H-.285" - .299"
- J-.300" - .314"
- K-.315" - .329"
- L-.330" - .344"
- M-.345" - .359"
- N-.360" - .374"
- P-.375" - .389"

**Boot Type and Ferrule**

- 0-No boot or ferrule
- 1-one piece boot no ferrule
- 2-two piece boot no ferrule
- 3-No boot with ferrule
- 4-one piece boot with ferrule
- 5-two piece boot with ferrule

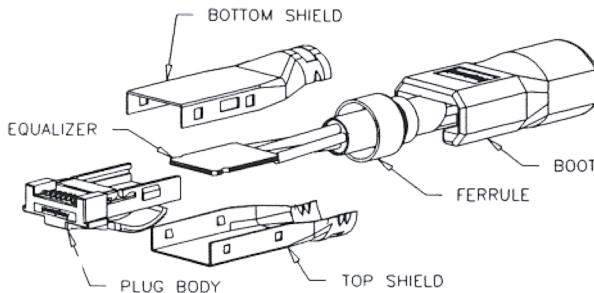
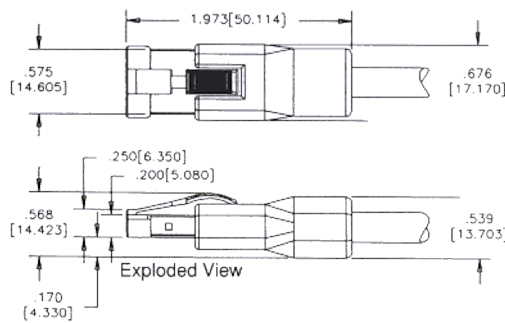
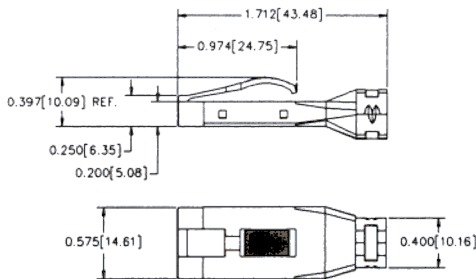
PLUG MATERIAL SPECIFICATIONS

Shell	Brass Alloy, Tin plated
Insulation Material	Glass filled thermoplastic UL94V-0
Contact Material	Phosphor Bronze
Contact Plating	30 micro inches gold over 50 micro inches Ni
Ferrule	Brass Alloy, Tin plated
Boot	Soft PVC

PLUG

PART NUMBER U46-xx1-0xx

PART NUMBER U46-xx1-xxx



**Amphenol**<sup>®</sup>

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