



Innovative Solutions for I/O Communications

TE Connectivity (TE) is your communication I/O solutions provider for electronic interconnect. Whether you are designing a new system or retrofitting an existing system, this solutions guide will help you select the required I/O components with easy access to additional online information through te.com. TE's broad portfolio of I/O interconnect, from high speed data transfer to rugged industrial communications, satisfies the needs of diverse markets and will help you solve size and data rate challenges with your next I/O design.



Authorized Distributor

Design Navigator

	Pitch (mm)	Number of Contacts	Max Data Rate per Lane (Gbps) ²	Max Current Rating per Contact (A) ²	High Vibration Performance	Environmental Protection	Power & Signal Combined	Durable in Harsh Environments	Quickconnect / Disconnect	Standards
1 DATA COMMUNICATIONS / TELECOMMUNICATIONS¹										
AMPLIMITE D-Subminiature Connectors	1.27 x 2.54 - 2.74 x 2.84	9 - 120	N/A	7.5	●	●	●	●	●	SCSI 2 & 3, RS-232, ISO-11569, IPI-2, HIPPI, IEE 802.3 MII, VESA, RS-232
CeeLok FAS-T I/O Connectors	N/A	8	10	1.0	●	●	●	●	●	MIL-DTL-38999, Ethernet, USB, SATA/eSATA
CFP Compliant Connectors / CXP Connectors & Cage Assemblies	0.8	84 - 148	12.5	0.5					●	Ethernet, Infiniband
CHAMP Board-to-Board & Wire-to-Board Connectors	0.8/1.27/ 2.16	14 - 100	1.0	3.5	●					UL, CSA, SCSI, VHDCI
Circular Plastic Connectors (CPC)	N/A	3 - 63	N/A	60	●		●	●	●	UL, CSA, VDE (select parts)
DEUTSCH DMC-M Single Module Connectors	2.54	1 - 20	10	90	●	●	●	●	●	EN4165 - ARINC 809 - BACC65 - UL
DEUTSCH Wildcat High Density Connectors	1.73	3 - 64	N/A	5.0	●	●	●	●	●	N/A
Heavy Duty Connectors (HDC)	N/A	1 - 150	N/A	420	●	●	●	●	●	UL, CSA, VDE
Mini Serial Attached SCSI High Density (Mini SAS HD) Connectors	0.75	36	12.0	0.5						SAS 2.1, PCIe
PARALIGHT™ Active Optical Cable Assemblies	N/A	N/A	14.5	350	●	●		●	●	N/A
QSFP+ Fiber Optic Transceivers	N/A	N/A	10.0	N/A				●	●	SFF-8436, 40GBase-SR4 Ethernet and InfiniBand
Quad Small Form-Factor Plus (QSFP+) Connectors	0.8	38	16.0	0.5					●	Ethernet, Infiniband
Quadrax High Speed I/O Connectors & Contacts	N/A	1 - 12	2.0	1.0	●	●			●	MIL-DTL-38999, ARINC 404, ARINC 600
RJ point five Connector Systems	1.27	8	1.0	0.5					●	Ethernet
RJ45 Modular Jacks	1.27	8	1.0	1.5	●	●			●	TIA, IEC, FCC, Ethernet
Small Form-Factor (SFP & SFP+) I/O Products	0.8	20	16.0	0.5					●	Fibre Channel, Ethernet
USB Connectors	2.0	9	5.0	0.9	●					N/A
X2 Rails & Connectors	0.8	70	3.125	N/A					●	Ethernet
XFP Cages, Connectors & Module Systems	0.8	30	10.0	N/A					●	Ethernet, CTN
2 INDUSTRIAL COMMUNICATION / AUTOMATION & CONTROL¹										
AMP Power Series Wire-Applied Connectors	N/A	4, 6	N/A	20						UL, CSA
AMPLIMITE D-Subminiature Connectors	1.27 x 2.54 - 2.74 x 2.84	9 - 120	N/A	7.5	●	●	●	●	●	SCSI 2 & 3, RS-232, ISO-11569, IPI-2, HIPPI, IEE 802.3 MII, VESA, RS-232
AMPLIMITE Hybrid Connectors (Power Coax Mixed)	0.109	3 - 36	N/A	32	●	●	●	●	●	MIL*
AMPSEAL Sealed Connector Series	2.0 x 4.0	8 - 35	N/A	17	●	●			●	UL, ISO/IEC
CHAMP Board-to-Board & Wire-to-Board Connectors	0.8 / 1.27 / 2.16	14 - 100	1.0	3.5	●					UL, CSA, SCSI, VHDCI
Circular Plastic Connectors (CPC)	N/A	3 - 63	N/A	60	●		●	●	●	UL, CSA, VDE (select parts)
Command Series Switches	N/A	4, 8, 12	N/A	5.0	●				●	UL, CSA, NEMA1, 12 & 13
DEUTSCH DMC-M Single Module Connectors	2.54	1 - 20	10	90	●	●	●	●	●	EN4165, ARINC 809, BACC65, UL
DEUTSCH DTS-RJ45 Ruggedized Shielded Connectors	1.27	4, 8	1.0	N/A	●	●	●	●	●	Cat5e
DEUTSCH Wildcat High Density Connectors	1.73	3 - 64	N/A	5.0	●	●	●	●	●	N/A
Heavy Duty Connectors (HDC)	N/A	1 - 150	N/A	420	●	●	●	●	●	UL, CSA, VDE
Industrial Mini I/O Connector System	N/A	8	1.0	0.5	●	●			●	Cat5e
Industrial RJ45 / Industrial Ethernet Connectors	1.27	4, 8	10	0.5	●	●			●	UL, CSA, Cat5e, Cat6
Industrial Switches	N/A	N/A	N/A	25					●	RU, CSA, VDE, UL
Industrial USB Connectors	2.0	4	0.12	0.5	●	●			●	UL, CSA, USB 2.0
Keylock Switches	N/A	2, 3	N/A	5.0					●	N/A
M8/M12 Connector Systems	N/A	3 - 4	1.0	5.0	●	●			●	UL, CSA
Micro-MaTch Board-to-Board & Wire-to-Board Connectors	1.27	4 - 24	N/A	0.5	●	●			●	N/A
Motorman Hybrid Connectors	N/A	13	1.0	20			●	●	●	UL, CSA, VDE, ISO/IEC, Cat5e
Quad Small Form-Factor Plus (QSFP+) Connectors	0.8	38	16.0	0.5					●	Ethernet, Infiniband
Quadrax High Speed I/O Connectors & Contacts	N/A	1 - 12	2.0	1.0	●	●			●	MIL-DTL-38999, ARINC 404, ARINC 600
RJ45 Modular Jacks	1.27	8	1.0	1.5	●	●			●	TIA, IEC, FCC, Ethernet
Small Form-Factor (SFP & SFP+) I/O Products	0.8	20	16	0.5					●	Fibre Channel, Ethernet
XFP Cages, Connectors & Module Systems	0.8	30	10.0	N/A					●	Ethernet
3 PERSONAL COMPUTER / HANDHELD DEVICES¹										
AMPLIMITE D-Subminiature Connectors	1.27 x 2.54 - 2.74 x 2.84	9 - 120	N/A	7.5	●	●	●	●	●	SCSI 2 & 3, RS-232, ISO-11569, IPI-2, HIPPI, IEE 802.3 MII, VESA, RS-232
CHAMP Board-to-Board & Wire-to-Board Connectors	0.8 / 1.27 / 2.16	14 - 100	1.0	3.5	●					N/A
Connectors for HDMI Standards	N/A	19	10.2	0.5					●	N/A
Digital Visual Interface (DVI) Receptacles & Cable Assemblies	N/A	24 - 29	3.96	1.5	●				●	N/A
D-Subminiature Connectors for VGA Standard	N/A	9, 15	N/A		●				●	N/A
RJ point five Connector Systems	1.27	8	1.0	1.5					●	N/A
RJ45 Modular Jacks	1.27	8	1.0	1.5	●	●			●	TIA, IEC, FCC, Ethernet
USB Connectors	2.0	9	5.0	0.9			●		●	USB
4 INSTRUMENTATION¹										
AMPLIMITE D-Subminiature Connectors	1.27 x 2.54 - 2.74 x 2.84	9 - 120	N/A	7.5	●	●	●	●	●	SCSI 2 & 3, RS-232, ISO-11569, IPI-2, HIPPI, IEE 802.3 MII, VESA, RS-232
AMPLIMITE Hybrid Connectors (Power Coax Mixed)	0.109	3 - 36	N/A	32	●	●	●	●	●	MIL*
CeeLok-FAS-T I/O Connectors	N/A	8	10	1.0	●	●			●	MIL-DTL-38999, 10/100/1000Ethernet, USB2.0/3.0, SATA/eSATA
CHAMP Board-to-Board & Wire-to-Board Connectors	0.8 / 1.27 / 2.16	14 - 100	1.0	3.5	●					UL, CSA, SCSI, VHDCI
Circular Plastic Connectors (CPC)	N/A	3 - 64	N/A	5.0	●		●	●	●	UL, CSA, VDE (select parts)
Corcom Power Entry Modules	Refer to the Featured Product section for more product details.									
DEUTSCH DMC-M Single Module Connectors	2.54	1 - 20	10	90	●	●	●	●	●	EN4165, ARINC 809, BACC65, UL
DEUTSCH Wildcat High Density Connectors	1.73	3 - 64	N/A	5.0	●	●	●	●	●	N/A
Industrial RJ45 / Industrial Ethernet Connectors	1.27	4, 8	10	0.5	●	●			●	UL, CSA, Cat5e
Industrial USB Connectors	2.0	4	0.12	0.5	●	●			●	UL, CSA, USB 2.0
M8/M12 Connector Systems	N/A	3 - 4	1.0	5.0	●	●			●	UL, CSA
Micro-MaTch Board-to-Board & Wire-to-Board Connectors	1.27	2 - 24	N/A	0.5	●	●			●	N/A
Quadrax High Speed I/O Connectors & Contacts	N/A	1 - 12	2.0	1.0	●	●			●	MIL-DTL-38999, ARINC 404, ARINC 600
RJ point five Connector Systems	1.27	8	1.0	0.5					●	Ethernet
RJ45 Modular Jacks	1.27	8	1.0	1.5	●	●			●	FCC

¹ For cable assemblies using specified interconnect, visit the [TE Cable Assembly website](#).

² May vary based on application and product selection

UL - Underwriters Laboratories Listed
 RJU - Recognized Under
 CSA - Canadian Standards Association
 * See product page on te.com for Mil specs




Data Communications / Telecommunications




Featured Products




- 1 **AMPLIMITE D-Subminiature Connectors**
- 2 ■ Ideal for industrial applications due to intermateability and rugged design
- 3 ■ Realize proven performance at competitive prices
- 4 ■ Support a broad range of design needs with extensive product offerings




- 1 **RJ45 Modular Jacks**
- 2 ■ Reduce electrical noise and gain up to Cat5e performance
- 3 ■ Gain additional PCB space with low profile and narrow housing design
- 4 ■ Suitable for a broad range of applications with diverse product configurations




- 1 **QSFP+ Fiber Optic Transceivers**
- 2 ■ Achieve increased data transfer rates with high speed capability
- 3 ■ Efficiently utilize application space with high density configuration
- 4 ■ Provide improved cable management with small design



- 1 **SFP+ I/O Products**
- 2 ■ Support high density design with belly-to-belly and stacked configuration
- 3 ■ Maximize system thermal management with heat sink options
- 4 ■ Achieve high speed and high density with standardized products



- 1 **CXP Connectors & Cage Assemblies**
- 2 ■ Provide up to 120Gbps of total bandwidth in one-piece press-fit assembly
- 3 ■ Allow maximum system thermal management with heat-sink options
- 4 ■ Enable high reliability mating and unmating with robust EMI spring design



- 1 **Quad Small Form-Factor Pluggable Plus (QSFP+) Connectors**
- 2 ■ Support a range of high speed requirements with multiple channels
- 3 ■ Achieve proven EMI containment with through-bezel or behind-bezel cage options
- 4 ■ Reduce cable clutter with direct attach copper cables for short reach applications

Industrial Communication / Automation & Control



Featured Products



- 1 **CHAMP Board-to-Board & Wire-to-Board Connectors**
- 2
- 3
- 4
- Satisfy board-to-board connection needs with stacking, coplanar and backplane configurations
- Offer versatility with plug and receptacle in both vertical and right angle mounting options
- Achieve durable connections with fully shrouded housings



- 1 **Circular Plastic Connectors (CPC)**
- 2
- 3
- 4
- Mixed power and signal available in a single interconnect
- Ideal for harsh environments where mechanical shock, moisture and debris are prevalent
- Achieve efficient field repair with removable contacts and replaceable coupling ring



- 1 **DEUTSCH Wildcat High Density Connectors**
- 2
- 3
- 4
- Enable quick and positive coupling with robust mayonet mechanism
- Provide for cable braid and boot termination with rear accessory feature
- Gain space and reduce weight with a small, lightweight design



- 1 **Heavy Duty Connectors (HDC)**
- 2
- 3
- 4
- Lower applied cost with quick and easy assembly options
- Gain machine configuration flexibility by combining power, signal and data circuits
- Withstand severe environmental conditions with IP68 configuration options



- 1 **M8 / M12 Connector Systems**
- 2
- 3
- 4
- Enable equipment interoperability through use of standard industrial interfaces
- Industrial Ethernet solutions ranging from 100Mb through 10Gb speeds
- Improve field termination time using factory made overmolded cable assemblies

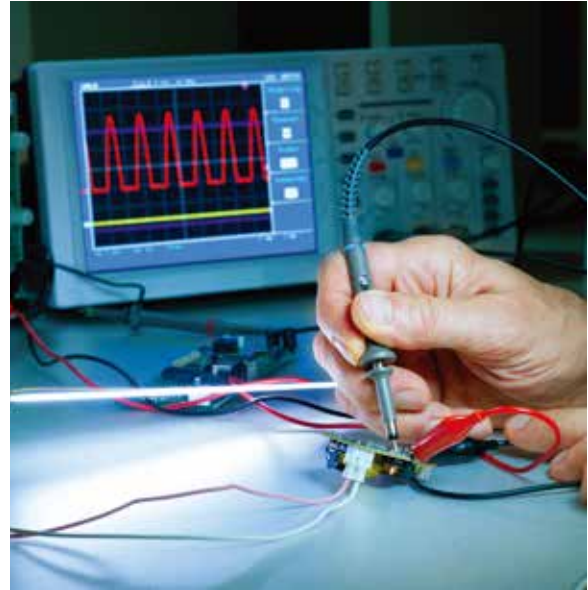


- 1 **Industrial Mini I/O Connector System**
- 2
- 3
- 4
- Avoid mis-mating with polarized housing options
- Increase reliability in high vibration environments with two points of contact
- Prevent unintentional plug pull-out with unique latching system

Personal Computer / Handheld Devices



Instrumentation



Featured Products



- 1 **RJ point five Connector Systems**
- 3
- 4
- Save board space with double density design and 7mm centerline spacing
- Increase installation and service efficiency with field terminable cable assemblies
- Ethernet solutions for applications ranging up to 10Gb speeds



- 1 **USB Connectors**
- 5
- Support data transfer rates of standard USB 2.0 or the 10 times faster USB 3.0
- Optimize power efficiencies with improved device interaction and charging time
- Standard and customized styles and orientations available



- 3 **Connectors for HDMI Standards**
- Support standard, enhanced or high-definition video and multi-channel audio in one cable
- Provide secure electrical contact and smooth cable insertion/extraction with easy-to-use friction lock connector design
- Gain ESD protection with fully shielded housing

Featured Products



- 1 **CeeLok FAS-T I/O Connectors**
- 4
- Provide EMI protection in a low profile, light-weight strain relief with a backshell integrated plug
- Achieve easy termination and field repairability with crimp-snap, 39029-style contacts
- Minimize cross talk with patented, noise-cancelling contact arrangement



- 2 **Micro-MaTch Board-to-Board & Wire-to-Board Connectors**
- 4
- Prevent fretting corrosion and allow for longer-lasting connection with contact spring design
- Eliminate unnecessary movement in high-vibration applications with high force contact system
- Support wide variety of design options with extensive product offering



4 **Corcom Power Entry Modules**

Series	Type	Rated Current / Voltage (max)	Agency Approvals
CU Series	Compact 1U height switched power entry module	1 - 15A / 250 VAC	UL, CSA, VDE
Medium P Series	Versatile power entry module with reduced size	3 - 10A / 250 VAC	UL, CSA, VDE

For a complete list of TE's Corcom EMI/RFI filters, visit: www.corcom.com



TTI Asia Locations

NORTH ASIA

Beijing/China

Phone +86 10 6566 4283
Fax +86 10 6566 4238

Dongguan/China

Phone +86 769 8275 6428
Fax +86 769 8275 9342

Hong Kong

Phone +852 3658 4700
Fax +852 2628 0966

Shanghai/China

Phone +86 21 5174 2088
Fax +86 21 5153 1383

Shenzhen/China

Phone +86 755 8386 5857
Fax +86 755 8386 5272

Suzhou/China

Phone +86 512 8885 9626
Fax +86 512 8885 9620

Taiwan

Phone +886 2 2796 8305
Fax +886 2 2796 8315

Chengdu/China

Phone +86 21 5174 2088
Fax +86 21 5153 1383

Wuhan/China

Phone +86 21 5174 2088
Fax +86 21 5153 1383

Xiamen/China

Phone +86 21 5174 2088
Fax +86 21 5153 1383

SOUTH ASIA

Malaysia

Phone +60 4 645 1011
Fax +60 4 645 1657

Philippines

Phone +63 2654 5599
Fax +63 2234 2187

Singapore

Phone +65 6788 9200
Fax +65 6788 3002

Thailand

Phone +662 694 2277
Fax +662 694 2276

Vietnam

Phone +65 6788 9200
Fax +65 6788 3002

OTHER LOCATIONS

Australia/New Zealand

Phone +65 6788 9200
Fax +65 6788 3002

Japan

Phone +852 3658 4700
Fax +852 2628 0966

Korea

Phone +852 3658 4700
Fax +852 2628 0966

India/Bangalore

Phone +91 80 4147 7191
Fax +91 80 4147 7192

India/Hyderabad

Phone +91 80 4147 7191
Fax +91 80 4147 7192

India/Pune

Phone +91 80 4147 7191
Fax +91 80 4147 7192

India/New Delhi

Phone +91 80 4147 7191
Fax +91 80 4147 7192

There's a TTI location near you.

Global Headquarters

www.ttiinc.com

TTI, Inc.
2441 Northeast Parkway
Fort Worth, Texas 76106
Phone +817 740-9000
Fax +817 740-9898

European Headquarters

www.ttieurope.com

TTI, Inc.
Ganghoferstr. 34
82216 Maisach-Gernlinden
Germany
Phone +49 8142 6680-0
Fax +49 8142 6680-490

Asian Headquarters

www.ttiasia.com

TTI Electronics Asia Pte. Ltd.
3 Changi North Street 2
Logistech Building #04-01
Singapore 498827
Phone +65 6788-9200
Fax +65 6788-9300



Authorized Distributor

www.ttiasia.com

Contact TTI FeedbackTTIAsia@ttiinc.com



te.com

© 2013 Tyco Electronics Corporation, a TE Connectivity Ltd. Company. All Rights Reserved.
AMP, AMPLIMITE, AMPSEAL, CHAMP, CeeLok FAS-T, Corcom, DEUTSCH, Micro-MaTch, Motorman,
PARALIGHT, RJ point five, TE Connectivity and TE connectivity (logo) are trademarks.
HDMI is a trademark of HDMI Licensing LLC.
VGA is a trademark of IBM Corporation.

Other logos, product and Company names mentioned herein may be trademarks of their respective owners.

1-1773705-2 CIS CM 06/2013

While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.