

## TE Connectivity Data Communications Product Guide:

Providing technology leadership for your next-generation high-speed architectural platforms

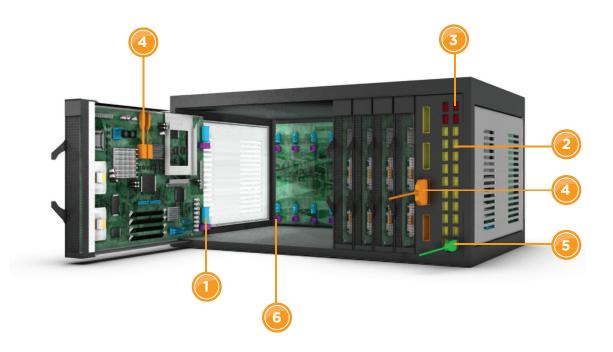
Success in today and tomorrow's data communications relies on dependable high-speed interconnections. From the data center, central office, enterprise communications and the wireless infrastructure, TE Connectivity provides a broad portfolio of high-speed products. This expansive portfolio addresses the increasing data rate demands for data communications.

This guide provides TE's high-speed product portfolio and capabilities for next-generation data communication architectures.





## **DATA CENTER - SERVER**



### **BOARD-TO-BOARD CONNECTORS**



#### BackPlane

IMPACT connector 

www.te.com/products/Impact

Z-PACK TinMan connector www.te.com/products/tinman

Z-PACK Slim UHD high-speed connector www.te.com/products/zpackUHD

Z-PACK HM-Zd connector www.te.com/products/HMZD

Z-PACK HM-Zd Plus connector (a) www.te.com/products/hmzdplus

MULTIGIG RT connector www.te.com/products/multigigrt

#### Mezzanine

STEP-Z connector www.te.com/products/STEP-Z

#### **CoPlanar**

Z-PACK HM-Zd connector www.te.com/products/HMZD

Z-PACK Slim UHD high-speed connector 
www.te.com/products/zpackUHD

# KEY CODE

O Data Rate: 25+ GB/s

O Data Rate: 10G

Data Rate: 20-25 GB/s

Oata Rate: 1G

Data Rate: 15-20 GB/s

Data Rate: 10/100

Data Rate: 10-15 GB/s



## **COMMUNICATION - SWITCH / ROUTER**





#### Pluggable

Mini SAS HD connector (1)



In Development

Please contact technical support team on back page

MultiLink SAS connector (



In Development

Please contact technical support team on back page

Quad SAS connector ①

In Development

Please contact technical support team on back page

SFP+ connector



www.te.com/products/SFPplus







zSFP+ connector 🕕 🕕 🕕 In Development

Please contact technical support team on back page



www.te.com/products/QSFP









In Development Please contact technical support team on back page



www.te.com/products/CXP

zCXP connector 🕕 🕕 🕕





In Development

Please contact technical support team on back page



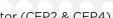






www.te.com/products/cfp

Quadra connector (CFP2 & CFP4) 🕀



In Development

Please contact technical support team on back page

XFP connector (



www.te.com/products/xfp

X2 connector



www.te.com/products/x2

Cat 6A (10GBase-T) connector

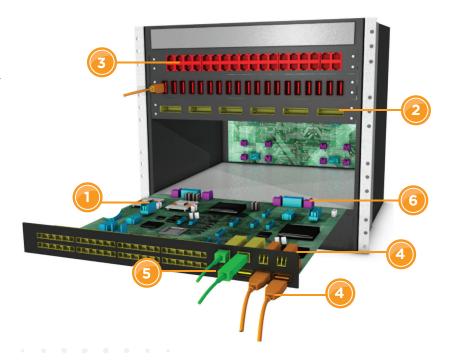


In Development

Please contact technical support team on back page

RJ point five connector system 🕕 www.te.com/products/rjpointfive







www.te.com/products/planarmag

Discrete 1G transformer |

te.com/products/planarmag

Discrete 10G transformer 🕛 www.te.com/products/planarmag

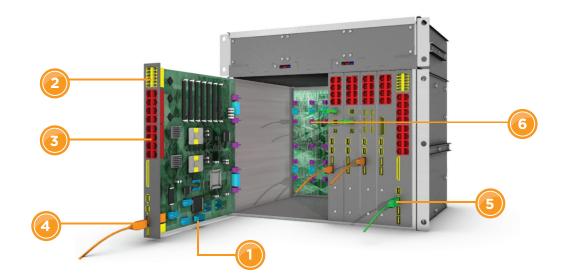
www.te.com/products/planarmag

1 x N Integrated Connector Module (ICM) www.te.com/products/planarmag

2 x N Integrated Connector Module (ICM)

PoE+ 2 x N Integrated Connector Module (ICM) www.te.com/products/planarmag

## WIRELESS INFRASTRUCTURE - MOBILE SWITCH

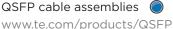


## **FIBER OPTICS**



#### **Active Optical Cable Assemblies**

QSFP cable assemblies







QSFP+ cable assemblies





In Development Please contact technical support team on back page

SFP+ cable assemblies 🕕





Please contact technical support team on back page

CXP cable assemblies 🕕





In Development

Please contact technical support team on back page

Hybrid cable assemblies 🕕





In Development

Please contact technical support team on back page

#### **Active Optical Modules (Transceivers)**

QSFP modules 🕕 🕕





www.te.com/products/QSFP-modules

QSFP+ modules 🕕 🕕









In Development

Please contact technical support team on back page

#### **Advanced Packing Solutions**

Mid-board optics (1) (1)





In Development

Please contact technical support team on back page

## **COPPER CABLE ASSEMBLIES**



4X cable assemblies (SAS, Fibre Channel, Infiniband, 10G Ethernet) www.te.com/products/4X12X

HM-Zd cable assemblies



www.te.com/products/high-speed-cable-assemblies

QSFP+ cable assemblies (





SFP+ cable assemblies

www.te.com/products/SFPplusca







XFP cable assemblies www.te.com/products/XFP

RJ point five connector system cable assemblies







www.te.com/products/rjpointfive

Mini SAS cable assemblies



www.te.com/products/minisascableassy

Mini SAS HD cable assemblies





In Development

. . . . . . . . .

Please contact technical support team on back page

InfiniTwist cables 🕕 🔘







www.te.com/products/InfiniTwist

## **POWER CONNECTORS**



MULTI-BEAM XLE connector

www.te.com/products/MULTIBEAMXLE

MINIPAK HDL connector

www.te.com/products/minipakhdl

MULTI-BEAM XL connector

www.te.com/products/MULTIBEAMXL

. . . . . . . . . . .

ET Power connector

www.te.com/products/Etpower

**CROWN LINE connector** 

www.te.com/products/CROWNLINE

## HIGH-SPEED PRODUCT DEVELOPMENT CAPABILITIES AND TECHNOLOGIES

#### **Signal Integrity Capabilities**

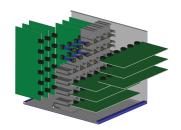
TE has leading edge signal integrity and Electro-Magnetic-Interference (EMI) modeling and testing capabilities required for ever increasing data rates. Our global team can function as your initial design and consultation resource to perform electrical modeling and simulation of high-speed connectors and cable assemblies. Additionally, we provide test and validation of electrical performances across your complete channel or system. So whether you're looking to validate a current system layout or developing the next-generation high-speed system, our signal integrity team can provide support for all areas of your analysis.

For more information about TE's signal integrity capabilities, visit our landing page at: http://www.TE.com/documentation/electrical-models/

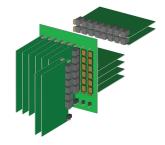
#### **High-Speed Products Enabling Next-Generation Architectures**

#### **High-Speed Backplane**

- Broad portfolio of high-speed, high-performance backplane connectors and cable assemblies for aggregate data rates greater than 100 Gbps (up to 40 Gbps per differential pair)
- Enables orthogonal and cabled backplane architectures
- Reduced connector noise and insertion loss
- Optimized PCB footprints



Cabled Backplane Architecture



Traditional Orthogonal Backplane Architecture

#### **High-Speed Copper Cables**

- Wide array of high-speed, high-performance cables and cable assemblies for next-generation industry standard applications
- Conductor sizes of 32, 30, 28, 26 and 24 AWG available
- Capable of aggregate data rates greater than 100 Gbps (up to 40 Gbps per differential pair)



**QSFP Cable Assembly** 



InfiniTwist Cable

#### **High-Speed Fiber Optics**

- Complete product solution set including passive and active optical cables and transceivers
- Our portfolio enables a wide range of applications including chip-to-chip, optical backplanes and fiber-to-the-antenna
- Capable of aggregate data rates greater than 100 Gbps (up to 40 Gbps per wave length)



QSFP Active Optical Cable Assembly



**QSFP+ Transceiver** 

#### **DATA COMMUNICATION INDUSTRY URLs**

www.te.com/industry/datacenter www.te.com/industry/communications www.te.com/industry/wireless

#### **TECHNICAL SUPPORT**

USA Internet: te.com/help

USA: +1 (800) 522-6752

Canada: +1 (905) 475-6222

Mexico +52 (0) 55-1106-0800

Latin/S. America: +54 (0) 11-4733-2200

Germany: +49 (0) 6251-133-1999

UK: +44 (0) 800-267666

France: +33 (0) 1-3420-8686

Netherlands: +31 (0) 73-6246-999

China: +86 (0) 400-820-6015





Authorized Distributor

#### te.com

www.ttiinc.com 1 800 CALL TTI information@ttiinc.com © 2011 Tyco Electronics Corporation, a TE Connectivity Ltd. Company. All Rights Reserved.

IMPACT is a trademark of Molex Incorporated

MultiLink SAS is a trademark of SCSI Trade Association

CROWN LINE, InfiniTwist, MINIPAK HDL, MULTI-BEAM XL, MULTI-BEAM XLE, MULTIGIG RT, Quadra, RJ point five, STEP-Z,

STRADA, STRADA Mesa, STRADA Whisper, Z-PACK, Z-PACK Slim UHD, Z-PACK TinMan, TE Connectivity and TE connectivity

(logo) are trademarks. Other logos, product and/or company names might be trademarks of their respective owners.

CB CIS 12/2011

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 brochure 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.