

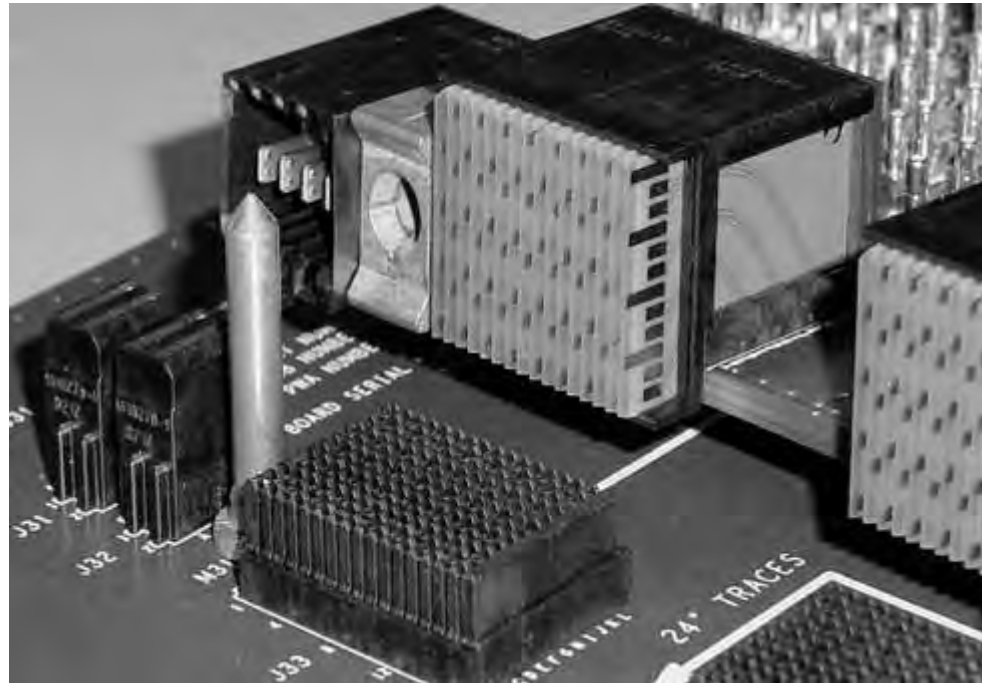
## MULTIGIG RT Tier 2 Connector System

### Target Applications

- High speed telecommunications equipment
- Midrange and high-end servers
- Networking equipment
- Blindmate design
- High speed custom platforms
- Mass data storage
- Rugged, mission-critical applications

### Product Features

- Excellent performance to 6.25+ Gb/s-
- High density: 113 contacts per inch provides 56 contact pairs per inch for differential signaling
- Options include 20.32 [.800] and 25.40 [1.000] pitch card spacing
- Modular options for signal, power, keying and guidance
- Optimized footprints
- Robust design
- Low noise levels
- Supports differential pair widths of 6 mils with 9 mil spacings
- Single-ended, open pin field and power wafers available



The MULTIGIG RT Tier 2 connector is the latest product release to meet customer requirements for high-density and high-performance two-piece interconnects. In TE and independent lab tests, the MULTIGIG RT Tier 2 connector has performed in excess of 6 Gb/s using standard FR-4 board material and routing techniques, and has **been demonstrated to 10 Gb/s.**

The MULTIGIG RT Tier 2 connector system provides the flexibility to configure the daughtercard for Differential, Single-ended, Open Pin Field, or Power

within a single connector module. All of these options then mate into a common Backplane Receptacle.

The robust connector uses daughtercard plugs with a printed circuit board (PCB) wafer design and backplane receptacles with a completely enclosed dual-beam design. All signal lines use redundant points of contact for high reliability.

The MULTIGIG RT Tier 2 connector is available for both 20.32 [.800] and 25.40 [1.000] pitch card spacing. The totally modular system allows flexibility in choosing signal and power modules as well as guidance, keying,

and electrostatic discharge (ESD) modules to meet the most demanding applications. Signal modules can be customized for specific electrical requirements — such as sequencing — that are critical in high speed applications.

Power modules are available with two- and four-voltage options, each circuit capable of carrying 20 amps. The robust metal guide pin provides eight keying options and a unique ESD contact to discharge static when daughtercards are hot-plugged.

### Availability

**Fully validated SPICE models: E-mail requests to [modeling@te.com](mailto:modeling@te.com)**

**Pro/E models and IGES models: E-mail requests to [TECAD@te.com](mailto:TECAD@te.com)**

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

IGES is a trademark of IAMBA Networks, Inc.

PRO/E is a trademark of Parametric Technology Corp.

### MULTIGIG RT Tier 2 Connector System (Continued)

#### Mechanical Design Summary

#### 20.30 [.800] Pitch Connector

| Type                   | Style       | No. of Cols. | Signal Pattern | Part Number |
|------------------------|-------------|--------------|----------------|-------------|
| (Backplane) Receptacle | Center      | 16           | N/A            | 1410140-1   |
|                        | Stand Alone | 16           | N/A            | 1410133-1   |
|                        | Half Left   | 8            | N/A            | 1410186-1   |
|                        | Half Right  | 8            | N/A            | *           |
|                        | Full Left   | 16           | N/A            | 1410141-1   |
|                        | Full Right  | 16           | N/A            | 1410142-1   |
|                        | Right End   | 18           | N/A            | 1410456-1   |
| (Daughtercard) Plug    | Center      | 16           | S.E.           | *           |
|                        |             | 16           | Diff.          | 1410137-1   |
|                        | Stand Alone | 16           | S.E.           | *           |
|                        |             | 16           | Diff.          | 1410134-1   |
|                        | Half Left   | 8            | S.E.           | *           |
|                        |             | 8            | Diff.          | *           |
|                        | Half Right  | 8            | S.E.           | *           |
|                        |             | 8            | Diff.          | *           |
|                        | Full Left   | 16           | S.E.           | *           |
|                        |             | 16           | Diff.          | 1410138-1   |
|                        | Full Right  | 16           | S.E.           | *           |
|                        | 16          | Diff.        | 1410139-1      |             |

#### 25.40 [1.00] Pitch Connector

| Type                   | Style       | No. of Cols. | Signal Pattern | Part Number |
|------------------------|-------------|--------------|----------------|-------------|
| (Backplane) Receptacle | Center      | 16           | N/A            | 1410127-1   |
|                        | Stand Alone | 16           | N/A            | 1410131-1   |
|                        | Half Left   | 8            | N/A            | *           |
|                        | Half Right  | 8            | N/A            | *           |
|                        | Full Left   | 16           | N/A            | 1410129-1   |
|                        | Full Right  | 16           | N/A            | 1410128-1   |
|                        | Center      | 16           | S.E.           | *           |
| (Daughtercard) Plug    |             | 16           | Diff.          | 1410123-1   |
|                        | Stand Alone | 16           | S.E.           | *           |
|                        |             | 16           | Diff.          | 1410132-1   |
|                        | Half Left   | 8            | S.E.           | *           |
|                        |             | 8            | Diff.          | *           |
|                        | Half Right  | 8            | S.E.           | *           |
|                        |             | 8            | Diff.          | *           |
|                        | Full Left   | 16           | S.E.           | *           |
|                        |             | 16           | Diff.          | 1410124-1   |
|                        | Full Right  | 16           | S.E.           | *           |
|                        |             | 16           | Diff.          | 1410125-1   |

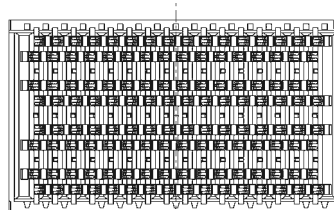
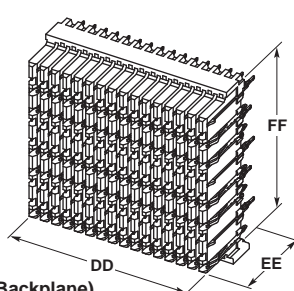
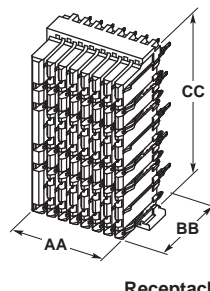
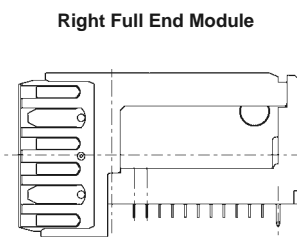
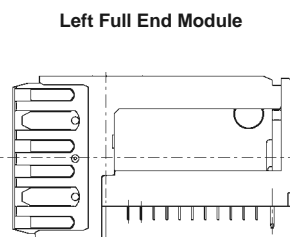
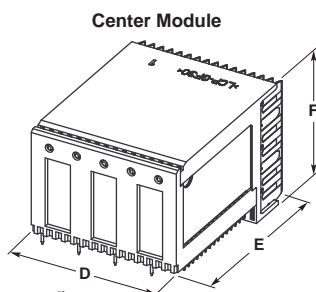
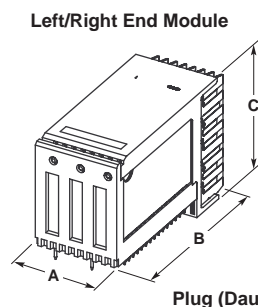
\* Contact TE.

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The drawings below show the nominal dimensions for the MULTIGIG RT 2 connector modules

| Dim. | 20.32 [.800] Connector | 25.40 [1.000] Connector |
|------|------------------------|-------------------------|
| A    | 16.10<br>.630          | 16.10<br>.630           |
| B    | 21.60<br>.850          | 27.40<br>1.080          |
| C    | 18.40<br>.720          | 24.20<br>.950           |
| D    | 28.70<br>1.130         | 28.70<br>1.130          |
| E    | 21.60<br>.850          | 27.40<br>1.080          |
| F    | 18.40<br>.720          | 24.20<br>.950           |

| Dim. | 20.32 [.800] Connector                 | 25.40 [1.000] Connector                |
|------|--|--|
| AA   | R = 17.00<br>.067<br>L = 15.20<br>.600 | R = 17.00<br>.067<br>L = 15.20<br>.600 |
| BB   | 10.50<br>.410                          | 10.50<br>.410                          |
| CC   | 18.60<br>.730                          | 24.40<br>.960                          |
| DD   | 28.70<br>1.130                         | 28.70<br>1.130                         |
| EE   | 10.50<br>.410                          | 10.50<br>.410                          |
| FF   | 18.60<br>.730                          | 24.40<br>.960                          |



Note: All part numbers are RoHS compliant.