# EXTreme Ten60Power Hybrid Power-and-Signal Connectors and Harness Solutions

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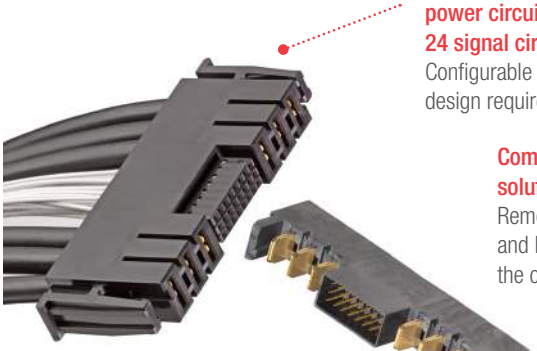
**Designed for board-to-board, wire-to-board, and panel-to-board applications that require high current density, low power loss, and design flexibility, EXTreme Ten60Power Hybrid Power-and-Signal Connectors and Harness Solutions provide up to 260A per linear inch, faster response times, and are easily configured for individual design requirements**

## Features and Benefits

**Multiple mating levels available on plug power and signal contacts**
Provides Last-Mate-First-Break (LMFB) or First-Mate-Last-Break (FMLB) capability

**Available in 2 through 6 power circuits: 0, 12, 18, and 24 signal circuits**
Configurable for optimizing design requirements

**Panel mount receptacle harness mates to standard EXTreme Ten60Power right-angle plug**
Allows blind mating via proven EXTreme Ten60Power alignment guides



*EXTreme Ten60Power Wire-to-Board Hybrid Signal-and-Power Receptacle Harness and Right-Angle Header*

**Complete plug and harness solutions available**
Removes the burden of plug and harness assembly from the customer

**Right-angle and vertical PCB plug mating possible**
Optimizes flexibility in design requirements

*EXTreme Ten60Power Wire-to-Board 4-Power Receptacle Harness and Right-Angle Header*

**Robust, high-current contact blades with 7.50mm power pitch**
Provides 50.0A of current

**Panel mount housing flange mounts to either the front of back of the panel**
Allows multiple chassis mounting arrangements

**8 to 16 AWG power receptacle terminals, 22 to 28 AWG signal receptacle terminals**
Maximum flexibility in wire gauge design requirements

**Rated for resistance to arcing in hot-pluggable applications**
Prevents electrical interruptions

**Power-only and hybrid power-and-signal configurations**
Maximizes number of configurations for optimized flexibility in design requirements

**Available as separate components**
Allows pick-and-place harness assembly and maintenance

**Multiple mating levels available on header power and signal contacts**
Provides last-mate-first-break (LMFB) or first-mate-last-break (FMLB) capabilities

**Low-profile design: 10.00mm height**
Enhances system airflow

**Modular assembly (modules can be arranged in virtually any configuration and added together)**
Additional circuit configurations can be achieved

**Standard power blades are rated up to 60.0A per blade at a 30°C T-rise**
Ensures maximum current-to-length ratio

**Available in 1 through 9 circuit split-blade power modules: 1 through 10 circuit standard power blade modules, 6 though 60 circuit signal modules; either end-mount or top-mount guidance**
Modules can be configured to accommodate virtually any design application

**Robust, high-current contact blades in DC (5.50mm) and AC (7.50mm) power pitches**
Provides excellent design flexibility

**Rated for resistance to arcing**
Supports hot-pluggable applications

**Right-angle and vertical orientations available**
Accommodates either coplanar or perpendicular applications

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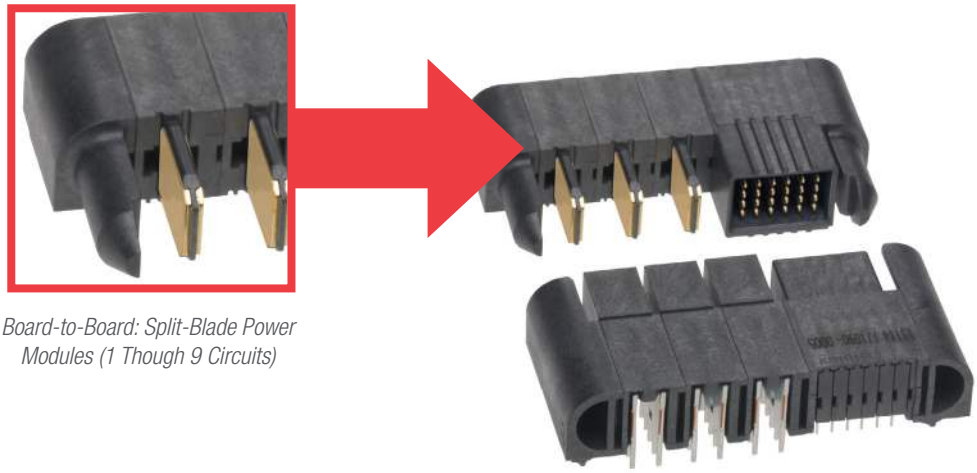
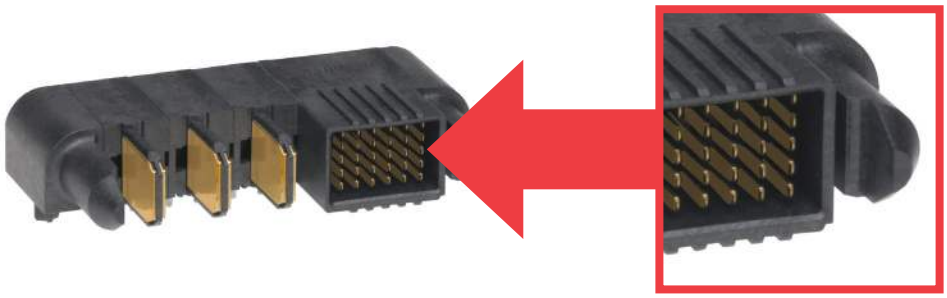
## Features and Benefits

**Isolated split mated contacts with dielectric LCP plastic (each split-blade terminal carries a 30.0A current rating at 30°C T-rise**
Shortens the distance between energized power contacts resulting in faster response times, lower overall impedance, and capacitance benefits. Increases power contact granularity if the customer does not need the standard, full 60.0A current rating for all power contacts



*Board-to-Board: Split-Blade Power Modules (1 Though 9 Circuits)*



*Board-to-Board:3- and 5-Row Signal Modules*

**3-Row (2.54 by 2.54mm pitch) and 5-row signal modules available (2.00 by 1.65 pitch)**
Provides design flexibility. 5-row version saves over 10.00mm space when using a 25-signal module versus the 3-row version with 24-signal modules. For use in more critical space-constrained applications

**Through-hole versions available in right-angle plug and receptacles; press-fit versions available in right-angle plug and receptacles and vertical receptacles**
Provides excellent design flexibility

## Applications

**Datacommunication Equipment**
- High-End Servers
- Rack Servers

**Telecommunication Equipment**
- Hubs
- Cellular Base Stations
- Switches
- Routers

**Consumer Electronics**
- Appliances
- Entertainment Systems
- HVAC

Server

Cellular Base Station

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## Specifications

### *REFERENCE INFORMATION*

Reference Information
Packaging: Tray
UL File No.: E29719
CSA File No.: LR-19980_A_ Class 6233-81 CSA
tested to UL-1977 andCSA C22.2 No. 182.3-M1987
TUV: R 72081037
Designed In: Millimeters

### *ELECTRICAL*

Voltage (max.): Power — 600V
Signal — 250V
Current (max.):
Power:
Board-to-Board — 60.0A
Wire-to-Board — 50.0A
Panel-to-Board — 50.0A
Signal — 2.5A
Dielectric Withstanding Voltage: 1500V
Insulation Resistance (min.): 5000 Megohms

### *MECHANICAL*

Pitch:
Original 3-Row Connectors:
Power — 5.50mm (DC) or 7.50mm (AC)
Signal — 2.54 by 2.45mm
High-Density Signal 5-Row Connectors:
Power — 5.50mm (DC) or 7.50mm (AC)
Signal — 2.00 by 1.65mm
Mating Force (max. per circuit):
Power Contacts:
Vertical Receptacle — 764g
Right-Angle Receptacle — 460g
Signal Contacts — 75g
Un-mating Force (min. per circuit):
Power Contacts:
Vertical Receptacle — 340g
Right-Angle Receptacle — 235g
Signal Contacts — 30g
Durability: 200 cycles

### *PHYSICAL*

Housing: 30% glass filled LCP or PBT
Contact:
Power Contacts — Copper (Cu) Alloy
Signal Contacts — Copper (Cu) Alloy
Plating:
Contact Area — Select Gold (Au)
Solder Tail Area — Tin (Sn)
Underplating — Nickel (Ni)
Flammability Rating: 94V-0
RoHS Compliant: Yes
Operating Temperature: -40 to +105°C

## Ordering Information

| Series No. | Component | Orientation | Interface | Power Blade Style | Function |
|---|---|---|---|---|---|
| 172452 | Plug | Right Angle | Wire-to-Board Harness | Standard | Power Only |
| 172453 | | | | | Hybrid |
| 172457 | | | Panel-to-Board Harness | | Power Only |
| 172458 | | | | | Hybrid |
| 46437 | | | Board-to-Board | | |
| 171088 | | | | Split Blade | |
| 172509 | Receptacle | Vertical | Wire-to-Board Harness | Standard | Power Only |
| 172510 | | | | | Hybrid |
| 172511 | | | Panel-to-Board Harness | | Power Only |
| 172512 | | | | | Hybrid |
| 46562 | | | Board-to-Board | | |
| 171089 | | | | Split Blade | |
| 46436 | | Right Angle | | Standard | |
| 171090 | | | | Split Blade | |
| 46708 | TPA Retainer | --- | --- | --- | --- |
| 46709 | Signal Wafer | | | | Signal Only |
| 44262 | Power Terminal | | | | Power Only |
| TBD* | Signal Terminal | | | | Signal Only |

**www.molex.com/link/ten60.html**



Order No. 987650-1981 Rev. 10 USA/0k/GF/2018.01