

EXTreme Ten60Power™

Hybrid Power and Signal Connectors



Designed for board-to-board, wire-to-board and panel-to-board applications, EXTreme Ten60Power™ hybrid power-and-signal solutions provide up to 260.0A per linear inch, fast response times and easy-to-configure modules

Features and Benefits

Wire-To-Board And Panel-To-Board Plug And Harness Solutions

General

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

Robust, high-current contact blades with 7.50mm power pitch Provides 50.0A of current per blade, 260.0A per linear inch

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

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

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

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

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

Wire-to-Board

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

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

Panel-to-Board

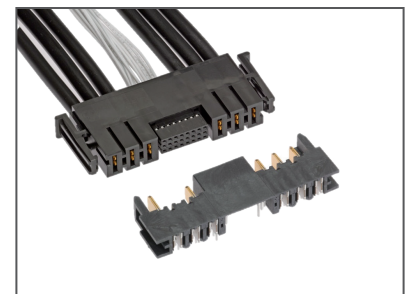
Power-only and hybrid power-and-signal configurations Maximizes number of configurations for optimized flexibility in design requirements

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

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



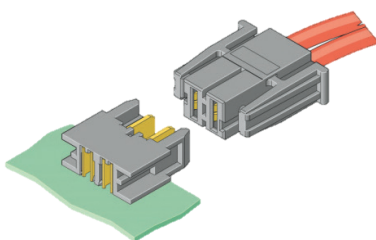
EXTreme Ten60Power™ Wire-to-Board 2-Power Receptacle Harness and Right-Angle Header



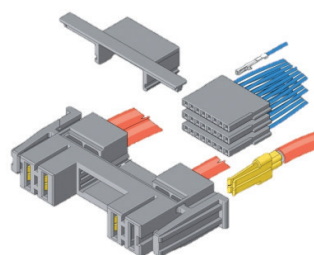
EXTreme Ten60Power™ Wire-to-Board 6-Power 24-Signal Harness and Right-Angle Header



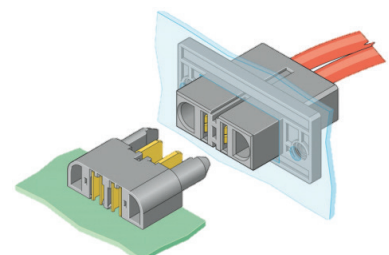
EXTreme Ten60Power™ Panel-to-Board 4-Power Harness and Right-Angle Header



Wire-to-Board Power Only



Wire-to-Board Hybrid Power and Signal



Panel-to-Board Power Only

EXTreme Ten60Power™

Hybrid Power and Signal Connectors



Features and Benefits

Board-To-Board Solutions

General

Low-profile design: 10.00mm height	Enhances system airflow
Standard power blades are rated up to 60.0A per blade at a 30°C T-rise	Provide 260.0A per linear inch, ensuring maximum current-to-length ratio
Available in 1- through 9-circuit split-blade power modules; 1- through 10-circuit standard power blade modules, 6- through 60-circuit signal modules; either end-mount or top-mount guidance	Modules can be configured to accommodate virtually any design application
Modular assembly (modules can be arranged in virtually any configuration and added together)	Additional circuit configurations can be achieved
Right-angle and vertical orientations available	Accommodates either coplanar or perpendicular applications
Rated for resistance to arcing in hot-pluggable applications	For a wide range of applications
Robust, high-current contact blades in DC (5.50mm) and AC (7.50mm) power pitches	Provides excellent design flexibility
Multiple mating levels available on power and signal contacts	Last-Mate-First-Break (LMFB) or First-Mate-Last-Break (FMLB) capability

Split-Blade Power Modules (1 through 9 circuits)

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
Modular design; custom hybrid assemblies based on standard power and signal components	Integrates into hybrid EXTreme Ten60Power assemblies along with standard power modules and signal modules to meet customers' specific requirements

3-Row Signal Module (Original Version)

2.54 by 2.54mm pitch signal spacing	Provides design flexibility
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5-Row Signal Module (High-Density Signal Version)

2.00 by 1.65mm pitch signal spacing	Saves over 10.00mm space when using a 25-signal module versus the original EXTreme Ten60Power High-Current Connector 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



Telecom Routers



Servers

Specifications

Reference Information

Packaging: Tray
 UL File No.: E29719
 CSA File No.: LR-19980_A_Class 6233-81 CSA
 tested to UL-1977 and CSA 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

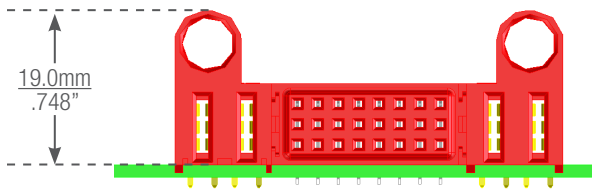
Mechanical

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

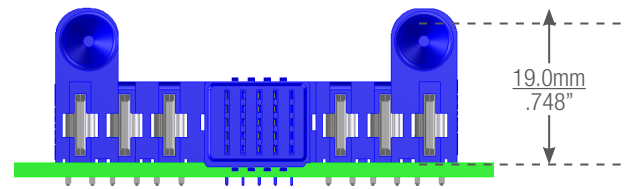
Physical

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

Top Guide Length Reduction Comparison – Original 3-Row vs. High Density 5-Row Signal Module



3- Row Optional Top Guides on Power Modules reduces the overall length by 13.60mm



5- Row Optional Top Guides on Power Modules reduces the overall length by 13.60mm

Ordering Information

Series No.	Component	Orientation	Interface	Power Blade Style	Function
172452	Plug	Right Angle	Wire-to-Board Harness	Standard	Power Only
172453			Panel-to-Board Harness		Hybrid
172457					Power Only
172458			Board-to-Board	Split Blade	Hybrid
46437					
171088	Receptacle	Vertical	Wire-to-Board Harness	Standard	Power Only
172510			Panel-to-Board Harness		Hybrid
172511					Power Only
172512			Board-to-Board	Split Blade	Hybrid
46562					
171089			Right Angle	Standard	
46436	Split Blade				
171090					
46708	TPA Retainer				-
46709	Signal Wafer	-	-	-	Signal Only
173693	Power Terminal				Power Only