

POWER DISTRIBUTION SOLUTIONS

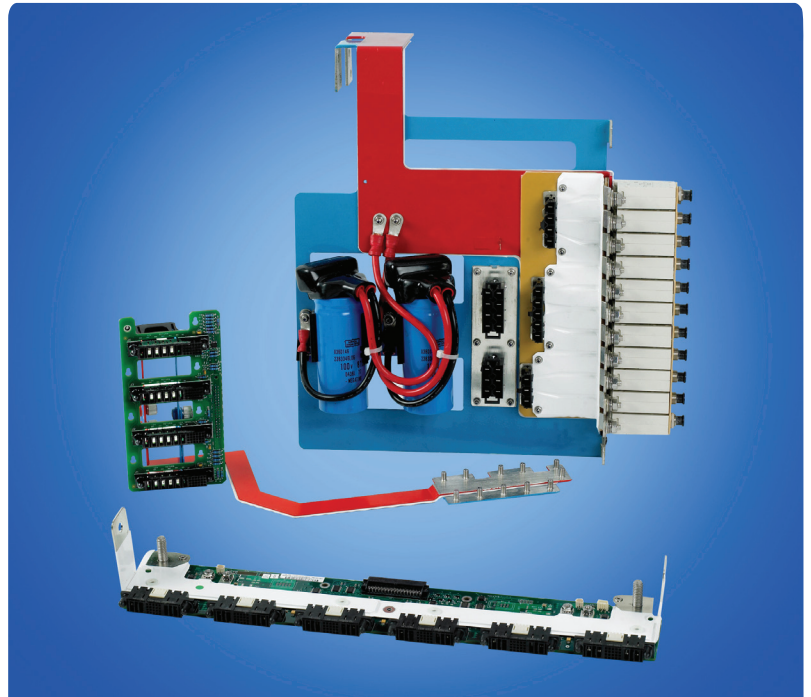
Integrated systems including bus bars, connectors, cables, PCBs, and other components

DESCRIPTION

FCI Power Distribution Solutions are based on laminated bus bar technology that provides predictable, repeatable and reliable electrical performance. From simple to complex power distribution requirements, FCI can design a system that saves space, lowers cost and provides pluggable modularity to allow equipment expansion or upgrades.

Our Power Distribution Solutions are engineered for easy connectivity. FCI's expertise and wide selection of connectors and cable assemblies, including FCI's popular PwrBlade®, HCI®, and HPCE™ power supply interconnects and Pwr TwinBlade™, PwrBlade®, and Pwr Profile+™ power cable solutions, make it easy to quickly connect power to a backplane or other system boards for easy installation.

FCI has been a leader in power distribution technology for over 20 years and offers full in-house design and modeling capabilities along with a global manufacturing footprint. FCI combines a broad line of power products with the ability to engineer new solutions as required. The result is a cost-effective approach that blends custom engineering with off-the-shelf connectors and cable assemblies to address a wide range of power distribution needs.



FEATURES & BENEFITS

- Broad range of power connector solutions includes high current density and low contact resistance products, touch-proof designs, low-profile solutions and options with integrated signal contacts for power control
- Customized designs integrate connectors and other components such as PCBs, breakers, switches, capacitors and cables
- Low inductance, distributed capacitance and low resistance minimize impedance, voltage drop, and noise
- Integration of a bus bar can replace thick copper traces and reduce board layers
- Improved thermal characteristics compared to cables
- More efficient utilization of cabinet space and less complexity compared to wire harnesses
- Simplified designs can reduce component count and cost
- Fast, error-free and cost-effective installation and lower field service costs
- Improved quality results from predictable and repeatable electrical performance
- Design capability includes analysis of current flow, thermal characteristics, voltage drop and inductance to ensure maximum efficiency

TARGET MARKETS / APPLICATIONS

- Communications
 - Wireless base stations
 - Switches
 - Routers
- Data
 - Servers
 - Supercomputers
 - Storage Systems
- Industrial
 - Power supplies
 - Medical scanners
 - Electrical cabinets (switchgear)

COST EFFECTIVE

- Fewer conductors can feed a common voltage to multiple outputs optimizing use of available cabinet space
- Can replace thick copper traces and can reduce backplane or board layers
- Reduction in overall component count and cost
- Enables quick and easy installation into a cabinet
- Eliminates complicated wiring and can eliminate wiring installation errors
- Enables quick and easy system maintenance and field service

ELECTRICAL PROPERTIES

- High current density – 5 A / mm² – well suited for fuse racks, power distribution assemblies (PDAs) or power distribution units (PDUs)
- Clean power distribution enabled by high capacitance and low inductance
- High voltage distribution – up to 4 kV – with low resistance and low voltage drop
- Multiple voltages accommodated by laminated designs
- Wide range of standard insulating films and coatings are available
- Predictable, repeatable performance

THERMAL MANAGEMENT ADVANTAGES

- Wide thin copper sheet dissipates heat more efficiently than round cable
- Lower profile increases airflow compared to power harnesses and cables
- Greater power density can often be achieved with less temperature rise compared to cable

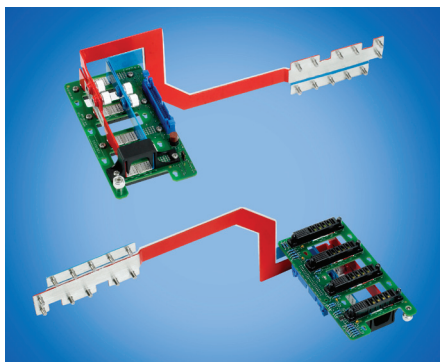
MECHANICAL PROPERTIES

- Capability for customized profiles and shapes for efficient use of cabinet space and PCB surface
- Can be formed to fit in small areas or in corners where bend radius complicates use of cables
- Requires less space than a wire harness
- Integrates functional components related to power distribution such as breakers, switches, capacitors, connectors, PCBs and cables
- Wide variety of available connection methods, including power interconnect solutions with increased current density and lower contact resistance, touch-proof designs, low-profile solutions, and connector systems offering capability to integrate signal contacts for power control or sensing
 - Commonly-used power supply interconnects, such as PwrBlade®, HCI®, or HPCE™ power card edge connectors
 - Soldered or ultrasonically welded cables with lugs or power I/O connectors, such as Pwr TwinBlade™, PwrBlade®, and Pwr Profile+™ cable connectors
 - Clinch studs/nuts, blades, holes/bolts, other terminals
 - Transfer PCBs
- Provides stable structure for additional components
- Neat, attractive appearance



ADDITIONAL INFORMATION

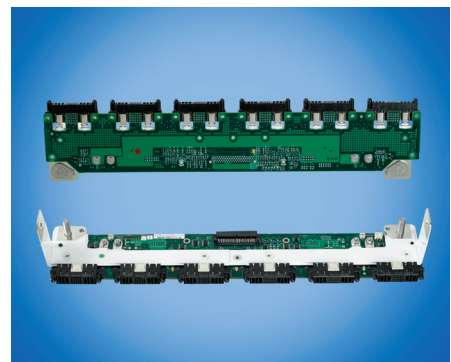
■ For more information, visit www.fciconnect.com/powerdistribution or contact powerdistribution@fci.com



Server application uses PwrBlade® connectors as the interface to pluggable AC/DC power supplies and a bus bar to distribute power within the rack unit



Power distribution unit for a wireless base station distributes power to a bank of circuit breakers



Server application includes PwrBlade® connectors as the interface to AC/DC power supplies, power management components, and a bus bar for power distribution