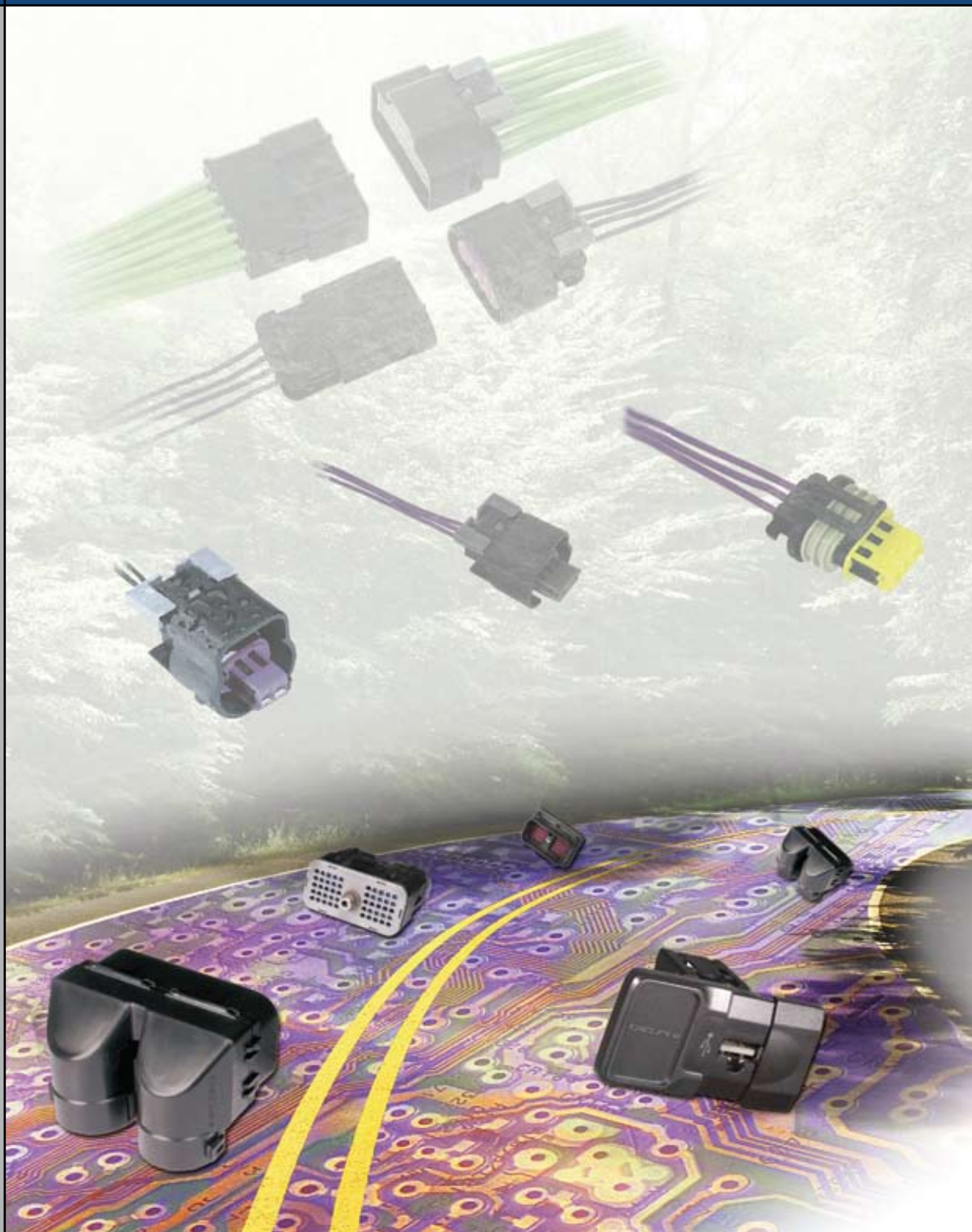




Delphi Connectors

www.ttiinc.com



Delphi Connection Systems

A World Leader in Automotive/Transportation Connector Systems is Available from the World's Leading Connector Specialist.

TTI, Inc. has a strategic business unit that focuses on the global transportation market. Delphi Connection Systems has a reputation for producing high quality electrical and electronic connectors that meet and exceed customer requirements. Together, these industry leaders provide extensive product inventory and superior service from product-knowledgeable experts. TTI and Delphi – now you have a choice!

DELPHI



- Extensive Product Portfolio
- Full Service Provider
- Leading Edge Interconnect Technologies
- Expertise in Multi-industry Connector Applications
- Integrated Systems Approach
- Development of Customer-Focused Solutions
- Service that Exceeds Customers' Expectations
- Strong Global Presence
- World Class Connector Line Card
- Product Knowledgeable Experts
- Local Sales and Product Support
- Broad and Deep Inventory Profile
- Leading Edge Technology Products & Supplies
- Value Added Solutions
- Full Customized Connector Capability
- Dedicated 200,000 square foot Connector Facility
- Full Suite of Supply Chain Services
- Quality and Reliability
- 98% On-Time Delivery



Delphi's Headquarters in Troy, Michigan



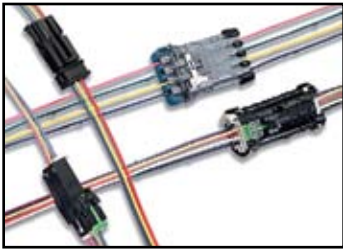
TTI's 200,000 square foot Connector Operations Center in Fort Worth, Texas



TTI, Inc. — Never Short on Solutions

1-800-CALL-TTI www.ttiinc.com





CONNECTOR FAMILY

Metri-Pack

GT

RF Coax Cable Assemblies

Weather Pack

CONNECTOR TYPE

- 150 Series
- 280 Series
- 480 Series
- 630 Series
- 800 Series
- Headers
- Junction
- Mixed

- 150
- 280
- Headers
- Lever Lock
- Mixed
- SlimLine

- Coaxial Cables

- Pin and Sleeve

FEATURES & BENEFITS

- Extended product range offers significant design and application versatility
- Used in high current to low energy circuits for electrical versatility
- Strength and stability of terminals help assure correct alignment
- Utilizes internationally standard male blade sizes for design flexibility
- Connector Position Assurance (CPA) and Terminal Position Assurance (TPA) for superior connection reliability
- Sealed version for excellent resistance to temperatures, chemicals, and abrasion
- Testing to SAEJ2030
- Tangless terminals for durable design
- Low engage force for improved reliability and ergonomics
- Pump-handle primary lock for lower engage and easy disassembly
- Secondary lock, Connector Position Assurance (CPA) and Terminal Position Assurance (TPA) capabilities for improved system design
- Mates to ISO, SAE blades for compatibility
- Conforms to USCAR design footprint for broad application flexibility
- Cam lever/mechanical assist for hand engage/disengage
- Optimized content packaging for electrical performance equal to less space efficient terminations
- Pre-staged male blade stabilizer for superior male blade protection
- Mixed terminal capability for design flexibility
- Protected seal interface for superior connection reliability
- Flexible manufacturing cells allow high volume/low mix and low volume/high mix
- Extensive experience in transportation E/E Architecture design and manufacturing
- Fully-certified testing/validation lab
- Full participation in global standards activities
- Sealed system specifically designed to withstand exposure to extreme temperatures, chemicals, and fluids
- Pin and sleeve configuration to alleviate stress relaxation
- Secondary lock and Connector Position Assurance (CPA) for improved system design
- Dual-locking tangs on terminals help prevent backing out
- Terminal plugging requires no orientation
- Positive locking indexing prevents mismatching of connectors
- Low energy, low voltage capability for vehicle electronics

TYPICAL MARKETS

- Commercial Vehicles
- Marine
- Commercial Vehicles
- Marine
- Agriculture
- Commercial Vehicles
- Construction
- Marine
- Motorcycles
- Commercial Vehicles
- Marine

TYPICAL APPLICATIONS

- Flat blade connections for electronic through high current applications
- Ergonomic connections for in-line, device, header, and bulkhead applications
- Ground position sensors and antenna applications
- Proven harsh environmentally-sealed connections



Automotive and Transportation



CONNECTOR FAMILY

064

Micro-Pack

Heavy Duty 1.0mm Vane

Power Pack 2000

CONNECTOR TYPE

- Headers
- Micro64
- MicroHVT
- MTS
- MTS-B

- 100 Series (unsealed)
- 100W Series (sealed)
- Headers

- 1.0mm Vane Terminals
- 50-way and 60-way Configurations
- Female Harness Connector
- Mating Header

- Inline
- Right Angle
- Panel Mount Headers

FEATURES & BENEFITS

- Unlimited number of rows and columns with 2.54mm centerline spacing to accommodate more terminals in less space
- Pin and box tangless female terminal for reliable sealing and easy repair
- Robust terminal interface design for continuous 7A current capability with either a square or round pin
- Non-oriented female terminal to simplify insertion
- Sealed and unsealed versions
- Industry standard design for flexibility
- Validated for high density commercial vehicle electronics
- Cam lever/mechanical assist, Connector Position Assurance (CPA), secondary lock, and wire dress available for improved system design
- 360° orientation available
- Conforms to USCAR design footprint for broad application flexibility

- Low energy (<5 amps), high density capabilities allow many electronic signals to be accommodated in one space-saving connector
- Filtered or shielded systems protect against electromagnetic interference (EMI)
- 3.0mm to 3.5mm centerlines accommodate applications where space is limited
- Mechanical assist and bolt-together designs enable ergonomic assembly/disassembly
- Improved one-piece (vs. two-piece) female terminal for sealed applications
- Sealed version for excellent resistance to temperatures, chemical, and abrasion (100W)
- Connector Position Assurance (CPA) and Terminal Position Assurance (TPA) for superior connection reliability

- Four contact points supported and protected by an external shield can
- Tin-plated terminal with selective gold plating at the contact interface
- Capable of 7.5 amps at 125°C
- Able to withstand vibration requirements of 29.5g RMS
- Unique pre-stage feature aids in ensuring terminals are fully sealed

- Current carrying capability up to 200 amps at 105°C
- Hand engage/disengage for one-way connectors to eliminate tools and save space and cost
- Mates with both a single blade style terminal and itself for easy application to device connectors
- Individually-sealed terminal cavities for environmental protection to the terminal contact areas and arcing protection
- Silver plating to withstand 155°C
- Connector Position Assurance (CPA) and Terminal Position Assurance (TPA) for superior connection reliability
- Conforms to USCAR design footprint for broad application flexibility

TYPICAL MARKETS

- Commercial Vehicles
- Marine
- Motorcycles

- Commercial Vehicles
- Marine

- Commercial Vehicles

- Commercial Vehicles
- Hybrid Vehicles
- Industrial Applications

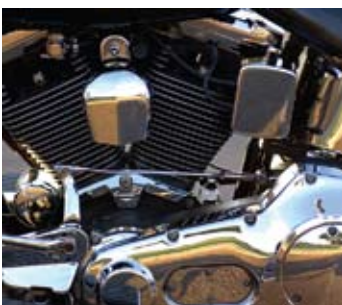
TYPICAL APPLICATIONS

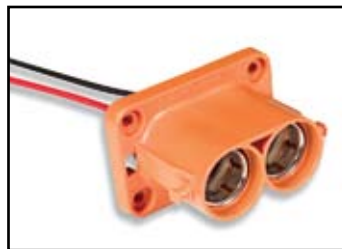
- High density connections for commercial vehicle and transportation electronics

- 1mm pin connections for low power and electronic devices

- Engine controllers, ABS modules, transmission controllers, and other devices requiring large I/O

- High power connection for 0V-600V AC/DC power systems for commercial on-road and off-road vehicles, hybrid vehicles, and industrial applications





CONNECTOR FAMILY

Data Connectivity

Modular Electrical Center

High-Voltage/Hybrid Connections

Additional Components

CONNECTOR TYPE

- Ports
- Hubs
 - Auxiliary Jacks
 - SD Cards
 - USB
 - Cables and Connections
- USCAR Mini-B Headers

- Micro-relay
- Mini-relay
- Maxi-fuse
- Mini-fuse

- Connections designed for 42V-600V DC and AC
- Minimum shielding effectiveness of 40dB (150kHz to 200MHz) ensures EMI protection
- Connection Systems to Handle Wide Current Ranges

- Assembly Coverings and Channels
- Brackets, Clamps and Clips
- Cable Seals
- Fuse Holders and Lamp Sockets
- Ring and Battery Terminals
- Splice Savers
- 56, 58, and 59 Series Connectors

FEATURES & BENEFITS

- Customer convenience
- Interface designed for high mate/unmate cycles to provide strong, robust construction and enhanced reliability
- Engineered for various data protocols
 - 1394
 - MOST
 - USB
- Designed to meet commercial and specialty vehicle applications standards

- Offers the versatility of custom designs, with the economics of off-the-shelf modules
- All mini- and maxi-fuse centers have bussing capability to reduce the number of leads required
- All mini- and micro-relays are designed for motor and resistive load applications and are a "plug-in" type of relay designed for use in electrical centers
- All modular electrical centers utilize secondary lock combs that are custom designed to match the module

- Shielding connection to control radiated emissions and EMI
- Terminal cavities isolated to protect against short circuit between high voltage terminals
- HVIL (Hazardous Voltage Interlock) available to protect during service operation
- Systems offering internal and external shielding
- Panel mount header with mating harness connector
- Custom designed connection systems to meet customer specifications
- Shield interface sealed from environment (no galvanic degradation)
- Leverage product development expertise to address all on- and off-road requirements

- Durable and proven designs
- Harness attachment devices designed for automotive and transportation products
- Ergonomic and assembly efficient designs including orientation features
- Custom designed solutions for customer specific applications

TYPICAL MARKETS

- Agriculture
- Commercial Vehicles
- Construction
- Marine
- Motorcycles

- Agriculture
- Buses
- Commercial Vehicles
- Lawn and Garden
- Marine
- RVs

- Commercial Vehicles

- Automotive
- Commercial Vehicles
- Marine

TYPICAL APPLICATIONS

- Applications requiring interface with an array of onboard information and entertainment systems

- Full range of power distribution applications, including stringent underhood environments

- High 300V battery pack, inverter modules, control modules, belt-driven accessories, power distribution center, BEC, transmission, power steering

- General automotive and transportation electrical distribution attachment needs



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