



MICRO DEVICES INC

PROFESSIONAL ELECTRONIC COMPONENTS STORE

Authorised Distributor for:



High Voltage Power Connector, High Voltage Metal
Connector, Manual Service Disconnecter, Signal
Connector, Charging Coupler, EV High Voltage
Harness, High Voltage Power Distribution System





Our Served Markets and Products

Recodeal

- Dedicated in offering reliable connection technologies and end-to- end Interconnect System Solutions

TELECOMMUNICATION



ELECTRIC VEHICLE



INDUSTRY & RAILWAY



ENERGY STORAGE & CLEAN ENERGY



DEFENCE



Interconnect System Product Solutions



Connectors



Raw Cable



Busbars



Harness Assemblies



Module/BOX assemblies



Design Assurance

Recodeal

- DESIGN: Close connection with customers and applications, solving their bottlenecks and offering reliable interconnection system solutions

Design
Force

25Y+ Design Experience

180+ Design engineers

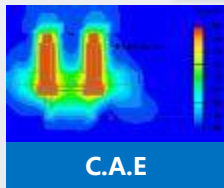
\$10M+ yearly Design Investment

Design
Achievement

20000+ Interconnection Solutions

160+ Design Patents

Key Strength



C.A.E



CNAS Lab



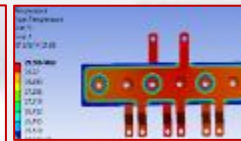
DFM / MFD AUTOMATION



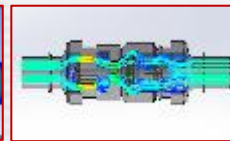
cooling analysis



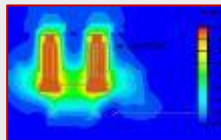
mold flow analysis



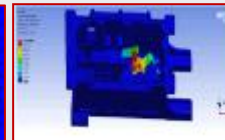
current density



C.F.D



thermal electric



mechanic stress



stray induction simulation



SI & EMC



Manufacturing Capabilities

Recodeal

- **MANUFACTURING:** 200K+m² facilities, located in Wuxi, Suzhou, Hefei, Wuhan and Sichuan to ensure accurate and fast delivery to customers.

Highly In-house integrated manufacturing capabilities that includes tooling design and fabrication, machining, stamping, busbar production, raw cables, and assemblies



Tooling design & Fabrication

- >30 unit machines
- UG, Solid work, HFSS

Machining

- 120 units, automatic
- Citizen, Fanuc, Tsugami



Raw Cable

- Electronics cable
- Control cable
- High Voltage cable
- EV charging cable



Injection Molding

- 50+ units, Robotics
- FANUC, SOMITOMO....



High-speed Stamping

- 300~700 times/min
- Progressive die



Busbars

- Flex & rigid busbars
- Vertical Injection molding
- Laminated busbars



Assembly

- Automatic production
- MES System



Our Key Technologies

Recodeal

- Our key technologies with interconnect system facilitates creating the value to our customers in various industry



HV Contact Technology

- Ring-spring contacts;
- High-conductivity composite terminal



Quick Lock Technology

- HV Self Quick-lock solution
- Q-AISG



High Density Hybrid Technology

- HTTA solution;
- CRH Cart-cart Coupling connector
- Fast-swap connector
- Microwave solutions



Float Mounting Technology

- Multi-contacts fast-swap connector;
- High-density RF BTB Connector
- Blind mating 4.3-10 BTB Connector





Telecom Interconnect System Solutions



RF Cable & Jumper

- 4.3/10, N, DIN
- 141, 250 cable
- Feeder cable (1/2, 3/8...)



AISG Cables

- Internal cable
- External cable



Fiber Cables

- ST, SC, LC, FC
- PDLC



Power cable

- 2 POs
- 3POs



Input / Output Solutions



F/O SFP/SFP+, PDLC



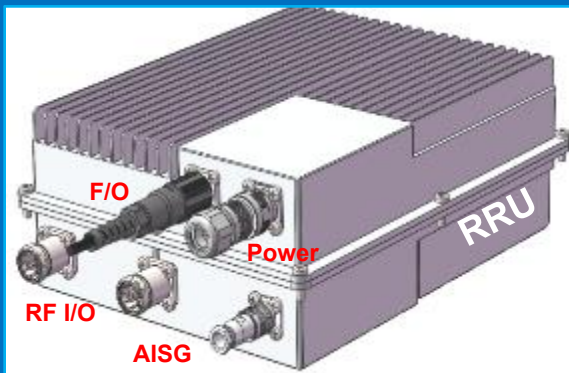
Power Connectors 2PINs, 3PINs



RF Connectors DIN, N, 4.3/10, RF Coupler



AISG 4,6,8,12,14,19 PINs

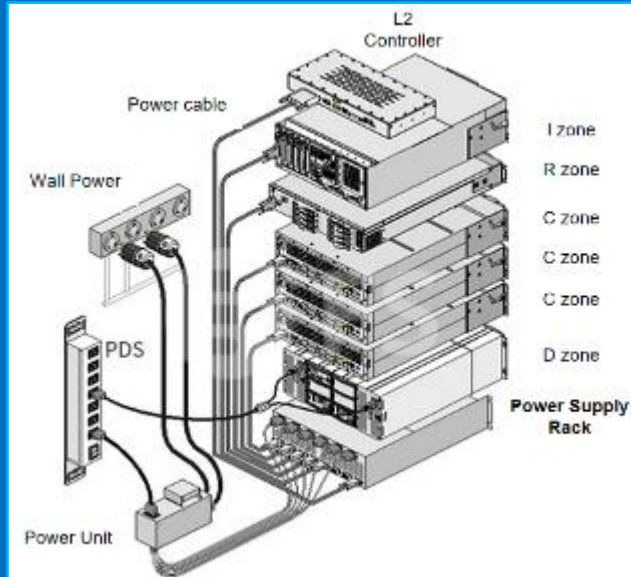


Quick Lock Solutions

- QDIN, QN, Q4.3/10, QAISG



Data Center and Server connection Solutions



Fiber Optic Connector SFP/SFP+, PDLC



Power connector 4pins~15pins



SAS& MiniSas: SAS29 PINs

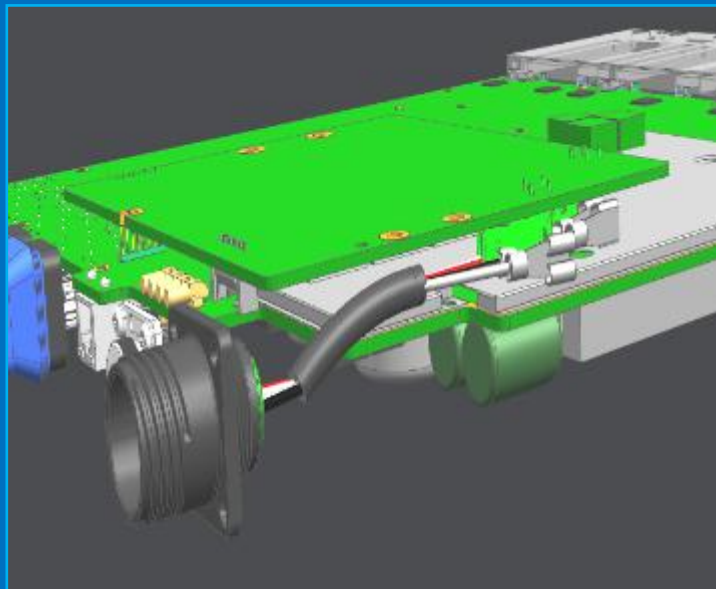


DDR 4/5 Connector (latch optional)

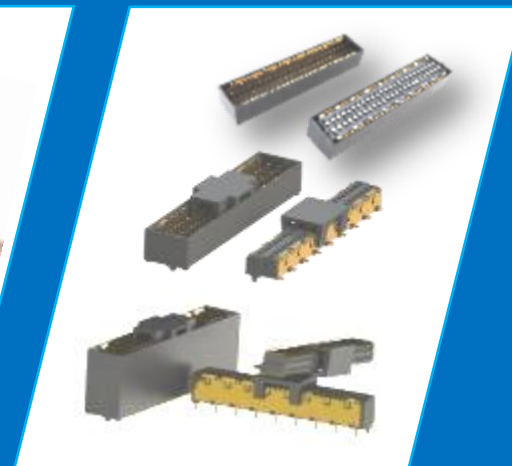




Module inside Interconnect System Solutions



**SMA, SMB, MCX, MMCX,
BMA, TNC.....**



Mini BTB HIGH SPEED

Micro design
High speed up to 10G
High density, max 50 PINs
Height 6mm-20mm



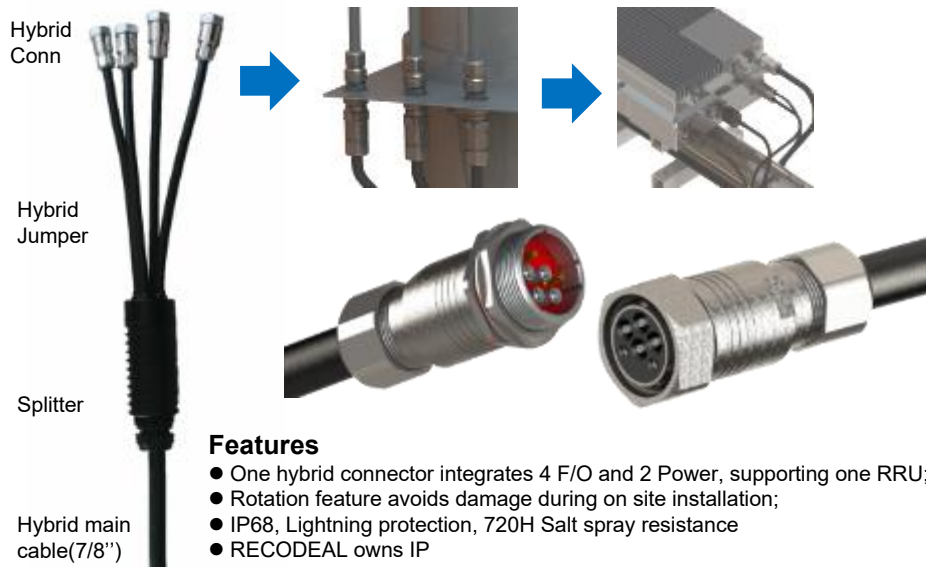
On-site installation Solution: Hybrid to The Antenna (HTTA)



Conventional separate 2 power cables and 4 F/O cables supporting 1 RRU

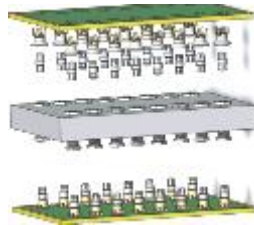
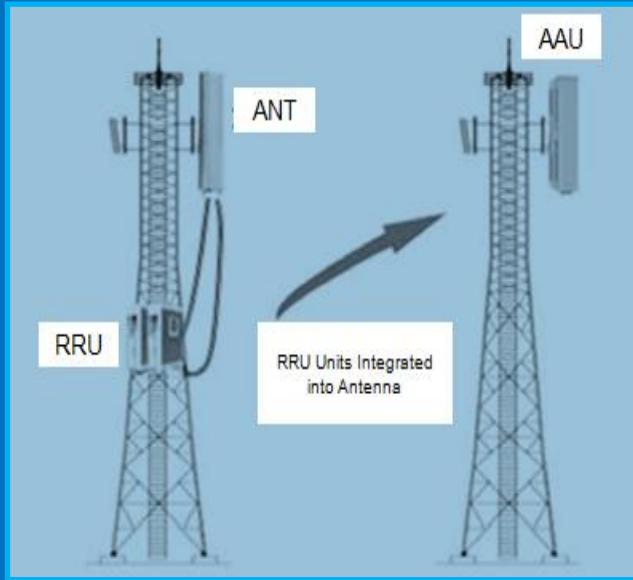


HTTA with hybrid cable and one hybrid connector supporting 1 RRU





5G Interconnect System Solutions



G1:WSMP



G2:CSMP



G3:RSMP



G4:RSMP+



POGO PIN

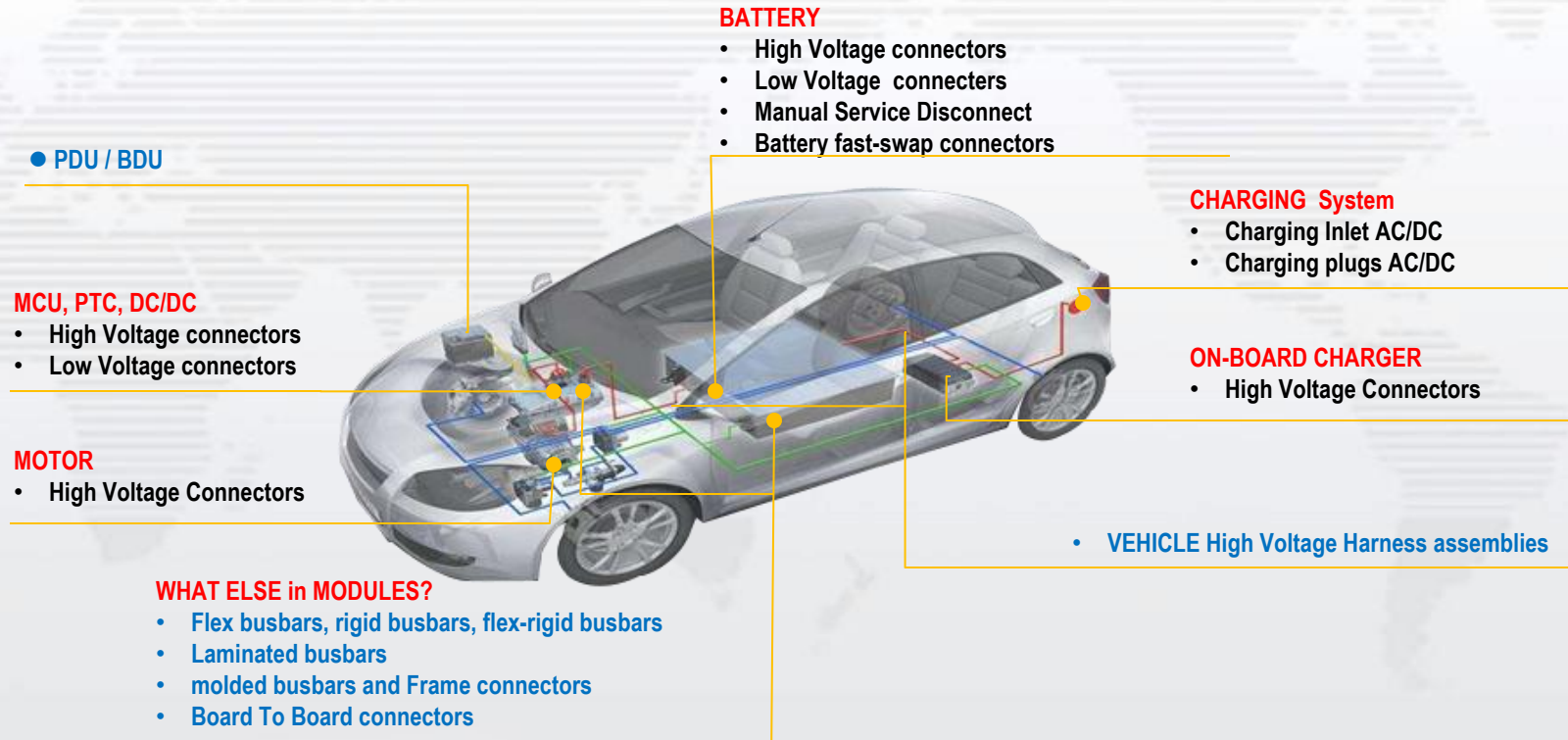


Spring Coaxial Connector
(SCC)



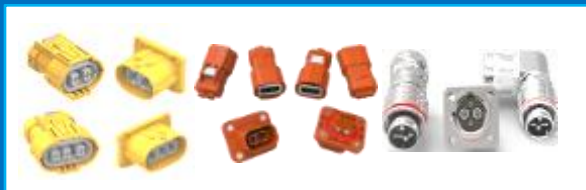


EV Interconnect System Solutions





EV HV & LV connectors



HV small current connectors

normally used on DCDC, OBC, PTC, PDU etc, up to 60A/1000V max, with IP68 Protection, Shielding, HVIL



Manual Service Disconnect

offering safe disconnections for battery, PDU and PEUs supporting 630A max. over 10 different sizes and contact types for selection meeting different working environments.



HV large current connectors

used on Battery pack, PEU, MCU, PDU, etc, up to 500A/1000V, with IP68 protection, shielding and HVIL



Low Voltage connectors

Chassis to wire signal connection solutions



Low Voltage connectors

Board to wire signal connection solutions



Battery fast-swap connectors



Passenger car
300A/800V pin to socket



Passenger car
200A/800V surface mating



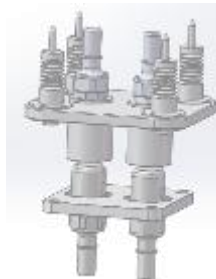
Passenger car
150A/500V pin to socket



Heavy truck G1
300A/750V pin to socket



Heavy truck G2
300A(X4)/750V pin to socket



Water fast swap
connector

RECODEAL serial fast-swap connectors are widely used on EV of commercial vehicles, passenger cars, and heavy trucks etc, and taking more than 95% market share in EV battery fast swap market, providing fast power replenishment and reliable connections through battery replacement for vehicles. Recodeal unique X,Y,Z float-mounting design technologies generates much reliable swaping process and connector functionality than any other existing technologies in the market.



Vehicle Charging Connectors



Features:

One-piece plastic body design for better water proof.

AC Types (Type II): 10A/220V, 16A/220V, 32A/450V

DC Types: 32A/450V, 125A/750~1000V, 200A/750~1000V, 250A/750~1000V

Compact control box design, replaceable pin design optional



Features:

Mating life >10000times

AC Types: 10A/220V, 16A/220V, 32A/450V

AC Inlet: Conventional types, LCD and LED display types



Features:

Reliable ring-spring contact, mating life >10000times

DC Types: 125A/750~1000V, 200A/750~1000V, 250A/750~1000V

Replaceable ring-spring contacts

Offering different outlet angle under different application circumstance
(90 degree right, 90 degree downward, 45 degree)



GB AC+DC
compact design
10A/16A, 220V



COMBO
DC 125A, 200A, 250A
AC 16A, 32A



JAPAN
DC CHADEMO
AC TYPE II



GB Type II
all-in-one
10A, 16A, 220V

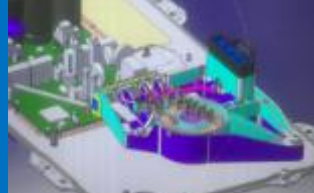
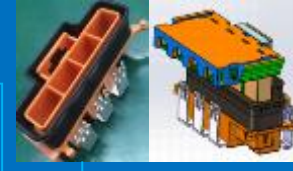
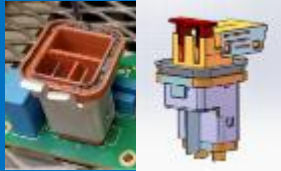


Discharger
10A/220V,
16A/220V



Frame Connectors inside EV electrical systems

Recodeal owns full in-house injection molding, stamping, machining and busbars fabrication capabilities and provide our customer with customizing supports for diverse frame connectors and board to board solutions which are used inside the EV electrical systems



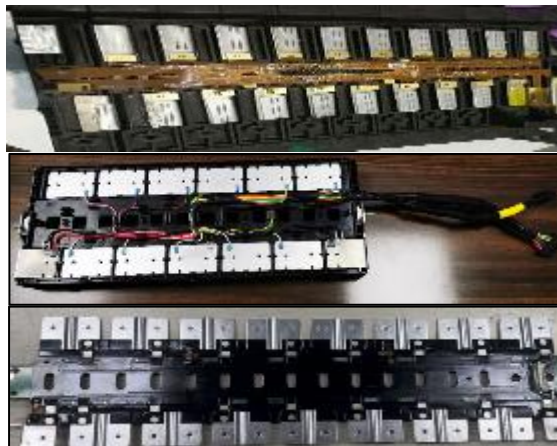


CCS, HV harness assemblies and box assemblies



HV CABLE ASSEMBLIES

- Offering wide range cable assembly production with different process technologies (crimping, welding, over-molding)
- MES System and computer-aided production
- Process automation and error-proofing technology



CCS ASSEMBLIES

- cell connection system offers the connections between BMS and battery cell components
- Recodeal provides diverse customizing solutions with FPC types, PCB types as well as the wire types



PDU/BDU ASSEMBLIES

- MES System and computer-aided production
- ATLAS intelligent screw driving system
- Strong PDU/BDU solutions: Laminated busbar for high voltage and PCB for signal connections



VEHICLE COMMUNICATION Interconnect System Solutions



FAKRA Interfaces for automotive high frequency applications, such as antennas, navigation, car mobile communication, Bluetooth applications etc

- RF signal transmission <6G Hz
- Coaxial cable connections, straight and right angle
- 360 degree turn-able right angle connectors
- PCB types, panel types...
- Single and multi-connectors
- Waterproof
- Temperature range -40~+105 degree C
- Secondary locking system

mini FAKRA

can transmit both microwave signals and differential signals

HSD Connectors

High performance in preventing interference from crosstalk and external sources. Used for automotive electronic applications that transmit high bit rate data streams, such as low-voltage differential signal cameras, USB connections, CAN communication, digital entertainment electronics, vehicle microcell base stations etc

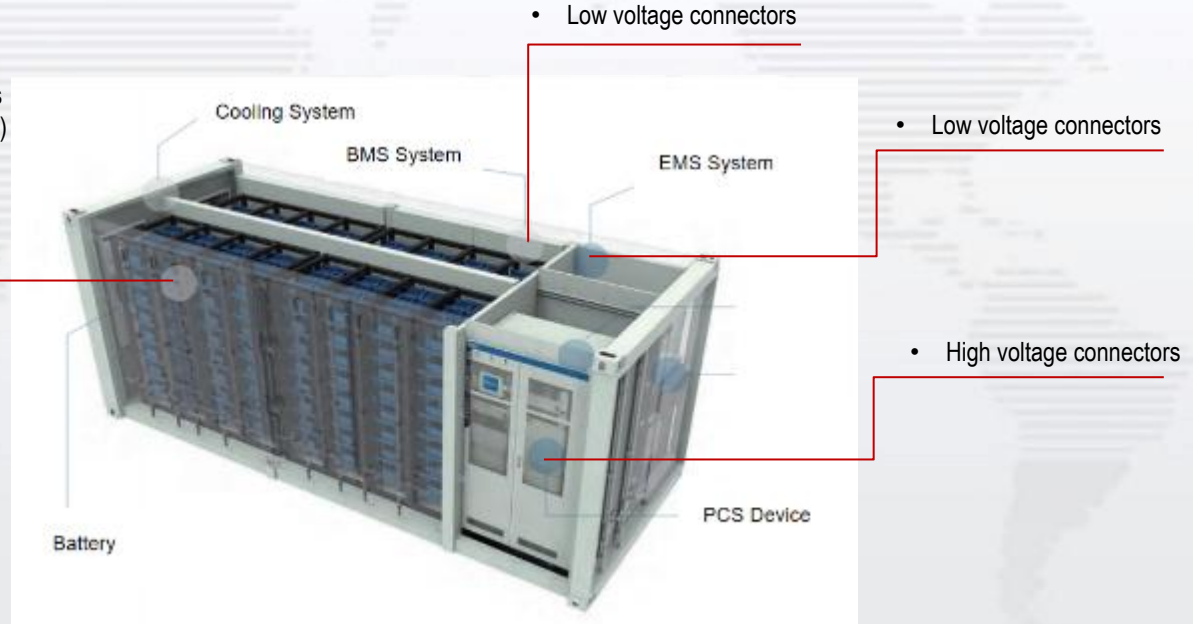
- 10Gbt/s
- Secondary locking system
- Crimping connection
- Good protections to avoid pin damages





Energy Storage Interconnect System Solutions

- Busbars
- High voltage cable assemblies
- Cell Connection System (CCS)
- High Voltage connectors
- Low voltage connectors
- Manual Service disconnect





High Voltage & Low Voltage Connectors



Before Year 2019

- REA 250A/1500VDC
- REF 250A/1000VDC

Year 2020

- REQ 350A/1000V
- REA1~4, 350A/1500VDC

Year 2021+

- REA1-B 120A/1000v
- CHIP terminal HV connector
- multi-pos low current

Recodeal high voltage connectors used on energy storage are TUV/UL certified, and can support 360 degree rotation to meet cable outlet from different directions





MSD, BUSBARS and Cell Connection System (CCS)



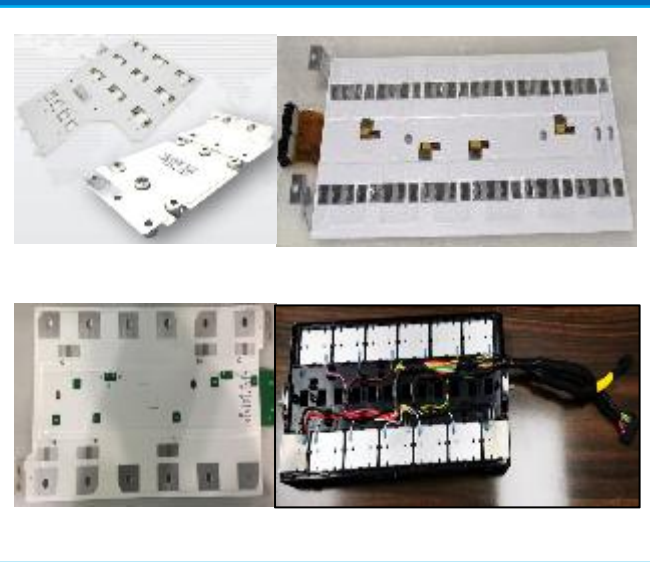
MSD Series:

630A MAX / 1000-1500V DC, offering manual power disconnect prior to any repairing and maintenance



BUSBARS

Full flex and rigid busbar, and laminated busbar process in house



CCS Solutions

Diverse cell connection system solutions by integrating FPC (or PCB, wire) and copper, offering connections between BMS and battery cell components



Industry Interconnect System Solutions





M12, M23 Series



Heavy Duty Connector Series



Subway Cart to Cart Coupling
Connector



Locomotive signal control
connectors



Solar outdoor
connectors(1,3,5pos)

Petroleum explosion proof
connectors

Industry Rectangle/circular
connectors

Harness & cable assemblies
Different process technologies



MILITARY Interconnect System Solutions

Radar system, Communication System, Electronic Interference System

FULL MILITARY CERTIFICATES

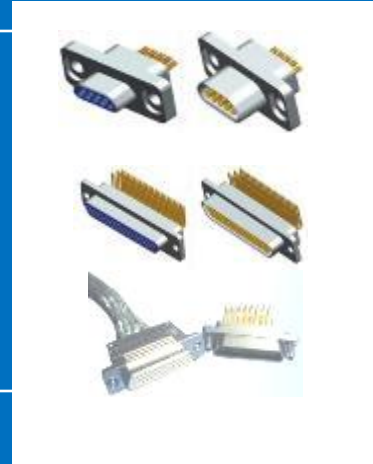




RF connector series
RF Jumpers



MIL STD Circular connectors
(38999, 26482, C-5015, YW, Y50,
Micro YM.....)



MIL STD micro rectangle
connectors (J29A, J30J, anti-
interference filter connector..)



Microwave Connectors , Up to
60G (2.92, 2.4, 1.85 series..)



BUSBAR Interconnect System Solutions

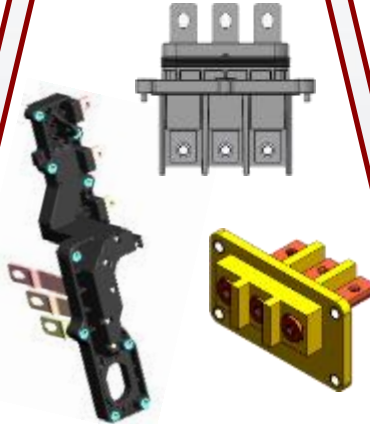
RECODEAL provides wide range of BUSBAR solutions e.g. flexible busbars, rigid busbars, flex-rigid busbars, Injection molding busbars, Laminated busbars etc, which are widely used for module-module high voltage connections, In-module high voltage connections on Electric Vehicle industry, as well as high voltage connections inside Electric Control Enclosures on Railway and Telecom industry etc.



Flexible, rigid and flex-rigid busbar Solutions



Busbar Ring-spring Solutions



Injection Molding Busbar Solutions



Laminated Busbar Solutions



Tooling and Spare parts



Plastic Injection Molding Parts

Precision Turning Parts

Progressive die stamping Parts

Injection Molding Tooling
& Progressive die



Our Served Customers

Recodeal

TELECOM



INDUSTRY



Wind Power, photovoltaic, energy storage, charging infrastructure



ELECTRIC VEHICLE





Quality Assurance

Recodeal

- **QUALITY:** National Certified laboratory which offers full sets of reliability tests covering mechanical, electrical and environmental properties.



IATF16949



ISO9001



IRIS



ISO13485



GJB



ISO14001



ISO45001



GB/T29490



Our Global Presence

Recodeal

- We Operate globally in close association with our customers and partners.



RECODEAL SICHUAN

MY, Sichuan, China

- R&D, Manufacturing, Sales
- Electric vehicle



CORPORATE HEADQUARTER

Suzhou, China

- R&D, Manufacturing, Sales
- Telecom, Electric vehicle, Industry & Railway, Defence



ARECO JIANGSU

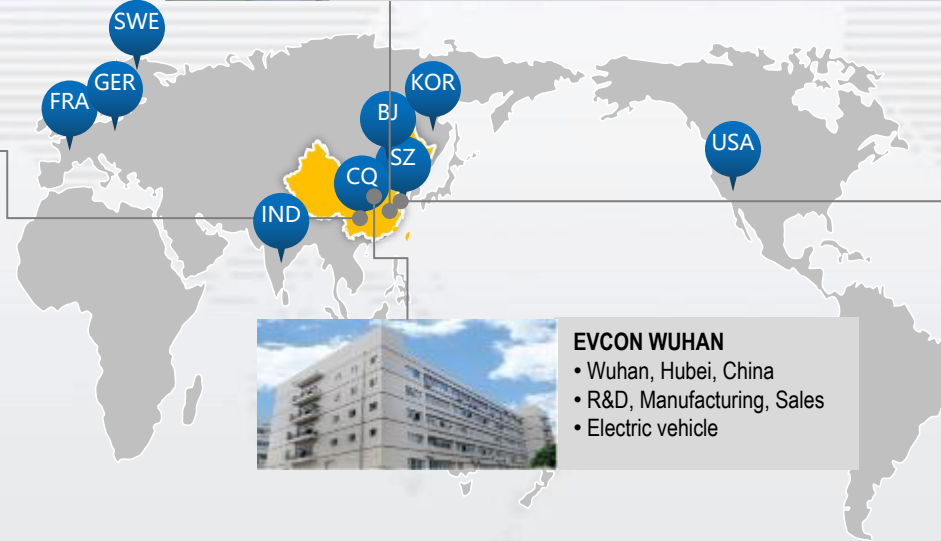
Wuxi, Jiangsu, China

- R&D, Manufacturing, Sales
- Raw cable



EVCON WUHAN

- Wuhan, Hubei, China
- R&D, Manufacturing, Sales
- Electric vehicle



Locations with only Sales

THANK YOU

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