

I . Company Introduction

Shenzhen Fleconn Precision Technology CO., Limited (Abbr. FLECONN) is a excellent designer, manufacturer and supplier in the fields of custom connectors, custom cable assemblies and wire harnesses such as customizing HDMI cables, VGA cable, DVI cable, Display Port (DP) and Mini Display Port cable, USB cables, iPhone 5/5s/iPhone 6 lightning cables, printer cable, computer cable, SCSI cable, cable loom, wiring looms. We can custom these cables by customer requirement for different length and specifications. We can also produce standard electrical connectors such as IP67/IP68 waterproof M5 M8 M12 Connectors, automotive connectors, aviation connectors, RF coaxial connectors, I/O USB Connector etc. Our highly skilled team of employees is dedicated to providing industrial and daily consumer product interconnection solutions. At the same time, we provide plastic cases, plastic enclosures and housing for electronics product, precision mold manufacturing, Engineering Design Services, CAD 2D 3D Drafting Services, Prototype Manufacturing.



We own a high qualified human resources and a wide range of supplier resources to meet the demands of the customers coming from the locality of China, Asian-Pacific region and global scale. Our company has a superexcellent managing system. It would provide **high speed, high quality and high cost performance** services for our global clients. We are devoted to establishing a win-to-win partnership with our customers in the long run.

M5/M8/M12 Cordsets





Professional Waterproof Case / enclosure / box Design and Manufacturing



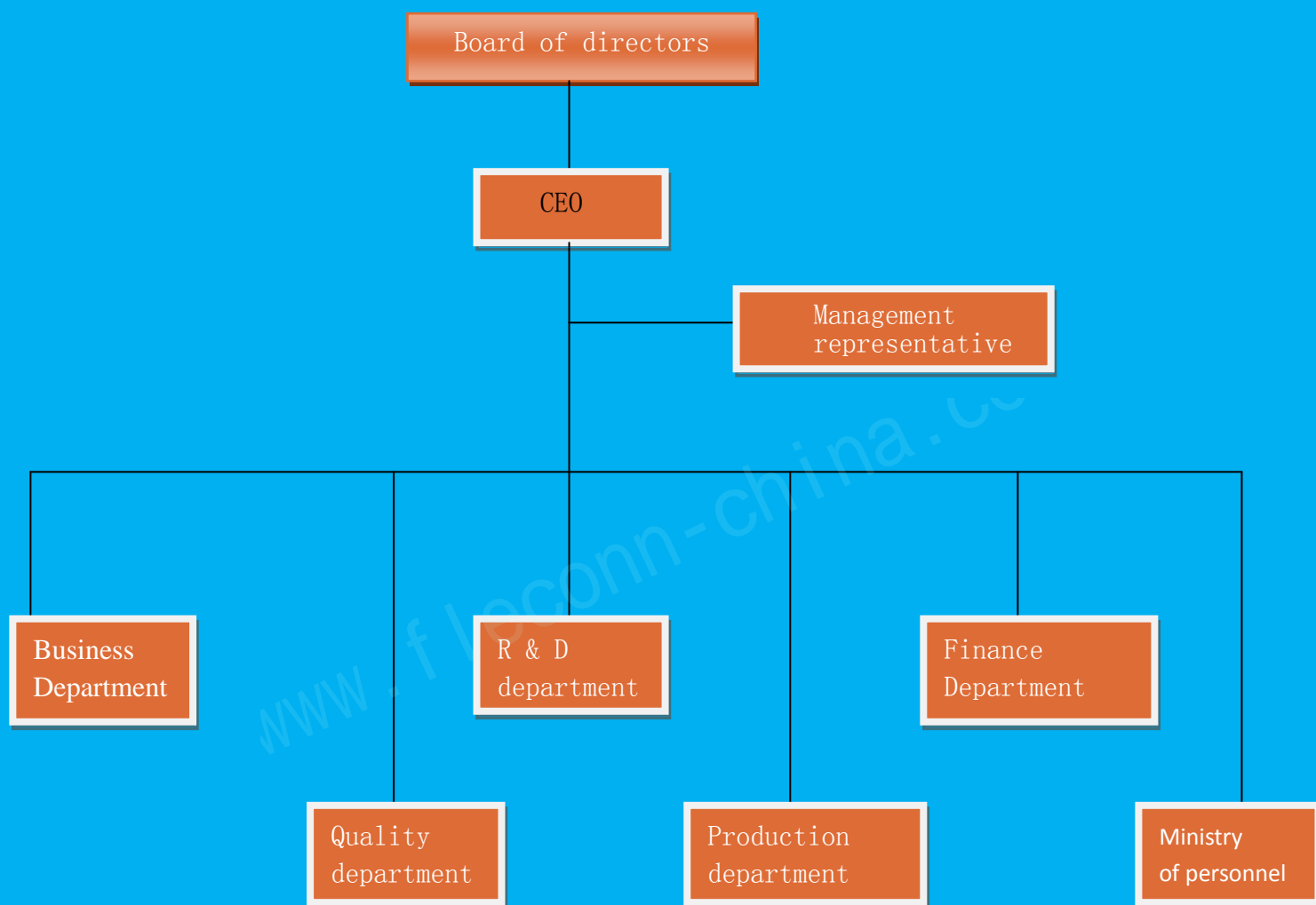
富莱科精密工业（中国）有限公司



公司拥有现代化的设备和厂房,凝聚了一批技术力量雄厚的专业人才及熟练员工500多人。从开发、设计与制作、生产工艺都有严格的检测手段,为向客户提供优质的产品提供了强有力的保障。全面推广ISO9001:2000管理模式,严格执行ISO国际水平业务流程,并通过自身开发的质量系统建立了一套完善的质量保证体系.同时得到社会多方面的支持和肯定。

OUR COMPANY<FLECONN> , THERE ARE ROWS OF BEAUTIFUL BUILDINGS, IN WHICH ADVANCED EQUIPMENTS ARE SET UP. FLECONN EMPLOYS A TEAM OF EXPERIENCED, TECHNICAL ENGINEERS AND MORE THAN 500 WELLTRAINED WORKERS. IN ORDER TO SUPPLY PERFECT PRODUCTS FOR OUR CUSTOMERS, WE OBEY A STRICT TEST SYSTEM IN PRODUCT R & D, TOOLING DESIGN AND MANUFACTURING UNDER ISO9001:2000.

Organization chart



Catalog

I . Company Introduction.....	1
II . Custom Cable Assemblies.....	6
1. M5 Cables/Cordsets	6
2. M8 Cables/Cordsets.....	6
3. M12 cables/Cordsets.....	7
4. Audio cable.....	9
5. USB cable.....	10
6. HDMI cable.....	11
7. VGA cable.....	12
8. RF IPEX cable.....	13
9. Wire Harness.....	14
III. Standard Connectors / Customized Connectors	15
1. M8 Connectors.....	15
2. M12 Connectors.....	16
3. SMA /SMB.....	18
4. RF Connector.....	19
5. Automotive connector.....	22
6. Waterproof connector.....	23
7. USB/Micro USB Connectors.....	25
IV . Product R & D Services	26
1. Connectors & Cable Assembly Development.....	26
2. Plastic Electronic Product Research and Development.....	27
3. Precision Mold Development.....	28
4. 3D One-Stop Services.....	30
V . Testing equipment.....	31
VI. Laboratory.....	32
VII. Acknowledgements.....	33

II . Custom Cable Assemblies

M5 Cables/Cordsets

FLECONN can custom M5 cables and M5 Cordsets with various wire length and 2pin, 3pin, 4 pins male connectors, 2 contacts, 3 contacts, 4 contacts female connectors.

M5 Cordset, 4 pin female connector



M5 Cordset, 4 pin male connector, IP67 Molded cable



M8 Cables/Cordsets

Connector with M8 x 1 screw locking or snap-in locking 8 mm Connector moulded on cable Degree of protection IP67/IP68 Metal housing with 360° EMI protected shielding Cable assembly possible, screw and solder termination Cable length 2 m and 5 m (PVC and PUR) Further cable lengths upon request, 50 pieces up.

M8 Cordset, 3 4 5 6 8 pin Male Connector Available



M8 cable, 4 pin A coding Female molded Connector



m8 male cable 4 pin ip67 waterproof connector 90 degree



m8 cable, IP68 4 position Right Angle



6 pin M8 sensor cable A-coding male connector



M8 cable, 6 pin A-coding Female Socket



M12 Cables/Cordsets

With the rapid development of industrial automation technology, automation system integrated more and more equipments, including sensors, actuators, etc. These devices need to have a stable and reliable cable to provide power supply and signal transmission, and need to work in the complex environment and with the function of waterproof, dustproof, corrosion resistant. M12 cables are rapidly developed in the case of growing demand.

M12 cable can be divided into soldering type, screw terminal type according to the connection methods. According to assembly methods, it can be divided into assembly type, molding type, panel mounting type. According to encoding mode, it can be divided into A coding, B coding, C coding, D coding, P coding, S coding, T coding, X coding. According to the shape, it can be divided into 180 degree straight M12 cable, 90 degrees right angled M12 connector cable, M12 T shape cables, M12 Y shape cables. At the same time it is also classified as two types of shielded and not shielded M12 cable. According to the pin or core number, there are 3 pins, 4 pins, 5 pin, 8 pins, 12 pins or 3 pos, 4 pos, 5 pos, 8 pos, 12 pos. The material of M12 cable jacket has PUR, PVC and so on.

FLECONN can custom M12 cables with different types and cable length from our customer requirements. Our products conform to the norms of RoHS, CE, UL and with good quality, reasonable price, fast delivery time..

Orange color over-mold 5 pin m12 cable connector ip67



Custom 4 pin m12 straight cable



12pin m12 female connector cable cordset



8pin M12 connector waterproof cable ip67



m12 plugs molded cable 8pin right angle



8 pin m12 receptacle cable 90 degree



Custom audio cable

Audio connecting cable is transmission of voice signals between the player and speakers, Headset cable. Mainly used for audio background music system (DVD, computer etc.) to connect the audio panel! There are generally 1.5 meters, 3 meters, 5 meters, 10 meters.

Insertion force test Plugtest: 6000 or more times

Pull test: tensile test $\geq 60N$

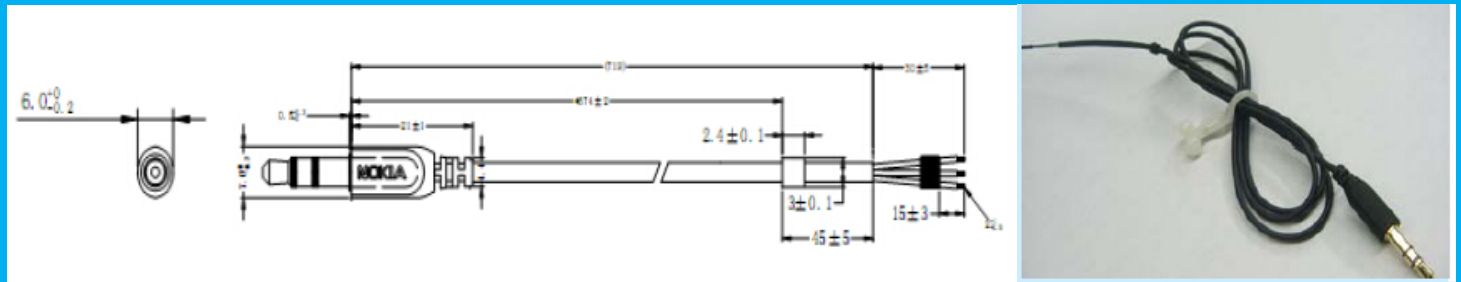
Winding test: 3300 or more times

Ultraviolet irradiation tolerance: UV

ASTM G154-00ae1

The ROHS standard with all materials

All material accord with RoHS



Audio Male To Female

The length can be selected



Audio 3PIN Male TO Male

The length can be selected



A sound A88

Length is optional.



3RCA TO Audio 4 PIN Male Length is optional.



Custom USB cables

USB is short for Universal Serial BUS. Its Chinese is referred to as "through-train line", It is the standard of external bus which is used to regulate the connecting and communicating of computers and external devices. It was applied in the field of PC Interface technology. **USB interface supports plug and play as well as hot swap function of devices.** USB is jointly proposed by Intel, Compaq, IBM, Microsoft and other companies in the end of 1994. The Purposes of developing USB Universal Serial Bus product is to integrate many existing PC I / O ports into the band etc. that is applicable to a variety of models for different applications. "A" series **connectors** can be directly inserted into the downstream outlet port of USB host or hub. The series of standard "B" **connectors**, with basic square shape and a chamfer, can be inserted into the upstream outlet of USB device or hub. This series includes two models of vertical and right angle socket. vertical models. FLECONN can customize all kinds of **USB Cable** for global customers

USB TO Micro-USB Connecting
Cable Assembly Supplier



USB AM TO USB BM Apply in the switch over



USB AM TO USB AF Apply



Flexible Elastic Retractable
USB Cable Assembly Supplier



Custom video cable

Custom HDMI Cables

HDMI Is a digital video / audio interface technology, special suitable for image transmission of digital interface, which can transmit audio and video signals at the same time, the maximum data transmission speed of 18Gbps. At the same time, without the need for the signal transmission of analog / digital or analog / digital conversion. **HDMI** can be used with high bandwidth digital content protection (HDCP), audio and video content with copyright to prevent the unauthorized duplication of the. HDMI has the extra space can be used in audio and video formats in the future upgrade. And because the audio signal needs a 1080p video and a 8 channel is less than 4Gbps, so there is a big margin for **HDMI**. This allows it to be respectively connected with the DVD player with a cable, receiver and PRR.

HDMI AM TO AM Length is optional



HDMI AM TO AF Length is optional



HDMI connector adapter
Adapting to different kinds of port



HDMI A Type TO D Type
Length is optional



HDMI A Type TO D Type
Length is optional



HDMI A Type TO VGA 15 Pin
Length is optional



Video cable

Custom VGA cables

VGA (Video Graphics Array) is a video coding standard IBM in 1987 with PS/2 together to launch, has the advantages of high resolution, display speed, rich colors and other advantages, has been widely used in the field of color display

HDB 15Pin /M TO HDB 15Pin M

Product color and Cable length is optional



HDB 15Pin /M TO DVI18+1 Pin M

Product color and Cable length is optional



HDB 15Pin /M TO RCA+MINI DIN

Product color and Cable length is optional



DB 9Pin /M TO RJ45

Product color and Cable length is optional



RF CABLE

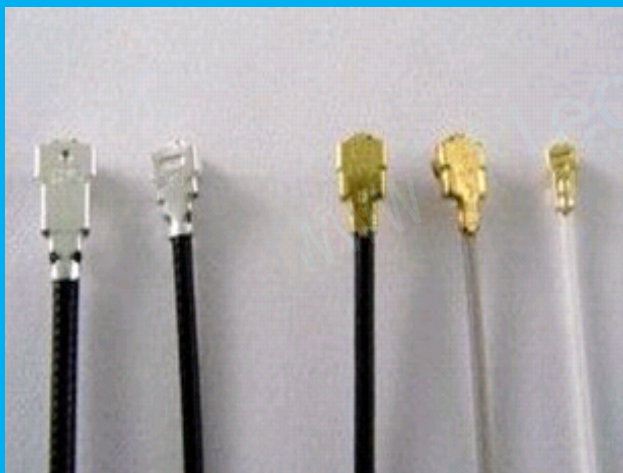
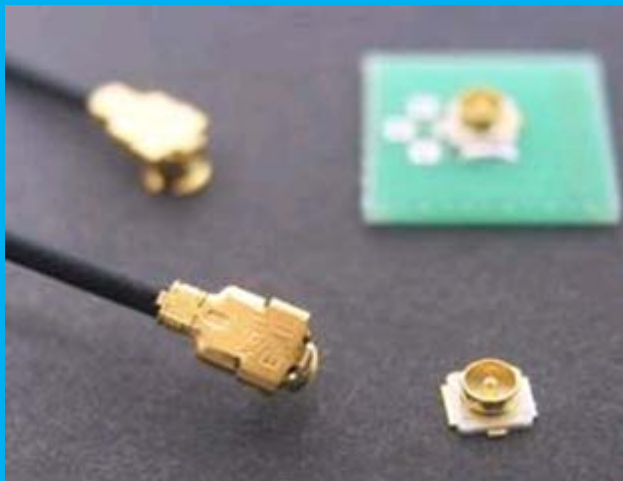
IPEX

We are developing and manufacturing compact connectors to be used for high-end electric and electronics devices. Our products are distributed in not only China, but also all over the world through overseas sales bases.

Miniature RF Coaxial Connector

Mating Profile Height : 2.5mm, 2.1mm, 1.6mm, 1.2mm

Applicable Cable Gauge AWG #6 (D=0.81mm) #32(D=1.32mm / 1.13mm) #30(D=1.80mm)



Application Fields:

Smartphone & Cell Phone / Notebook PC & Tablet PC / Flat panel display / Professional TV camera / Digital camera & Video camera / Security & Network camera / Multifunction printer / Printer / AV equipment / Medical equipment / Digital measurement instrument / Robot / Industrial / Projector / Handy terminal / Amusement / Car electronics

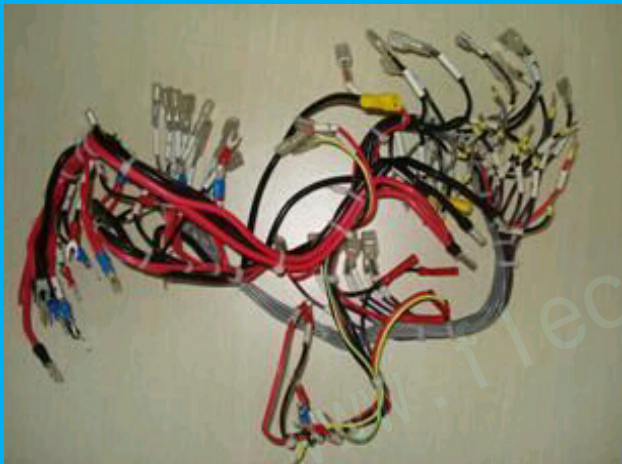
Custom Wire Harnesses

FLECONN provides for high-signal, high-density and high-speed applications, high-end **wire harness** design, resulting in providing a fully integrated solution for whole industry from cars to telecommunications.

Custom wire harnesses for power equipment



Lift Cabinet Wire



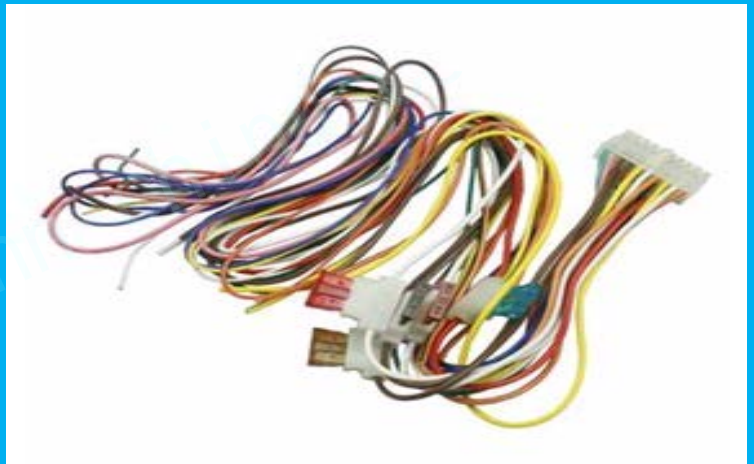
Car wiring harness



Integrated wiring harness



Industrial Wire Assemblies



Micro-Fit 3.0™ Overmolded Cable Assemblies



III. Standard Connectors / Customized Connectors

M8 Connectors

M8 circular connectors are widely used in the machines, electrical and electronics equipments or devices of all industries nowadays, therefore, many people become involved in the field of M8 circular connectors. As there are great varieties of M8 connectors, many beginners will encounter great difficulty on a comprehensive understanding of the M8 connector. Therefore, we have compiled a relatively complete professional knowledge introduction for M8 connectors. We heartily anticipate this article can help the masses of workers in the field of M8 connectors.

M8 Male Connector 3 pins



M8 Female Connector 3 pins



M8 Connector Female Assembly Type 4 pins



M8 Connector Male Plug screw terminal



6 pin Male M8 Connector, soldering Type



5 pin M8 Molding Type Female Connector



6pin M8 Connector Female Front Panel Mount



6 pin M8 Female Connector, Rear Panel Mount



M12 Connectors

M12 circular connectors are widely used in the machines, electrical and electronics equipments or devices of all industries nowadays, therefore, many people become involved in the field of M12 circular connectors. As there are great varieties of M12 connectors, many beginners will encounter great difficulty on a comprehensive understanding of the M12 connector. Therefore, we have compiled a relatively complete professional knowledge introduction for M8/M12 connectors. We heartily anticipate this article can help the masses of workers in the field of M12 connectors.

M12 Connector Automation Cable Plug



M12 Female Connector Assembly Type



M12 Male Connector Metal Shell Shield 4pins



M12 Female Connector Metal Shell Shield 4 pins



M12 Socket Right angle 8pins Female Connector



M12 Socket 90 Degree 8pins Male Connector



M12 Panel Mount Female Connector



M12 Panel Mount Male Connector



M12 Male Connector Rear Panel Mount



M12 Female Connector Rear Panel Mount



M12 Connector Female Right Angled PCB Type



M12 Male Panel Mount 90 Degree PCB Type



M12 Molded Cable Connector A coding 8 pins



M12 Plugs Molding Cable A coding 4 5 6 8 12 pin

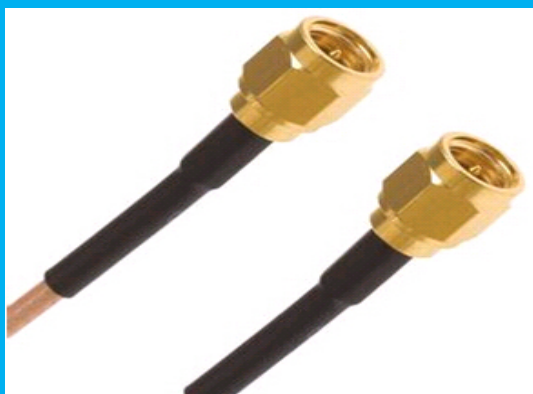


SMA

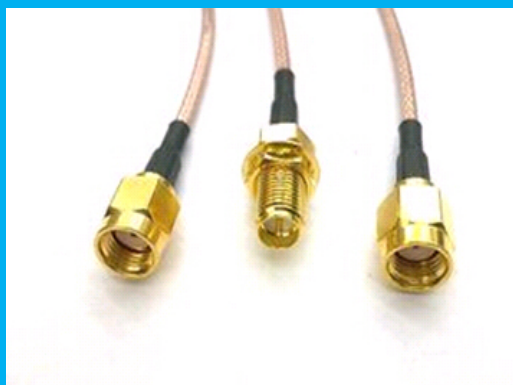
SMA interface comes in two forms, SMA is the end of the standard "+ male thread holes", and the other end "internal thread needle +"; RP-SMA of opposite polarity is one "external thread needle +", and the other end is a "threaded hole +", the figure on the right shows the reversed polarity RP-SMA

RP-SMA interface of wireless devices are the most popular, more than 70% AP, wireless and 90% PCI wireless network card interface is the interface, the interface size, hand held intercom and other equipment, there are many types, but the needles and tubes are the opposite of wireless devices. Wireless AP and the wireless router by using the interface including the bulk of civilian equipment. TP-link and the DLINK and the United States that NETGEAR, Belkin, Lei branch of Shenzhen brand, as long as the antenna is detachable, basically using this interface.

SMA/M TO SMA/M 50 Ohm



SMA/M TO SMA/F 50 Ohm



SMB

SMB was originally IBM beirui-feigenbaomu (Barry Feigenbaum) development, the purpose of which is the local file in the DOS operating system interface "interrupt 13" into a network file system. Later, Microsoft made significant changes to this development, the changed version is the most common version. Microsoft SMB protocol and the development of it, along with the 3Com network management programs together, and Windows for Workgroups and then keep adding new features in the Windows version.

SMB/M TO SMB/F CABLE



SMB FAKRA /F TO SMB FAKRA/F



RF/Coaxial Connctors

RF connectors, RF coaxial connectors, usually considered to be hooked up to a cable or installing a component on the instrument, as the transmission line electrical connection or separation of components. **RF connectors** belong to Mechatronics products, which serve as a bridge. In more than 60 years, through the joint efforts of experts from various countries, and formed an independent RF connector a complete professional system, an important part of family of connectors. Coaxial transmission system is an indispensable component.

F Connector



N Connector



BNC Connector



MMCX Connector



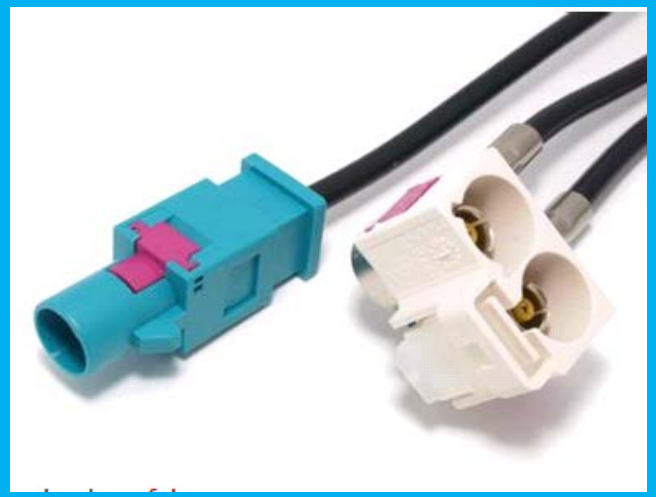
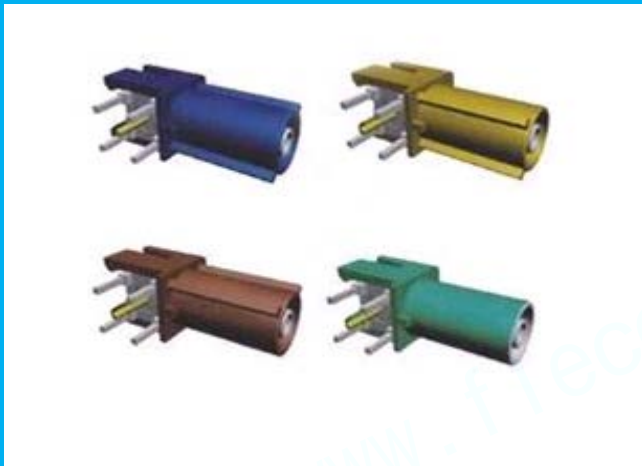
SMC Connector



SMA Connector



SMB FAKRA Connector



SAA Connector



TNC Connector



Automotive connectors

Automotive Connector is a part of electronic engineering and technical personnel in regular contact. It is very simple: in the circuit is blocked or does not make sense in isolation between circuits, build bridges of communication, so that the current is flowing, making circuits expected function. Auto Connector form and structure is changing, its main structure is composed of four basic components, namely: contacts, case (depending on the variety), insulators, annex.

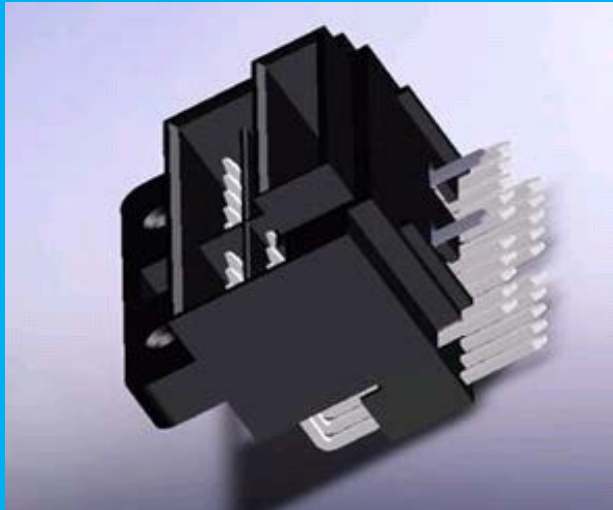
ODB-ii 16Pin



Waterproof 1-6Pin male and female connector



Low current 20P Board-side connector



Low current 20P wiring connectors



current 20P Board-side connector



Current 20P wiring connector



Waterproof connector

Waterproof connectors, by definition, can be applied to the water environment, in the case under pressure to keep internal mechanical and electrical connector performance properly using the connector.



Standard: IEC 61076-2-104

Connector Body: PA66+GF

Contacts: Brass with gold Plated

Connector locking System:Screw-lockitng

Connector Screw: Brass with nickel plated

Insulation Resistance:>100M ohm

Shielding: Available

Waterproof Rating:IP67 / IP68

Waterproof Cable Plugs



Waterproof Male socket, 2 to 18 poles for power or signal



Waterproof Socket 6 pin 8 pin 10pin 12 pin



IP67 RJ45 Waterproof Ethernet Connector



M12 Waterproof Connector circular Wire ends



USB/Micro USB Connectors

USB A/M Plug short body dispense with pre injection



USB A Male Connector needing pre injection



USB AM connector three-piece suite short body 26mm



Micro USB 2.0 three-piece two-side with Soldering Pad



Micro USB similar to Molex (all pins are in one side)



MICRO USB MALE 5 PINS 5 TERMINALS FOR WEDDING



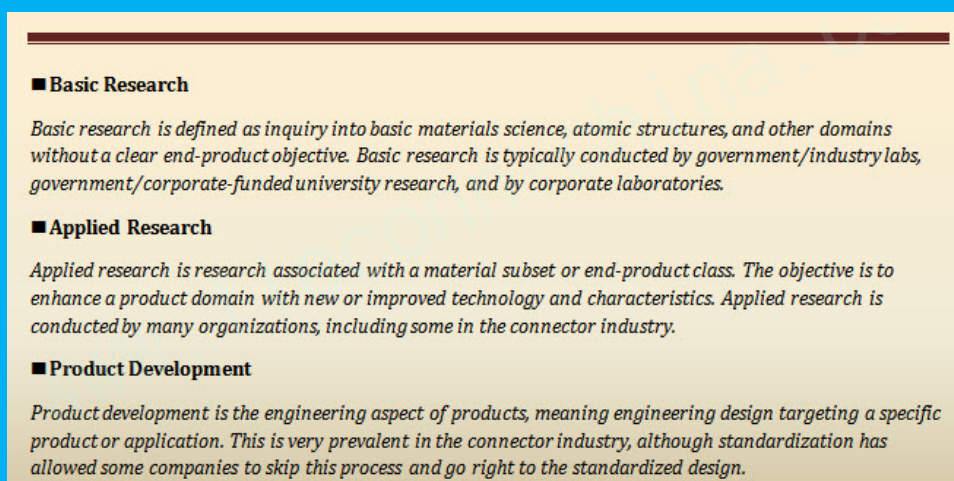
IV. Product R & D Services

Custom Connector Development

Bigger, Better, Faster, More: Research and Development in the Electronics Industry

Research and development (R&D) is a broad subject with many different interpretations, so any article on the discipline is subject to a critique.

For most companies in the electronic connector industry, R&D means almost any exploratory engineering activity not directly associated with commercial product. It encompasses enabling technologies that improve, enhance, and occasionally create breakthroughs in new product development. But for the most part, connector research is tied into OEM product needs, since connectors are a component part of evolving end-product developments. For the electronics industry at large, it may be helpful to look at the big picture, represented in the chart below:



Connector Research Needs*

- *High Speed Signal Metrology*
While connectors are not the biggest issue here, improvement is needed as we cross the 10Gb/s threshold. Connector designs need to be invisible at 10, 25, and possibly 40Gb/s or economical fiber optic connector/cable solutions need to be developed. This research needs to move forward in conjunction with the materials science, semiconductor, cable, substrate, and electronic packaging regimes necessary to make fiber optics a viable high-volume manufacturing (HVM) solution.
- *Standards in Reliability Qualification*
As an electromechanical component with a myriad of application parameters, is it possible to develop predictive reliability/MTBF data based on an analytics or testing approach to different connector designs and applications? This is a question posed by the OEM and EMS community that purchase connectors for use in electronic systems.
- *Dynamic Warpage Measurement*

This question relates to large, thin engineered plastic connector designs such as DDR4 and CPU sockets approaching 2,500 contacts (and also large BGA packages) that are exposed to the higher surface temperatures associated with lead-free solder processes and the thin-web injection-molded designs of these products.

- *Key Challenges with Press-Fit Connectors*

There are mechanical, high-speed signaling, power, and packaging issues here. In the automotive industry, for instance, press-fit connectors are desired for a range of applications and need to be characterized for harsh environments. In backplane and midplane applications approaching 25 to 40Gb/s, board-to-board connectors, high-speed twin-ax cables, and fiber optics will all remain in use.

- *State-of-Art Memory Connector*

JEDEC DDR4 specs are finalized, but as DDR4 approaches or exceeds its maximum 3.2Gt/s — or the next-generation memory technology surfaces — what challenges need to be overcome to ensure a cost-effective socketed or otherwise upgradeable memory connector?

- *Emerging Needs in Future Automotive Connectors*

Press-fit was mentioned above. There are also special connector needs in drive train and electromotive system interconnects for modules, HEV, PHEV, emerging battery, fuel cell, solar, and other applications.

- *Advanced Materials Research*

This will include metallic alloys and sealing/encapsulating materials as well as applications such as injection molding, printing of new complex designs, and flexible circuitry.

- *Advances in Fiber Optics*

Significant challenges in fiber optics include chip/package interconnects, cost-effectiveness, connector termination improvements, packaging architecture, waveguides, and interconnects, including optical PCBs.

- *Micro-Interconnect Technology*

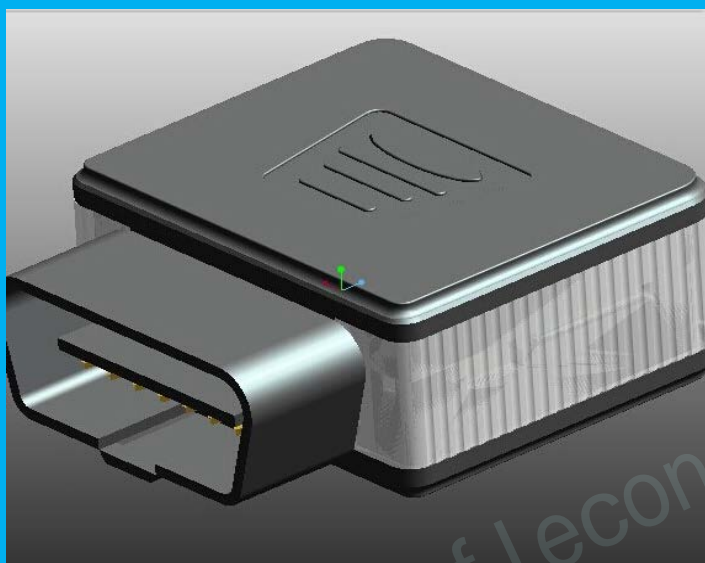
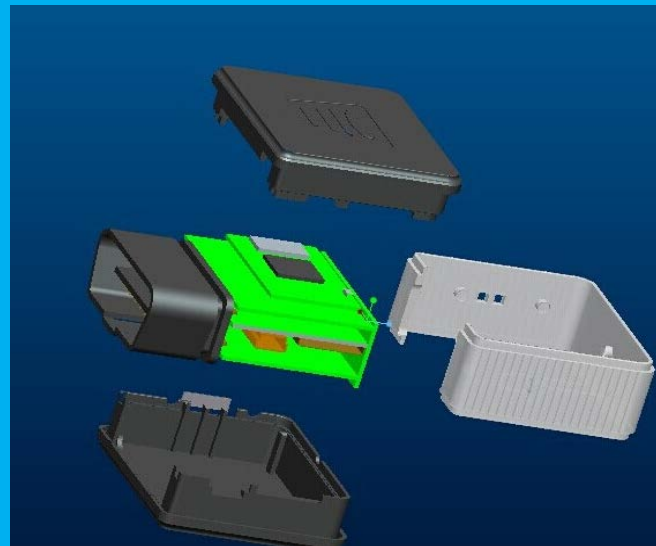
This includes materials and process for sub-100um interconnects, when and if they are needed.

- *Future Connector Designs in an All-Si World*

This question requires more intense dialogue between connector manufacturers and the semiconductor and packaging industries. This is a challenge because the semiconductor and packaging segments are not major connector users except for test; their R&D organizations are even less accessible; and there are proprietary obstacles.

Custom Plastic Enclosures/ Housings for Electronic Products





Precision Metal Plastic Mold Manufacturing

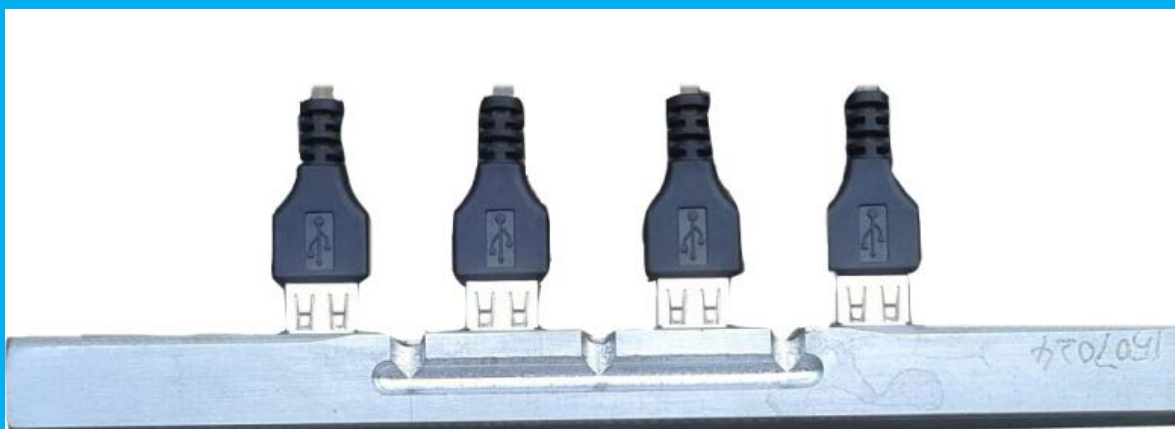
FLECONN is a fast growing High-Tech and exporting enterprise, dedicated in developing and manufacturing high-precision Plastic Injection Mould, Stamping punching Mould, injections parts, stamping parts and various precision plastic and electronic products etc, and it has provided worldwide enterprises with various Innovative products, i.e. automobile accessories, plugs and connections, home appliances and computer accessories etc.

FLECONN has equipments of CNC digital controlled lathe, CNC machining center, milling and drilling machine, CNC EDM, CNC wire cutting machine, Rockwell hardness tester, projection machine, fully automatic nut forming machine, fully automatic bolt forming machine and so on. More than 200 hundred workers work for her, including 10 experienced mold research and development, design engineers. Due to constant development in product skills and tech, and due to improvement in management, our products nowadays are increasingly popular all over the world.

After several years of development and growth, FLECONN has already held the leading position in its industry. Meanwhile, FLECONN has accomplished the customers' assignment and orders with highly religious and prudent attitudes, and conquered one

technical peak after with its precision products. With "Provide our customers with zero-defect product and service in time" as FLECONN's business policy, we have won the recognitions from the clients at home and abroad, and taken up the stable and wide market share all over the world via our advanced machinery equipments, high-quality production, front-edge processing and well-known prestige. We'll do our best to become an excellent precision mold developer, mold designer, mold maker and mould manufacturer thereby provide one-stop services for global customers.

Welcome to custom molds and samples by providing conception, ideas, drawings or samples.



Why choose our 3D Engineering Services?

3D PRO/E Services

FLECONN uses the most advance PRO/E software that can accurately simulate real-world operating conditions. This will reduce the time and costs traditionally used towards building and testing prototypes. For Prototyping purposes, FLECONN converts ideas into 3D PRO/E data. Once a product is prototyped and is ready for production various 2D models may be used as well. FLECONN offers its customers production ready 2D engineering designs for manufacturing and patenting purposes as well.

Cost Effective and Rapid Solutions

FLECONN can convert any idea into a PRO/E 3D Model. Pro/Engineer (PRO/E) is a integrated soft of CAD/CAM/CAE. We live in a 3D world, so we visualize objects the same way. When it comes to communicating a design, we naturally prefer a 3D image, model, or animation over a 2D technical drawing. In the 2D world, designers must be able to look at three or four views of a design and mentally combine them in order to visualize what that design will look like in 3D.

3D Assemblies and Rendering

Once your 3D Pro/E or 3D CAD model/assembly is available, FLECONN uses the most sophisticated computer generated images to provide you with 360° real-view snapshots of your product. Your designed prototype/product can be assigned in various colors, materials, lighting, and scenes to show you what the final product will look like in real life. Use the images for presentations, proposals, and both virtual and material studies.

Looking to turn your visions into marketable products? Get to market faster with product design and development services from FLECONN. We offer multi-disciplined full turn key product development consulting and design, providing engineering services for companies specializing in electronics, mechanics, robotics, software, firmware, electro-optics, custom instrumentation, PCB layout, and prototyping pilot runs. From concept to prototype manufacturing, and development to sales, our experts can help you along every step of the path to a successful product.

Our product design and development experience includes Intelligent devices, industrial products, biotech instruments, and aerospace industrial equipment. With product development consulting and prototype manufacturing services, we can use our resources and knowledge to help propel your ideas into reality. Best of all, our services are affordable so you can focus on the funds needed for your product.

The Process of One-Stop Services:

- **DESIGN**

- Concepts
- Graphic Design
- Product Development
- Product Design Studies
- Electronic Packaging
- Photo Realistic Renderings
- Test Set Design



- **ENGINEERING**

Mechanical Engineering
Mechanical Systems Engineering
Electrical/Electronics Engineering
Technical Drawings

- **ANALYSIS**

Mechanism Design/Analysis
Finite Element Analysis (FEA)
Stress Analysis
Engineering Compliance (Compliance to ASME and Other Specifications)
Rigging Analysis for Below the Hook Devices (Compliance to ASME BTH-1-2008)

- **MANUFACTURING**

Prototypes
CNC Machined Parts
Sheet Metal Parts
Weldments
Contract Manufacturing



V. Testing equipment

Our quality policy is the continuous improvement of existing processes, in a timely and efficient manner to provide to meet customer demand for both products and services, or new goods, even more than the customer needs. To achieve this policy, the company's top management commitment use quality management techniques, effective implementation and maintenance of the ISO 9,001:2008 quality management system.

In order to achieve our quality objectives and customer satisfaction of their needs, we will authorize the company to organize personnel to understand and solve the problem, and comply with the safety regulations and the continued rapid system responsive to the needs of our internal and external customers.

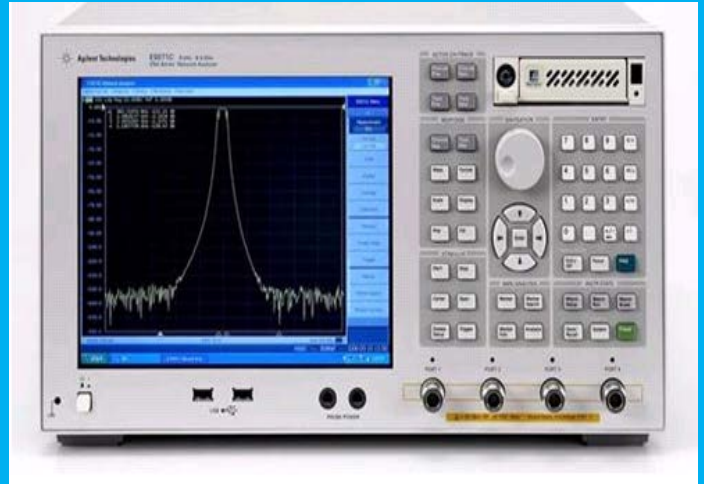
So we emphasize: we are committed to providing excellent products and service to satisfy customers.

CABLE TEST



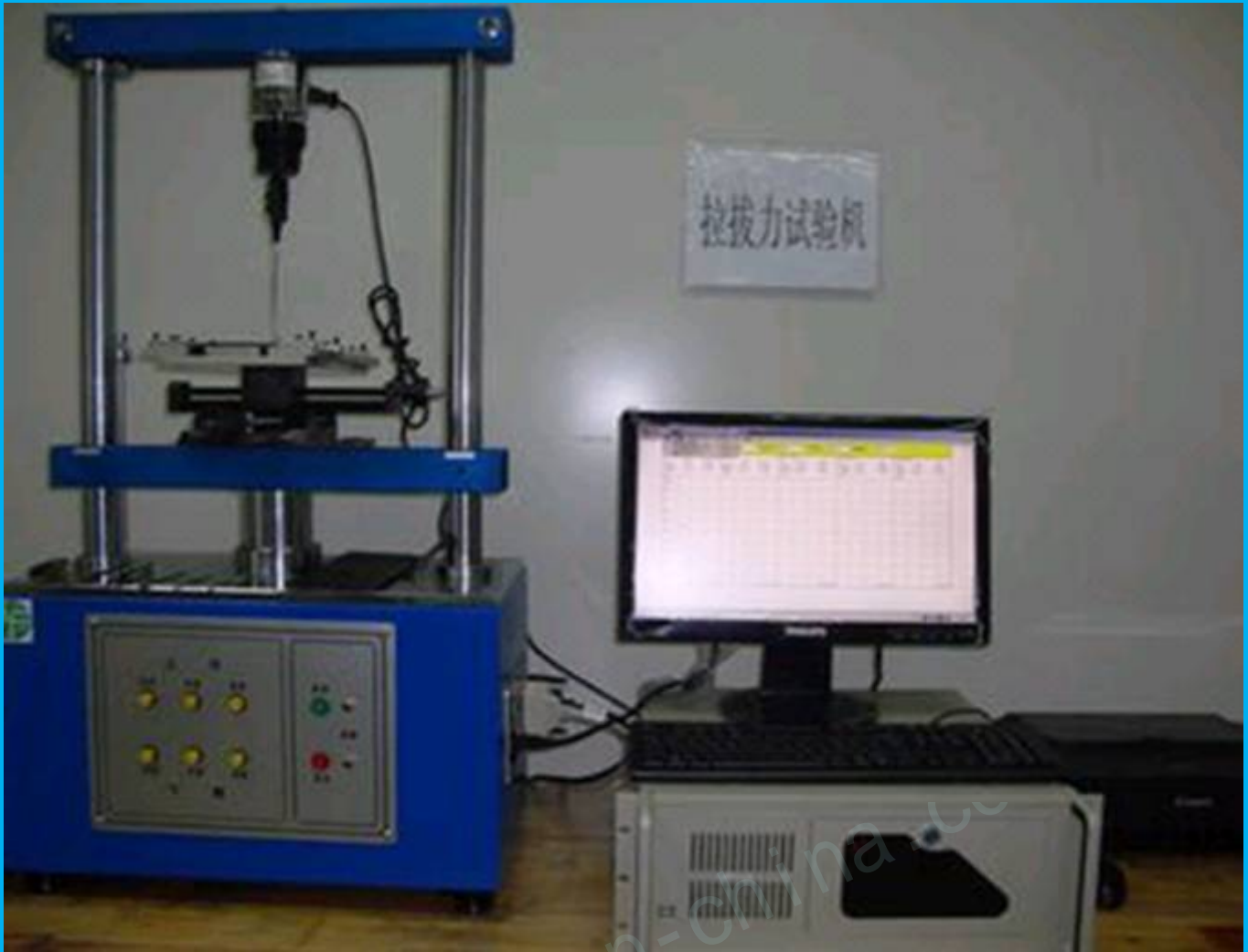
Sensitive resistor Tester





VI. Laboratory





VII. Acknowledgements

Thank you for reading our company introduction and product catalog. Hope our products could help you.

Due to product replacement, there are some similar newly developed products that have not been timely organized into directories, you are welcome to inquire.

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Tel: +86 755-23490966

Thank you!

www.fleconn-china.com