

## PRODUCT LINEUP

Leading in the field of high-frequency and high-speed transmissions, I-PEX contributes to the digital society by providing excellent signal integrity solutions with the development of a wide variety of ultra-precision connectors and our incomparable customer support.

### RF connectors: MHF® series



**MHF®** is a series of ultra-miniature RF coaxial connectors for antenna connection within wireless devices that achieves maximum performance with minimal space. Compatible with various communication standards, such as 5G mmWave/Sub6, 4G, LTE, Wi-Fi, Bluetooth, GPS, WiGig, M2M, IoT, SigFox, WiSUN, NB-IoT and LoRa.

- ◆ I-PEX's unique i-Fit® solderless connection technology provides stable VSWR performance up to 15 GHz
- ◆ Products with our ZenShield® technology, such as the MHF® 7S, provide improved EMC performance
- ◆ MHF® 1 LK & MHF® 4L LK are the industry's first micro-RF coaxial connector with locking mechanism
- ◆ A wide range of options, from extremely small connectors with a mated height of 1.0 mm to connectors that support frequency bands up to 15 GHz

### Micro-coaxial/Twinax connectors: CABLINE® series



**CABLINE®** is a connector series that uses micro-coaxial cables that can transmit high-speed signals in a space-saving manner inside a variety of equipment. It supports high-speed transmission such as 64 Gbps/lane, PAM4, USB4, Thunderbolt 3, eDP HBR3 and PCIe Gen 3/4.

- ◆ Electromagnetic noise countermeasures and crosstalk reduction with ZenShield® EMI shielding technology
- ◆ Highly flexible and can be used in narrow spaces by bundling cables
- ◆ Ideal for internal connections with moving parts and strict wiring design requirements, such as the connection between the motherboard and display of a laptop PC
- ◆ Some products include a mechanical lock

### Board-to-board connectors: NOVASTACK® series



**NOVASTACK®** is a board-to-board (FPC) connector series that supports high-speed transmission and high-frequency standards, such as USB4 (20 Gbps/lane), 5G mm wave, sub-6, and eDP HBR3.

- ◆ Shielded options to ensure EMC performance with ZenShield® technology
- ◆ Optional features include independent power terminals converters, etc.

### FPC FFC connectors: EVAFLEX® series and MINIFLEX® series



**EVAFLEX®** is a connector series for FPC and FFC cables that features one-action mating with a mechanical lock mechanism that ensures excellent retention. ZenShield® technology offers excellent EMC protection and enables high-speed transmission, such as USB 4, USB 3.2, V-By-One HS, and eDP.

- ◆ Rated for high temperature operation (up to 125°C)
- ◆ Vertical and horizontal mating-types available

**MINIFLEX®** is also a connector series optimized for FPC and FFC cables and has a connector shape known as ZIF (Zero Insertion Force) or LIF (Low Insertion Force).

- ◆ Various pitch ranges from 0.5 mm to industry's smallest class 0.175 mm
- ◆ Options of a variety of pin counts

**Wire-to-Board connectors: ISH®, IARPB® and AV-B series**

**ISH®** is a connector series that has excellent high temperature and vibration resistance and has a unique spring structure terminal to ensure high connection reliability. These connectors use discrete wires suitable for supplying large current power to devices.

- ◆ Long-term connection reliability
- ◆ Ideal for harsh environments such as automotive and industrial applications

**IARPB®** is a board-in type discrete wire connector with excellent vibration resistance. Particularly suitable for automotive applications such as headlights, inverters, and DC-to-DC converters.

- ◆ Excellent vibration resistant due to housing post structure
- ◆ Plating process provides a structure with excellent visibility and stable solder wettability to ensure work efficiency during mounting

**AV-B** is a connector for drone battery connection.

- ◆ Prevents unintentional unmating due to vibrations and shocks during drone navigation
- ◆ Half-mating prevention shape allows visual check for correct mating

**Terminals: AP series and ISFIT®**

**AP** series is a set of board-to-board power terminal products that supports high-current amperage and withstands high temperatures, all in small form-factors. They are ideal for

in-vehicle chargers and industrial equipment that is subject to rapid environmental temperature changes.

- ◆ High level of flexibility gives superior floating performance, allowing mounting of multiple terminals
- ◆ Operate at currents up to 32A
- ◆ Withstand temperatures up to 125°C

**ISFIT®** is a solderless press-fit terminal with a unique design that includes a 4-point contact with an internal spring structure that provides low mating force and eliminates damage to the through-hole on the PCB.

- ◆ Excellent contact reliability
- ◆ Highly accurate center position alignment helps to reduce workload of assembly operators and improves the inspection process

**I/O connectors: MINIDOCK™ series**

**MINIDOCK™** is a family of board-to-board docking input/output (I/O) connectors that provides a rugged, secure and reliable docking solution for portable medical and industrial devices.

- ◆ Diecast housings and large tapered guide pins ensure up to 5,000 mating cycles
- ◆ Options include vertical and horizontal mating, pin counts ranging from 80 to 240, and 3-level pin sequencing for signal, power, and ground

*We provide precision manufacturing solutions. Ensuring quality every step of the way from in-house tool design to fully automated manufacturing and inspections.*

**Jumper harness solution: LEAPWIRE®**



**LEAPWIRE®** is the I-PEX high-speed jumper harness solution.

- ◆ Minimizes PCB trace and achieves excellent high-speed signal transmission
- ◆ Applicable for internal connection of DPU and Smart NIC Twinax cable connectors

**RF coaxial cable solderless connection technology: i-Fit®**



**i-Fit® solderless termination technology** used in the I-PEX micro RF coaxial connector (MHF®) series eliminates variations in the electrical performance of RF cable assemblies caused by solder and maintains uniform electrical characteristics.

- ◆ Ease of wiring work and maintaining uniform electrical characteristics are most important for antenna performance

**Excellent EMC design: ZenShield®**



**ZenShield®** is the name for I-PEX's excellent EMC countermeasure technology available in many of our connector products. The connectors with ZenShield shielding provide significant mitigation of EMI.

- ◆ 360-degree EMC shielding prevents electromagnetic noise radiation from the board mounting part of the signal terminals
- ◆ Gives board designers more flexibility by allowing connectors to be placed near antennas