



**Industrial Mini I/O**

**Product Presentation**

**Amphenol**  
**FCi**

# Industrial Mini I/O

## Agenda

- Product Overview
- Product Specifications
- Features & Benefits
- Main Markets & Applications

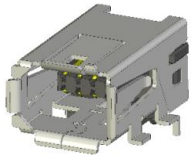
# Industrial Mini I/O

## Value Proposition

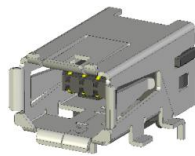
- More reliable than RJ45. With only one quarter the size of conventional RJ45 plugs, the Industrial Mini I/O connector provides critical space saving on a PCB – space that can now be used more efficiently.
- Accidental unplugging of a network connection due to shock, vibration or pulling on cords causes expensive downtime in an industrial environment.
- The Mini I/O unique locking system is specified to 100N of pull force. With its innovative piercing termination, the Mini I/O Field Installable version decreases the time usually needed to terminate the wires through soldering and with an easy to use hand tool, the field assembly in virtually any environment is now possible.

## Product Overview

Type I  
Receptacle



Type II  
Receptacle

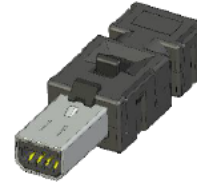


- Available Surface Mount & Through Hole
- Vertical and Right Angle
- Panel Mount Receptacle Field Installable

Type I Cable  
Plug



Type II Cable  
Plug



- Field Installable version available
- Secure Interface Locking System
- Cable assemblies : Pigtail or dual end

Type I Cable  
Receptacle



Type II Cable  
Receptacle



- Field Installable
- Secure Interface Locking System
- Panel Mount version available
- Cable Assemblies Pigtail or dual end

# Industrial Mini I/O

## Product Specifications

### Product Facts

- Used in Fast Ethernet or Gigabit Ethernet applications Meet Cat5e specification
- 2 unique interfaces which may be used by customers to prevent mismatching
- RoHS compliant
- Lead Free, Halogen Free
- Compatible with other Mini I/O headers

### Electrical Performances

- Rated Voltage: 30V
- Current Rating: 0.5A

### Mechanical Performances

- Durability : 1500 cycles.
- Mating Force: 30N Max
- Unmating Force : 30N Max.
- Insulation Resistance: 500M ohms min.
- Cable Diameter : 7.1 mm Max
- Wire Size : 22-30 AWG

### Environmental

- Operating Temperature : -40°~85°C

### Materials

- Housing: High temperature thermoplastic
- Shell: Copper Alloy
- Terminal: Copper Alloy

### Specifications

- Standard: IEC/PAS 61076-3-122
- ANSI/TIA-568.C.2
- Product Specification: GS-12-1345, GS-12-1346 and GS-12-1347
- Package Specification: GS-14-2538

### Packaging

- Tray and Tape / Reel

# Industrial Mini I/O

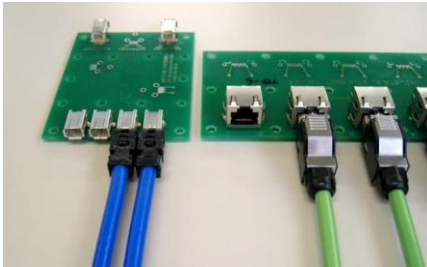
## Features & Benefits

Features	Benefits
Compact size; 75% space saving vs. RJ45	Space saving
High reliability connection with “Fighting Snake” contact principle (2 points of contact per line)	Supports stringent demands of an industrial and high vibration environment, enabling increased productivity through a reliable connection
Locking feature with high cable retention force within the metal housing requiring a minimum of space	Protects the plug from accidental pull and unmating
Plug kit field installable	Time Saving Termination
Two unique interfaces to prevent improper connections	Prevents mismating

# Industrial Mini I/O

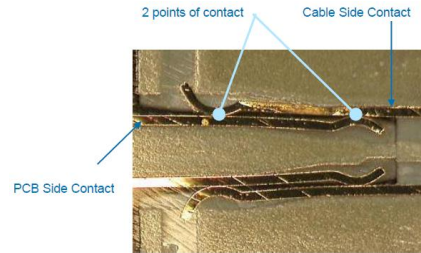
## Friendly concept for Outdoor applications

### Compact Size



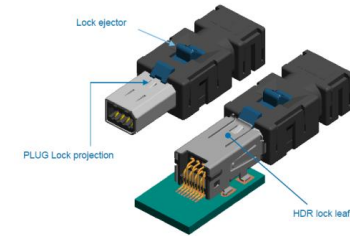
- Compact WTB connector system for Industrial Communications. It is 25% of the original size of an RJ45.

### High Reliability



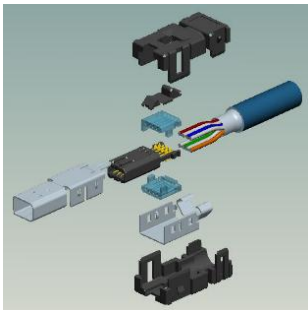
- Reduce contact failures
- Fighting snake concept, enables performance / continuity in high vibration environment.

### Locking Feature

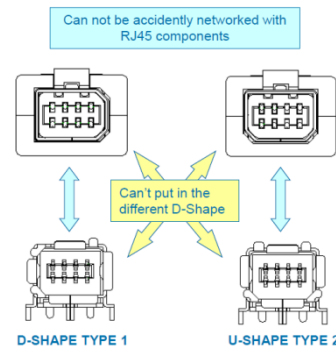


- Accidental unplugging of a network connection due to shock, vibration, pulling on cords, etc.. Causes expensive downtime in an industrial environment

### Field Installable



### Physical Coding



# Industrial Mini I/O

## Main Markets & Applications

### Motion Drive



### CNC Controller



### Machine Controller



### DCS Controller



### PLC



### Network Converter



### 10G Switch ALU (Recent won)

Where RJ45 is applicable, Mini IO is ready to perform better under a smaller space and high vibration environment



# Industrial Mini I/O

## The interface for MECHATROLINK

**The Beat of the Machine**

The control network in a control unit is inserting the control nerve in the human body, which is an important feature in controlling the whole body. The robot driver in a control unit is being connected to more distributed control layer down. The control network represents the master's device in all kinds, and connectivity of the basic nodes are required to be made. The network control precisely and accurately only when the control network built in rhythm, resembling the human nerve.

**MECHATROLINK**

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**Applications:**

- Press brake
- Bonding
- Extraction robot
- Ejection molding
- Washing
- Food packaging
- Tester
- Mounting machine
- Etching
- Machine tool
- Liquid crystal glass processing
- Molding
- Probing

Member List: <http://www.mechatrolink.org/app/association/members.php?lang=cn>



**THANK YOU**

**Amphenol**  
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