

## Amphenol Product highlights for Industry 4.0

The Internet of Things has paved the way for Industry 4.0, opening up opportunities for digitisation, networking, and automation to transform the entire global manufacturing sector. The result is the creation of smart factories; the integration of end-to-end production processes from distinct silos to an entire ecosystem that is connected, smart, productive and highly efficient.

Automated processes require increased data computing capabilities, higher bandwidths, greater data transfer rates, higher port density, mini industrialisation and shielding capabilities. Amphenol ICC is committed to helping companies to develop their Industry 4.0 vision, dedicating resources to develop the right products to enable participation in this market revolution.

#### Amphenol ICC's product range offers:

- · Real time production monitoring
- · Automated process control
- · Computer-integrated manufacturing
- · Environmental conditioning and monitoring

#### Applications supported by the Amphenol ICC product range include:

- · Programmable logic controllers
- · Human machine interface and computerised numerical control
- I/O modules
- · Servo drives
- · Control cabinets
- · Robot control
- · Robot arms

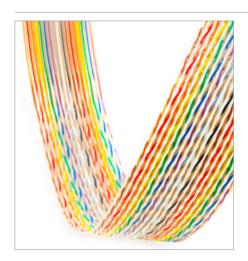
#### **Dedicated technical support from Avnet Abacus**

Avnet Abacus has the technical knowledge and expertise to support you in your design. Our dedicated team of product specialists can offer you a bespoke sampling service and advice on product selection and availability to help you get your application to market quickly and effectively. Contact our specialists today in your local language at www.avnet-abacus.eu/ask-an-expert

### **Amphenol**

## Product highlights for Industry 4.0

#### **TWIST & FLAT CABLES**



The Twist 'N' Flat cable combines the time and cost savings of mass termination with the electrical performance of twisted pairs. The cable consists of stranded round conductors insulated with color coded PVC twisted into pairs and laminated between layers of PVC film to form a planar cable. The twist in adjacent pairs is reversed to reduce cable crosstalk even further. Standard cables alternate 18 in. (45.7 cm) long twisted pair sections with 2 in. (5.1 cm) flat sections in which the conductors are laminated in parallel.

#### **Features**

- · UL / CSA certified
- Twisted pairs for significant crosstalk reduction
- Up to 64 conductors (32 pairs) with precise spacing for controlled electrical characteristics
- Double sided lamination provides excellent conductor strain relief and mass termination from either side of cable
- Reduced assembly costs compared with discrete or hand lamination terminations

#### **RJ45 (RJHSE SERIES)**



Amphenol's broad range of RJHSE series registered jacks (RJ) offers solutions to meet the increasing demand for faster speeds and greater bandwidth required by telecom & networking markets for VoIP, Ethernet, WLAN, medical, and industrial applications.

The connectors are PoE and PoE+ compatible and are RoHS and IEC 60603-7 compliant.

Amphenol's high performance line of connectors meets Cat5e, Cat6, and Cat6A specification performance levels per EIA-568-C.2 without external assistance and the discerning designs allows for easy upgrade from Cat5e to Cat6 or Cat6A.

#### **Features**

- · Available in various shield options
- · Variety of LED options
- $\cdot$  Wide operating temperature: -55° C to +85°C
- · 750 mating & unmating cycles
- With high temperature thermoplastic, connectors without LEDs are suitable for the Reflow process

#### **Applications**

- · Communications
- Storage
- · Consumer goods, home, industrial, office, retail
- · Medical

#### **MUSBR SERIES USB 3.0 CONNECTORS**



Amphenol's MUSBR series of ruggedised USB connectors with die cast housings and IP67 sealing is now available in 3.0 speed. The rugged series provides reliable performance in extreme conditions for the most demanding applications, and mates with standard USB plugs. The connectors are available in right angle or vertical styles and single port or stacked versions. They have an operating temperature range from -55°C to +105°C for extreme conditions and are RoHS compliant.

#### **Features**

- Provides IP67 rated water/dust proof performance
- Interface is sealed in both the mated and un-mated conditions
- Meets military shock and vibration requirements
- Connectors mate with any certified standard USB 2.0 or USB 3.0 type A plugs
- Achieves data rates up to 5 Gb/s (USB 3.1 gen 1)
- · RoHS compliant

#### **Applications**

- · Communications
- · Data
- · Consumer
- · Industrial and instrumentation
- · Medical
- Automotive

#### **MINITEK 1.27MM CONNECTORS**



The Minitek127® 1.27mm connector system is an extensive range of modular connectors for all types of wire/cable-to-board applications. It includes straight and right angle, surface mount and through hole pin headers and board receptacles in different plating variations, as well as customised stacking headers, and an IDC version. The range is available in up to 100 positions.

Minitek127® comes in three duplex plating versions – 30µin, 15µin GXT®, 10µin

gold and Gold Flash, to support applications in a wide range of environments.

• 1.27mm pitch wire/cable-to-board solution

- · IDC version available
- · Up to 100 positions available
- · Duplex plating saves cost and meets demanding design requirements
- · Accommodates wire range up to 30AWG

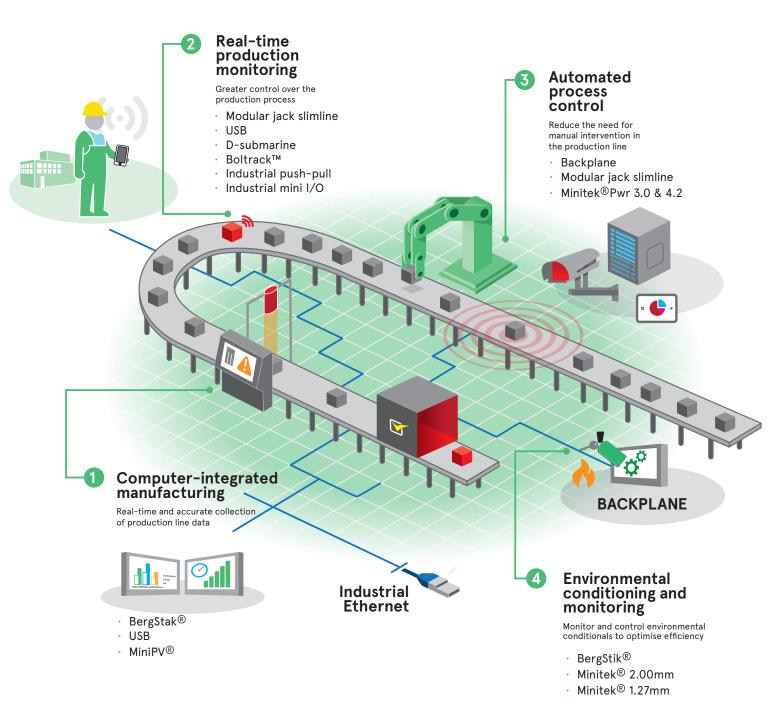
#### **Features**

- · Available in 3 Duplex plating versions (30 $\mu$ ", 15" GXT, 10 $\mu$ " gold and Gold Flash)
- Tape on reel with pick up cap or tube without pick up cap packaging
- · Both top and bottom entry product available
- · Standoff design
- · Post options for SMT product
- · Customised stacking header
- · RoHS compliance and lead-free

#### **Applications**

- · Communications
- $\cdot \; \mathsf{Data}$
- · Industrial and instrumentation:
  - Industrial control
  - Instrumentation & test equipment
- $\cdot \ \text{Vending machine} \\$
- · POS (Point Of Sale) equipment

# Smart factories of today



(Source: "Huawei And NXP Turn China Into A "Smart" Factory | Hardware-Boom")

#### **FURTHER INFORMATION**

To find more about the Amphenol ICC product range, visit avnet-abacus.eu/amphenol-icc