

Amphenol

COMMUNICATIONS SOLUTIONS

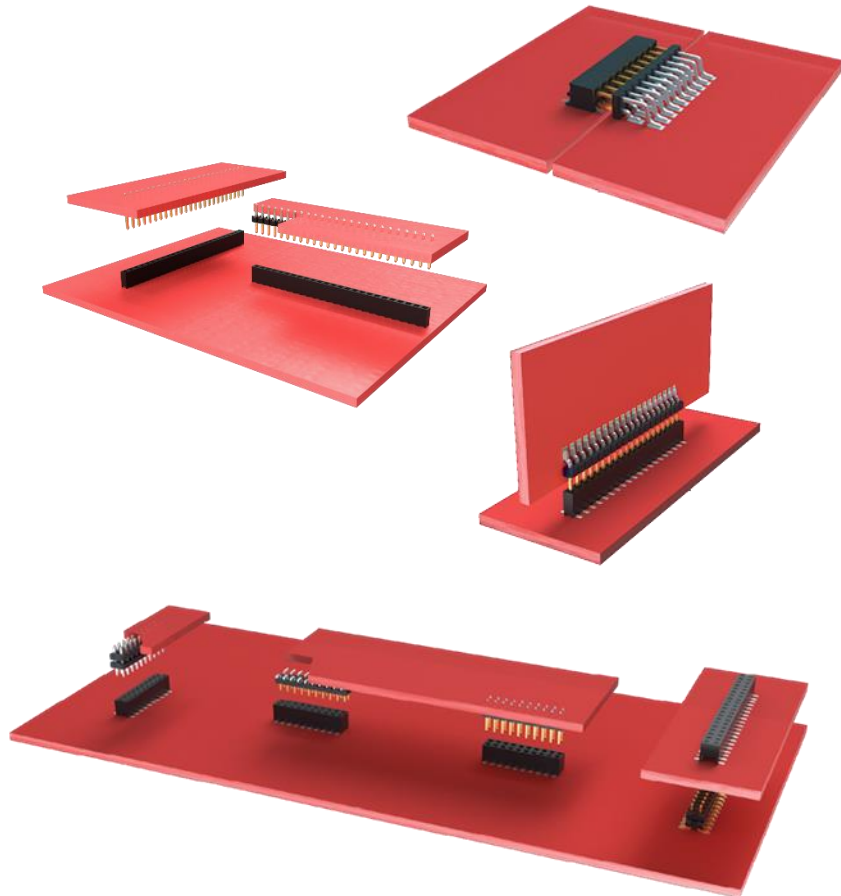
Minitek®

Product Presentation

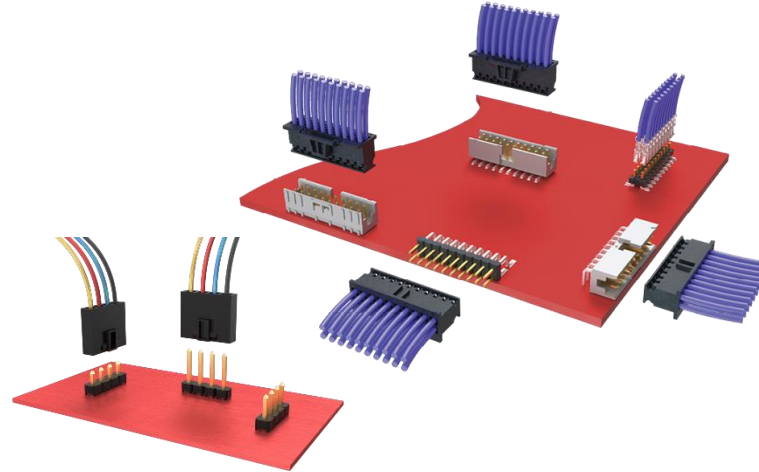
 **FCi Basics**



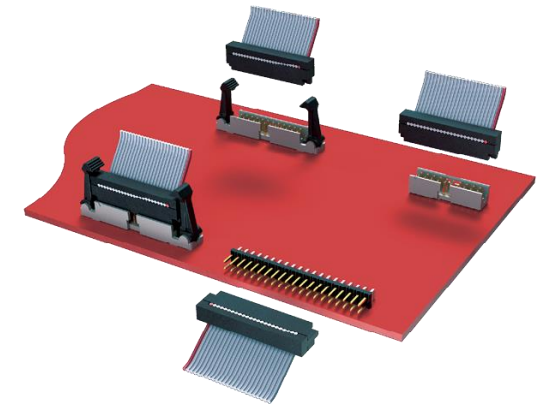
Board-to-Board



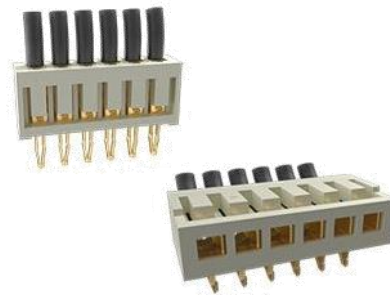
Wire-to-Board



Cable-to-Board



Board-In



Blind Mate Interface



Minitek® Board-to-Board and Wire/Cable-to-Board Value Proposition


- Minitek® is the **most complete Modular Connector System** on the market for Board-to-Board and Wire/Cable-to-Board connections on 2,00mm pitch
- Minitek® is available in **through-hole, surface-mount** or **pin-in-paste** solder option
- Minitek® comes in **single and double rows, straight** or **right-angle** orientation, **shrouded** or **unshrouded** with **2 to 50 positions**
- Minitek® 2,00mm pitch offers **38% board space reduction** compared to 2,54mm systems

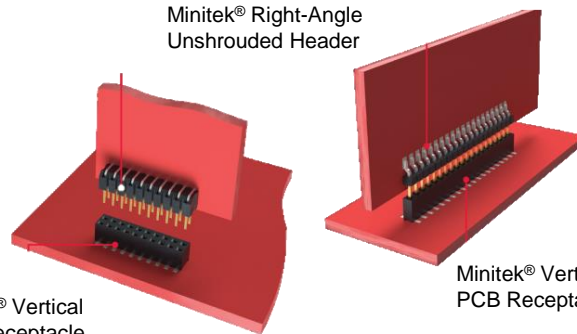
Minitek® Board-to-Board and Wire/Cable-to-Board Features and Benefits

Features	Benefits
Modular System	Everything Inter-matable
2.00mm pitch	38% less board space compared with 2.54mm
Lowest profile eject latch header	Meets your specific design requirements
Lowest coplanarity at 0.1mm	Facilitates efficient and cost effective automatic placement
Standoff design	Make easy the cleaning of PCB
0.50mm square drawn wire pin	Provides four smooth mating surfaces
Hight row material temperature range	Withstands reflow soldering process

Minitek® 2.00mm Board-to-Board

Minitek® Straight Unshrouded Header

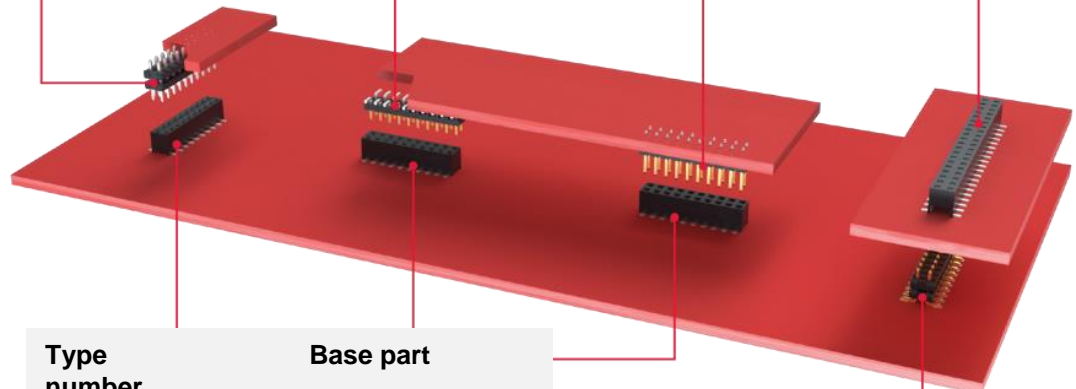
Type number	Base part
Single Row TMT/PiP	10138654
Double Row TMT/PiP	57102
Double Row SMT	57202 



Minitek® Horizontal PCB Receptacle

Type	Base part number
Single Row TMT	10131931
Single Row SMT	10131930
Double Row TMT	10131932
Double Row SMT	10131933

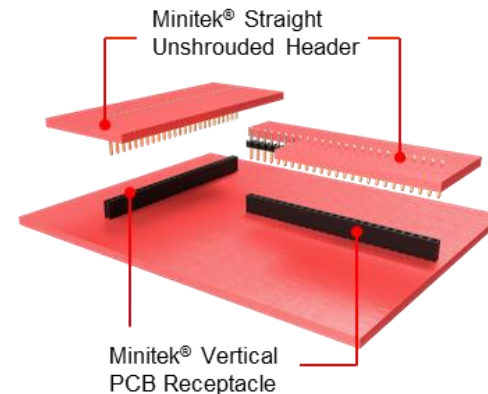
Minitek® Unshrouded Stacking Headers



Type number	Base part
Single Row TMT	10131934
Single Row SMT	10131935
Double Row TMT	10131936
Double Row SMT	10131937
Minitek® Vertical PCB Receptacle	

Type number	Base part
Double Row TMT / PiP	59112
Double Row SMT	59202

Minitek® Unshrouded Stacking Headers



Minitek® Right-Angle Unshrouded Header

Type	Base part number
Single Row SMT	10112684
Double Row TMT	98423
Double Row SMT	10112690
Double Row PiP	10072353

Minitek® 2.00mm

Product Specification – Board-to-Board

Material

- Housing : High Temperature Thermoplastic
- Flammability : UL94V-0
- Terminal: Phosphor bronze
- Plating: up to 0.76 μm (30 $\mu\text{''}$) Gold / GXT over 1.27 μm (50 $\mu\text{''}$) nickel

Environmental

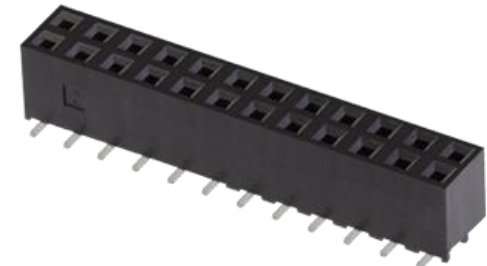
- Operating Temperature: -55°C to +125°C

Electrical Performance

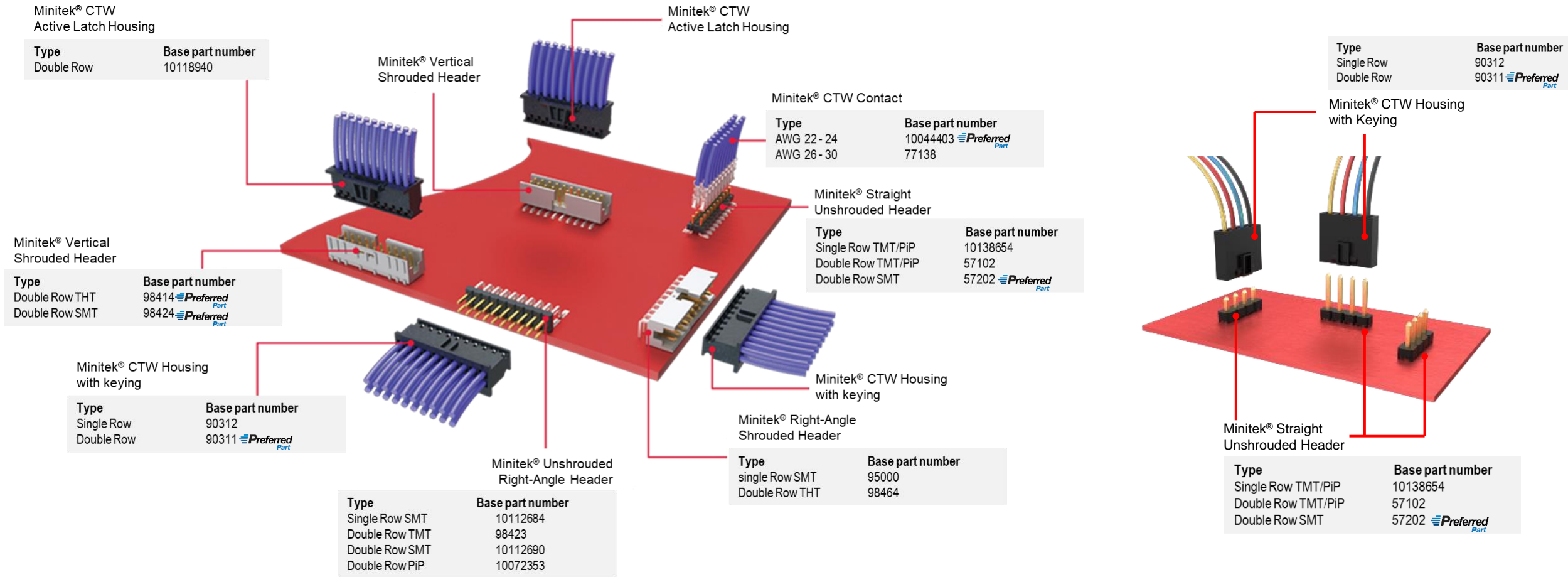
- Current rating: up to 2A continuous
- Contact resistance: 20m Ω max.
- Insulation resistance : 1000 M Ω min
- Contact dielectric withstanding voltage: 650V rms

Mechanical Performance

- Mating cycles (durability): 100 - Gold
- Insertion force gold finish contact: 1.8 N
- Withdrawal force (min) gold finish contact: 0.2 N
- Contact normal force: 0,8N
- Contact wiping length: 1.5mm



Minitek® 2.00mm Wire-to-Board



Minitek® 2.00mm Product Specification – Wire-to-Board

Material

- Housing : High Temperature Thermoplastic
- Flammability : UL94V-0
- Terminal: Phosphor bronze
- Plating: up to 0.76 μm (30 $\mu\text{\"}$) Gold / GXT over 1.27 μm (50 $\mu\text{\"}$) nickel

Environmental

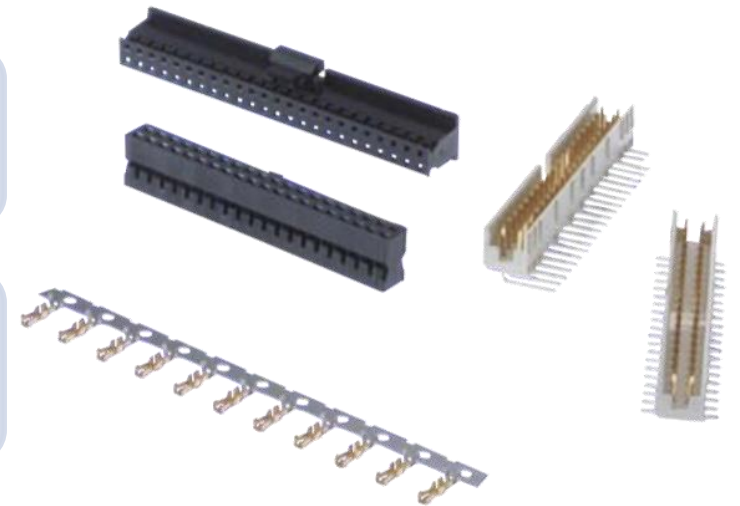
- Operating Temperature: -55°C to +125°C

Electrical Performance

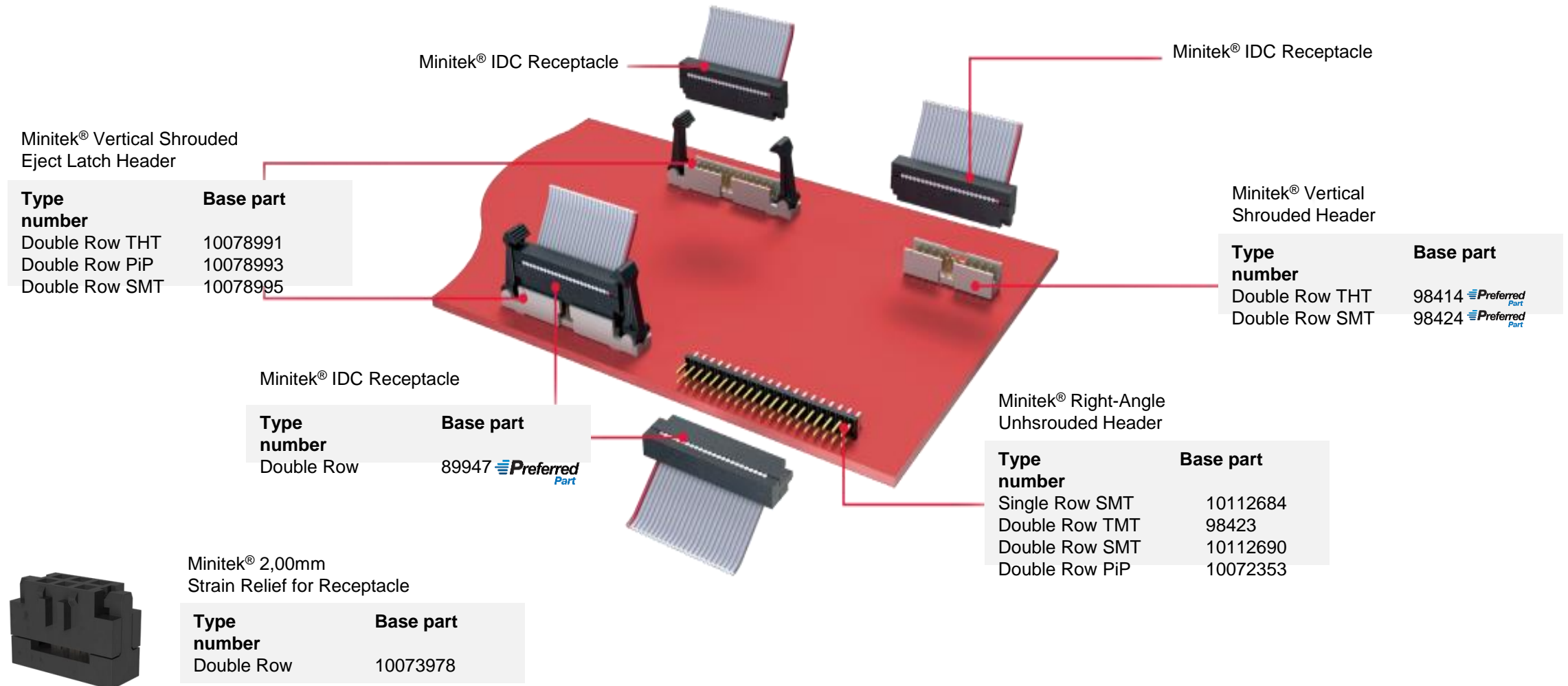
- Current rating: up to 2A continuous
- Contact resistance: 20m Ω max.
- Insulation resistance : 1000 M Ω min
- Contact dielectric withstanding voltage: 500V rms

Mechanical Performance

- Insertion force gold finish contact: 1.8 N
- Latching retention force : 15N min (for 2x3 to 2x4 pos.)
- Latching retention force : 25N min for (2x5 to 2x25 pos.)
- Withdrawal force (min) gold finish contact: 0.2 N
- Contact normal force: 0,8N
- Contact wiping length: 1.5mm
- Wire Gauge : 22 to 30 AWG



Minitek® 2.00mm Cable-to-Board



Minitek® 2.00mm Product Specification – Cable-to-Board

Material

- Housing : High Temperature Thermoplastic
- Flammability : UL94V-0
- Terminal: Phosphor bronze
- Plating: up to 0.76 μm (30 $\mu\text{"}$) Gold / GXT over 1.27 μm (50 $\mu\text{"}$) nickel

Environmental

- Operating Temperature: -40°C to +125°C

Electrical Performance

- Current rating: up to 1A continuous
- Contact resistance: 20m Ω max.
- Insulation resistance : 1000 M Ω min
- Contact dielectric withstanding voltage: 650V rms

Mechanical Performance

- Insertion force gold finish contact: 1.8 N
- Latching retention force : 30 N
- Withdrawal force (min) gold finish contact: 0.2 N
- Contact normal force: 0,8N
- Contact wiping length: 1.5mm



Minitek® 2.00mm Product Specification – Jumper

Serie 86730



Material

- Housing : High Temperature Thermoplastic
- Flammability : UL94V-0
- Terminal: Phosphor bronze
- Plating: from 0,2µm to 0.76 µm (30µ") Gold over 1.27 µm (50 µ") nickel

Environmental

- Operating Temperature: -40°C to +105°C

Electrical Performance

- Current rating: up to 1Amp
- Contact resistance: 20mΩ max.
- Insulation resistance : 1000 MΩ min
- Contact dielectric withstanding voltage: 650V

Mechanical Performance

- Insertion force per contact: 650grams maximum
- Withdrawal force per contact: 50 grams minimum

Minitek® Board-in 2.00 – 2.50mm Value Proposition

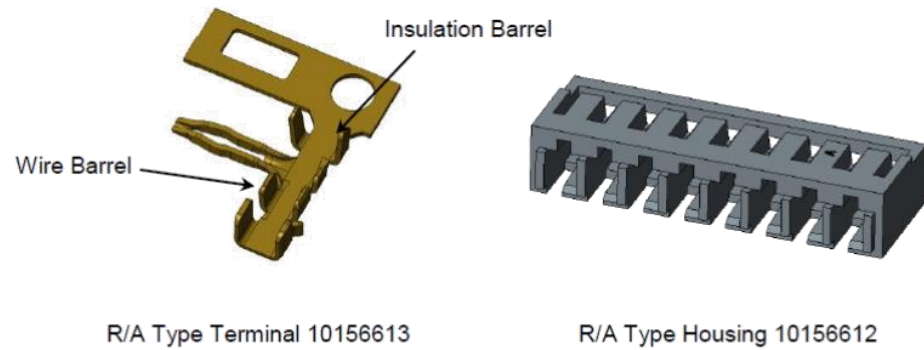
- Minitek® Board-In connector system is a flexible solution designed for cost efficient & permanent Wire-to-Board applications.
- Minitek® Board-In is a one-piece direct solder to Board solution that provides space and cost savings compared to a two-piece connection system.
- The connector system is currently offered in 2-16 positions and 2.00mm & 2.50mm pitch.
- It covers vertical and horizontal applications.
- Minitek® Board-In is ideal for applications in the following markets: Consumer, Datacom, Industrial & Instrumentation, Automotive

Minitek® Board-in 2.00 – 2.50mm Features and Benefits

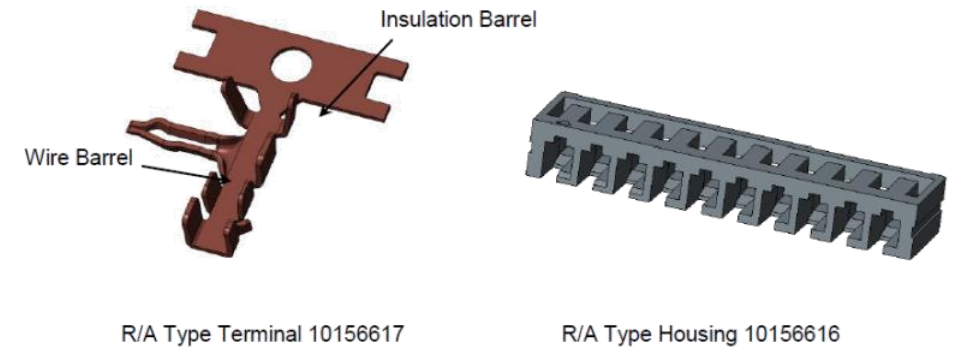
Features	Benefits
Accepts standard through hole soldering methods	More reliable compared to hand soldering
One-piece direct solder-to board assembly	Provides space and cost saving compared to the two-piece connector system
Offered in two pitches and multiple circuit sizes	Design flexibility
Vertical and horizontal configuration	Suitable for applications with limited space
Terminal and housing locking features	Secure connection

Minitek® Board-in 2.00 – 2.50mm Product Overview

Board-In 2,00mm



Board-In 2,50mm



Minitek® Board-in 2.00 – 2.50mm Product Specification

Material

- Housing : High Temperature Thermoplastic
- Flammability : UL94V-0
- Terminal: Phosphor bronze
- Plating: up to 0.76 μm (30 $\mu\text{"}$) Gold / GXT over 1.27 μm (50 $\mu\text{"}$) nickel

Environmental

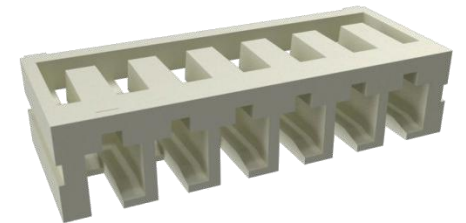
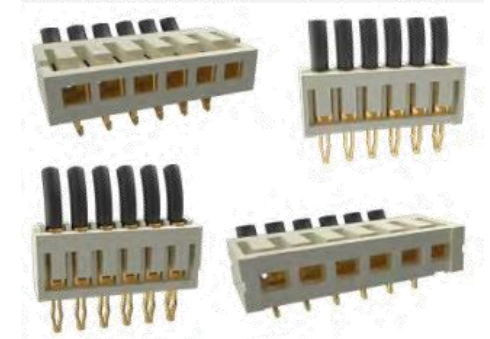
- Operating Temperature: -40°C to +105°C

Electrical Performance

- Current rating: 2A (2,00mm) / 3A (2,50mm)
- Voltage Rating: 250VAC/DC
- Insulation O.D.: 1,30mm max (2,00mm) / 1,70mm max (2,50mm)
- Insulation Resistance: 1000M Ω min

Mechanical Performance

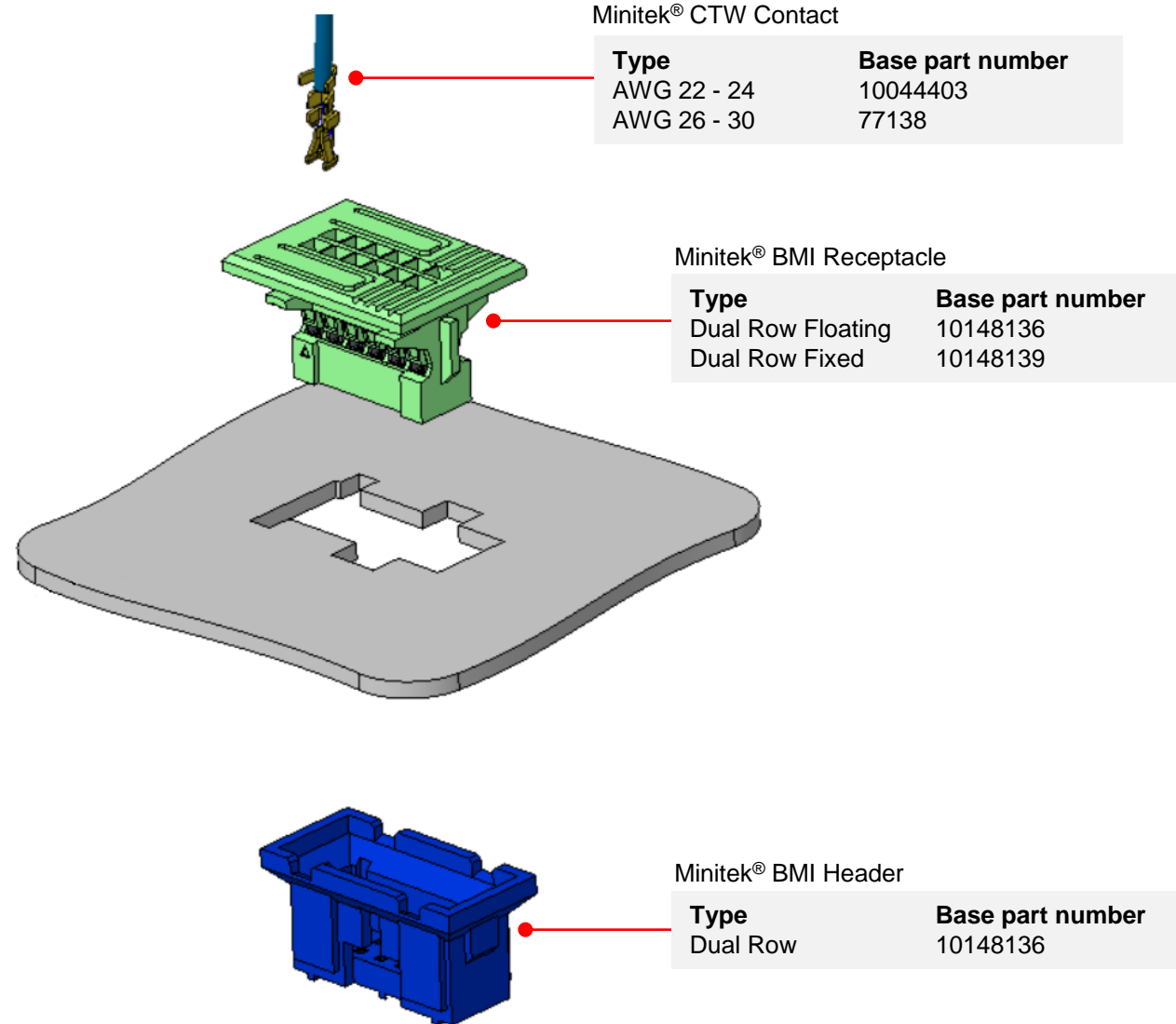
- Terminal/Housing Retention Force: 9,8N min
- Terminal Insertion Force: 9,8N max



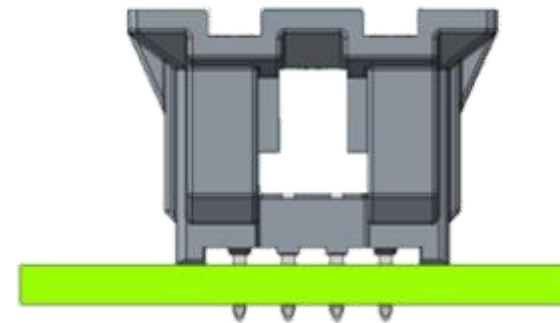
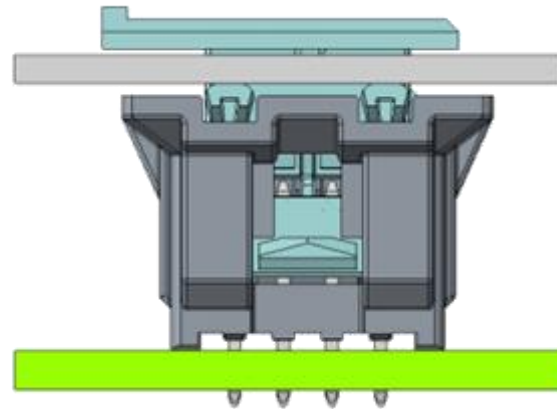
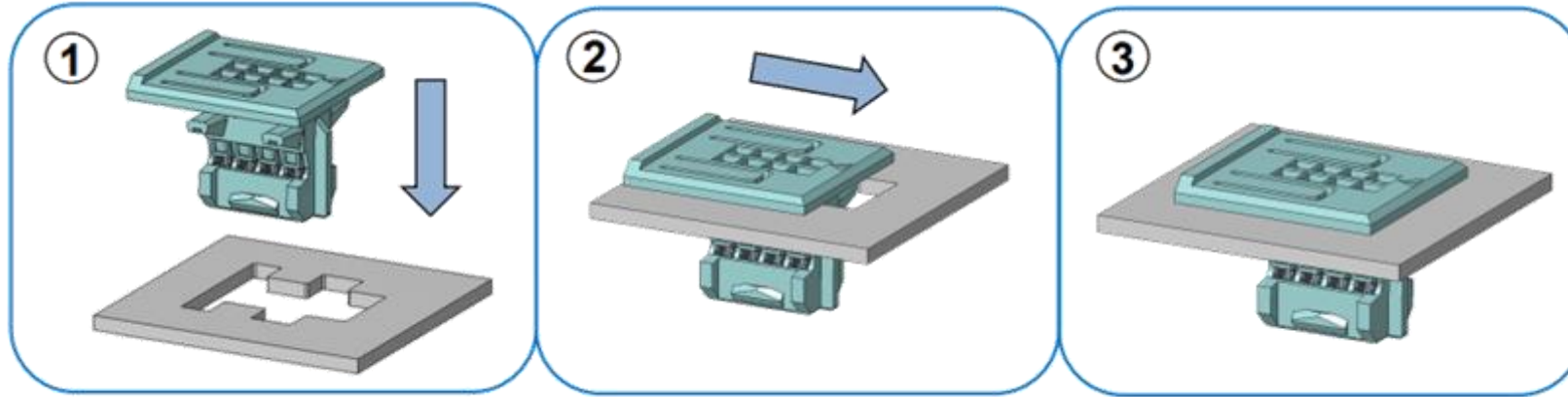
Minitek® Blind Mate Interface Value Proposition

- Minitek® Blind Mate Interface allows to connect headers and receptacle in mezzanine application where there is low visibility at both ends.
- Minitek® Blind Mate Interface allows +/-2,00mm catching for blind mating and +/-1,00mm misalignment on horizontal axis's
- Minitek® Blind Mate Interface is compatible with multiple manufacturing process and do not need specific industrial tools
- Minitek® Blind Mate Interface ensure secured mating retention and prevents accidental mis mating.

Minitek® Blind Mate Interface Product Overview



Minitek® Blind Mate Interface Mounting instruction



Minitek® Blind Mate Interfact

Advantage vs competitors : Floating receptacle

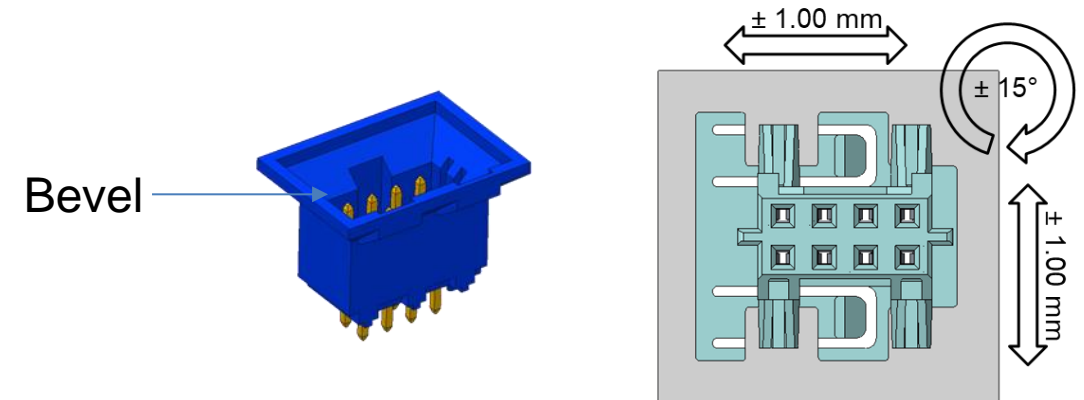
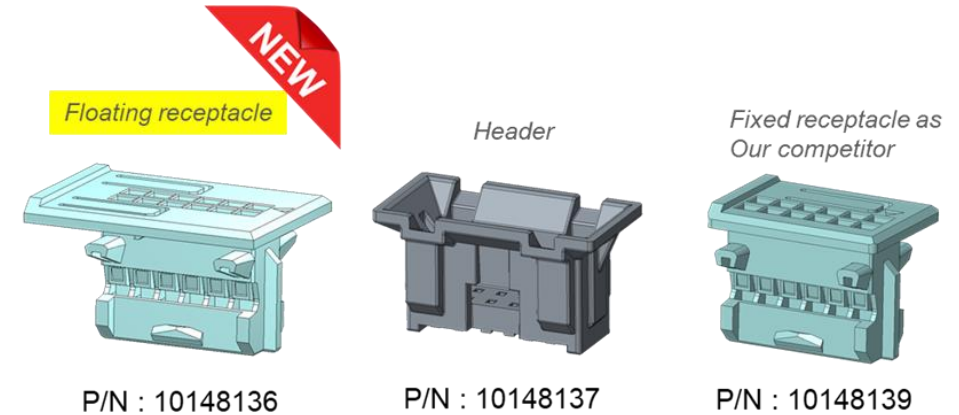
With products of competitors, **receptacle is fixed on panel**. What is called **misalignment** is the acceptable alignment default of receptacle vs. header during mating operation, caught up by the bevel of the header.

In addition to the bevel, the particularity of Minitek® Blind Mate is **the floating mount of the receptacle on panel even when mated together**.

This feature allows a self-alignment of receptacle in order to admit a **positioning error between board and panel**.

This is very convenient when several headers have to be plugged in one time. **No risk of high constraints on the header solder tails anymore**.

BEVEL : An angled or sloped surface at the end of the connector, designed to facilitate alignment, ease of insertion, and protection while ensuring a secure and efficient connection.



Minitek® Blind Mate Interface Product Specification

Material

- Housing : High Temperature Thermoplastic
- Flammability : UL94V-0
- Terminal: Copper alloy
- Plating: up to 0.76 μm (30 $\mu\text{''}$) Gold / GXT over 1.27 μm (50 $\mu\text{''}$) nickel

Environmental

- Operating Temperature: -40°C to +125°C

Electrical Performance

- Low Level Contact Resistance: 20m Ω max.
- Insulation Resistance: 1000m Ω min.
- Voltage Rating: 200Vrms
- Current Rating: 2A per contact
- Dielectric Withstanding Voltage: 650V AC

Mechanical Performance

- Catching: $\pm 2\text{mm}$ in x and y axes
- Misalignment with Floating Option: $\pm 1\text{mm}$ or 15° in x and y axes, $\pm 0.3\text{mm}$ in z axis
- Terminal Insertion Force: 2N max. per contact
- Durability: 100 mating cycles for gold plating



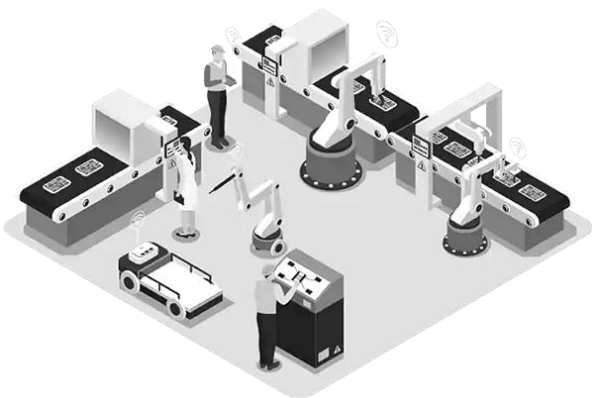
Minitek® Blin Mate Interface Features and Benefits

Features	Benefits
Blind mate interface	Allows ±2.00mm catching for blind mating
Floating receptacle option available	Allows ±1.00mm misalignment in x and y axes
Passive locking on housing with low thumb latch operation	Ensure secured mating retention
Fully polarized housings	Prevents accidental mismating
Scoop-proof housings	Ensure terminals and header pins are not damaged from misuse
Available in through hole, PIP and SMT as option	Compatible with multiple manufacturing processes



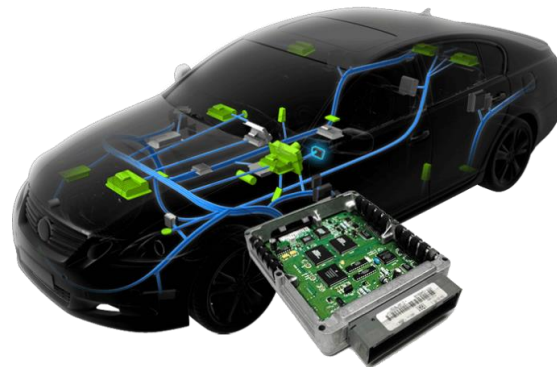
Industrial

- Industrial Automation
- Instrumentation
- Medical
- Vending Machines



Automotive

- Electronic Control Systems



IT Datacom

- Servers
- Communication Equipment



- [Datasheet](#) Minitek® 2,00mm Receptacle
- [Datasheet](#) Minitek® 2,00mm SMT Horizontal Headers
- [Datasheet](#) Minitek® 2,00mm Active Latch Housing
- [Datasheet](#) Minitek® 2,00mm Eject Latch Header CTB
- [Datasheet](#) Minitek® 2,00mm PiP Headers
- [Datasheet](#) Minitek® 2,00mm Shrouded Stacking Headers
- [Datasheet](#) Minitek® 2,00mm Unshrouded Vertical Headers
- [Datasheet](#) Minitek® 2,00mm/2,50mm Board-In
- [Datasheet](#) Minitek® 2,00mm Blind Mate Interface
- [Web product landing page](#) Minitek® 2,00mm
- [Web product landing page](#) Minitek® 2,00mm Board-In
- [Web product landing page](#) Minitek® Blind Mate Interface
- [Product Presentation](#) Minitek® 2,00mm
- [Product Specification](#) Minitek® 2,00mm (DPS-12-011)
- [Product Presentation](#) Minitek® 2,00mm/2,50mm Board-In
- [Product Specification](#) Minitek® 2,00mm Board-In (GS-12-1594)
- [Product Specification](#) Minitek® 2,50mm Board-In (GS-12-1595)
- [Product Presentation](#) Minitek® Blind Mate Interface

Thank You

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COMMUNICATIONS SOLUTIONS

 **FCi Basics**