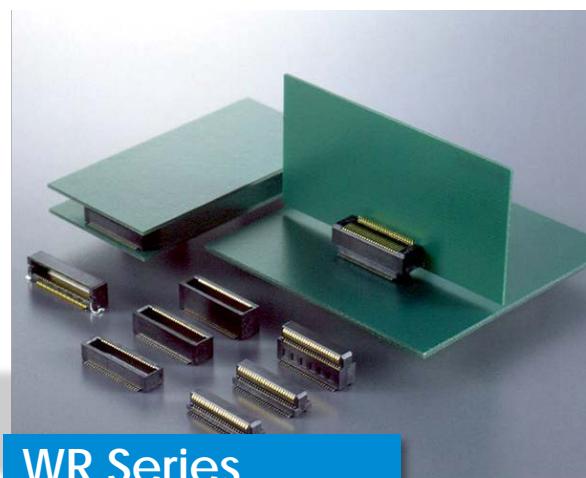


# INDUSTRIAL BOARD-TO-BOARD CONNECTORS

# Industrial Board-to-Board Connectors



JAE's board-level interconnect solutions provide best-in-class reliability and performance through industry leading technology and design to a wide range of pitch, stacking heights, and pin counts. Our elite industrial line of board-to-board solutions feature a rugged design that provides high-current / high-speed connections for even the most challenging applications.



WR Series



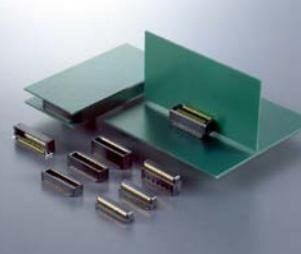
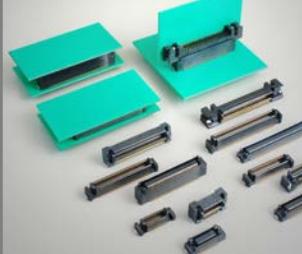
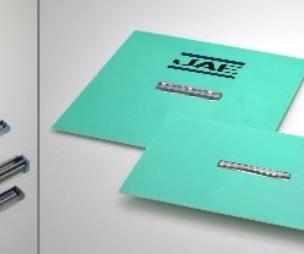
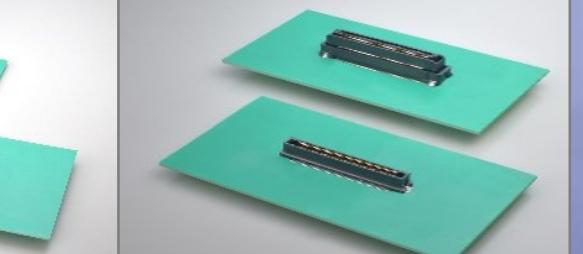
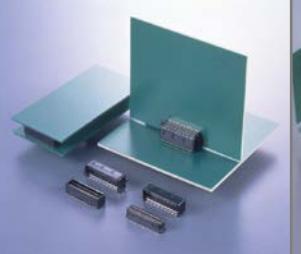
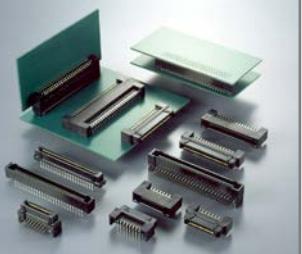
TX24/25 Series



KX14/15 Series

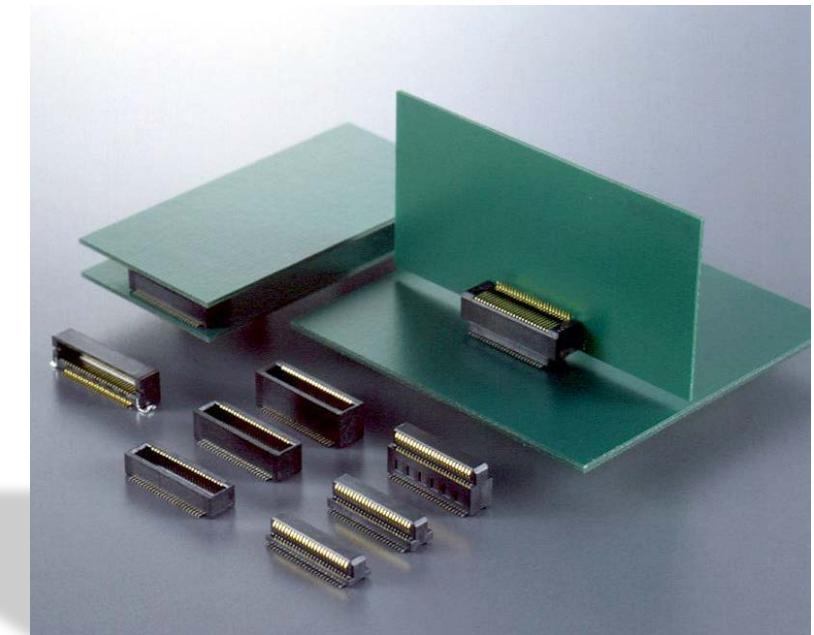


# Industrial Board-to-Board Selection Guide

	SMT Mount					Thru-hole Mount	
Series	<a href="#">WR</a>	<a href="#">KX14/15</a>	<a href="#">AC01</a>	<a href="#">AX01 (Upcoming)</a>	<a href="#">IL-WX</a>	<a href="#">KX24/25</a>	<a href="#">TX24/25</a>
Photo							
Pitch	0.5mm	0.8mm	0.5mm	0.635mm	0.8mm	0.8mm	1.27mm
Stacking Height	4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 8.0, 9.0mm	4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0mm	<b>2.5/3.0mm</b> : 50, 100 pin <b>2.5mm</b> : 60, 80 pin	<b>14mm</b> : 30, 60, 80, 90, 100, 140 pin <b>20/30mm</b> : 30, 40, 60, 80, 100 pin <b>24mm</b> : 30, 60, 80, 100 pin *8, 10, 16, 18, and 22mm in planning	4.5mm	-	12.0-24.0mm (in 2.0mm increments)
Pin Count (Parallel)	20, 30, 40, 50, 60, 70, 80, 100, 120, 160	20, 30, 40, 50, 60, 70, 80	50, 60, 80, 100	30, 40, 60, 80, 90, 100, 120, 140	6, 8, 10, 12, 14, 16, 18, 20, 24, 28, 30, 32, 34, 36	80, 100, 120, 140, 180 (coplanar)	30, 40, 50, 60, 80, 100, 120
Pin Count (Right Angle)	20, 30, 40, 50, 60, 70, 80, 120	20, 30, 40, 50, 60, 70, 80	-	30, (40), 60, 80, 90, 100, (120), 140	6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36	80, 100, 120, 140, 180	30, 40, 50, 60, 80, 100, 120
Board Mount	SMT	SMT	SMT	SMT	SMT	Thru-hole	Thru-hole
Current Rating	0.3A	0.5A	0.3A	0.5A	0.5A	0.5A	1.0A
Voltage Rating	200VAC 300VDC	200VAC 300VDC	200VAC 300VDC	50VAC	200VAC 300VDC	200VAC	250VAC
Durability	500 cycles	500 cycles	50 cycles	100 cycles	30 cycles	500 cycles	500 cycles
Features	9 different vertical stack heights	Mating guide and key to prevent mis-mating	Contact pitch: 0.5mm stacking height : 2.5mm and 3.0mm stacking heights (3.0mm stacking height is for 50 pin. And 100 pin only)	Floating Function: X,Y ±0.5mm movable High Contact Reliability: dual contact points	Contact Pitch: 0.8mm Stacking Height : 4.5mm Available in various pin counts as low as 6 pins	Robust mating guide. Click response when mated	Ribbon type contacts ensure reliable electrical continuity

## Features

- **Broad Product Lineup**
- **Stacking Height:** 4 – 9mm (in 1mm increments)
- **High Contact Reliability:** Ribbon type contact resistant to twisting



WR Series Connectors

## General Specifications

Pin count	20,30,40,50,60,70,80, 100,120, (160) The vertical doesn't have 160 pin
Pitch	0.5mm, Double row
Current rating	0.3A
Voltage rating	AC200V, DC300V
Voltage proof	AC500Vr.m.s (1 min)
Insulation resistance	100MΩ (Min)
Contact resistance	50mΩ max (Horizontal) , 70mΩ max (Vertical)
Operating temperature range	-40°C ~ +85°C

## Materials and Finishes

Description	Materials / Finishes
Insulator	Pin side : Glass-filled LCP (UL94V-0, Black) Socket side: Glass-filled LCP (UL94V-0, Black)
Contact	Copper Alloy : Connecting area: Au plating 0.1µm min over Ni Terminal area: Sn plating over Ni or Au flash over Nickel
Hold-down	Copper alloy / Tin plaiting

## Features

- **Broad Product Lineup**
- **Stacking Height:** 4 – 12mm (in 1mm increments)
- **High Contact Reliability:** Ribbon type contact resistant to twisting
- **Easy Insertion Mating Guide**



KX14/15 Series Connectors

## General Specifications

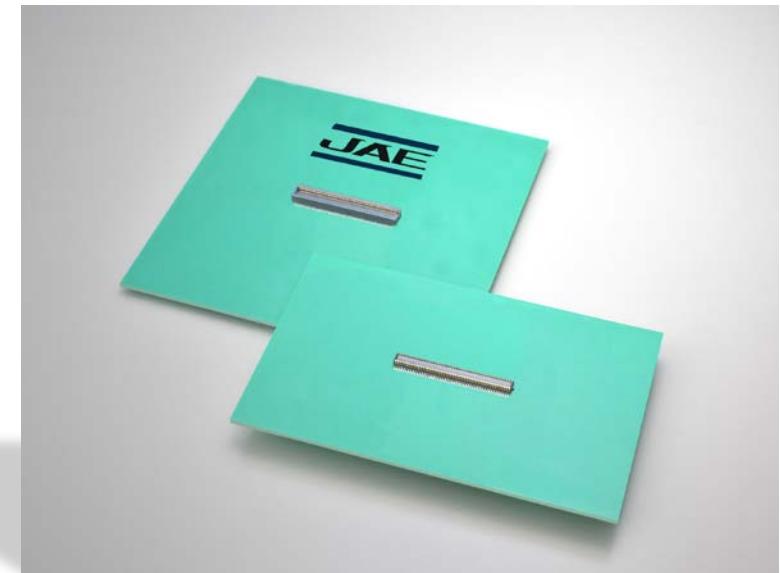
Pin count	20,30,40,50,60,70,80
Pitch	0.8mm, Double row
Current rating	0.5A
Voltage rating	AC200V, DC300V
Voltage proof	AC500Vr.m.s (1 min)
Insulation resistance	100MΩ (min)
Contact resistance	70mΩ (max)
Operating temperature range	-40°C ~ +85°C
PCB thickness	1.6mm

## Materials and Finishes

Description	Materials / Finishes
Insulator	Synthetic resin (UL94V-0, Black)
Contact	Copper Alloy : Connecting area: Au plating 0.1µm min over Ni Terminal area: Au flash plating over Ni
Hold-down	Copper alloy / Sn plaiting over Ni

## Features

- **Stacking Height:** 2.5mm and 3.0mm stacking heights (3.0mm stacking height is for 50 pin and 100 pin only)
- **High Contact Reliability:** Ribbon type contact resistant to twisting



AC01 Series Connectors

## General Specifications

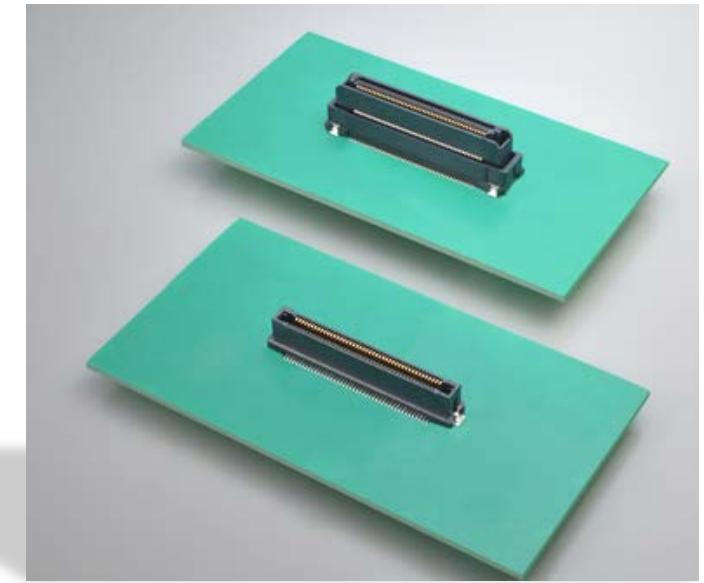
Pin count	50,100 pin (2.5, 3.0mm) 60,80 pin (2.5mm)
Pitch	0.5mm, Double row
Current rating	0.3A
Voltage rating	AC200V, DC300V
Voltage proof	AC500Vr.m.s (1 min)
Insulation resistance	100MΩ (min)
Contact resistance	40mΩ (max)
Operating temperature range	-40°C ~ +85°C

## Materials and Finishes

Description	Material/Finishes
Insulator	LCP (Color: Black)
Contact	Copper Alloy / Au over Ni plating

## Features

- **Broad Product Lineup:** 0.635mm pitch, 30 – 140 pin,
- **Stacking Height:** 8 – 30mm
- **High Contact Reliability:** Dual contact points
- **Low insertion/extraction force:** Rolled contact surface
- **Floating Function:** X, Y  $\pm 0.5$ mm movable
- **PCIe 3.0 Compatible:** High speed transmission (8.0Gbps)



AX01 Series Connectors

## General Specifications

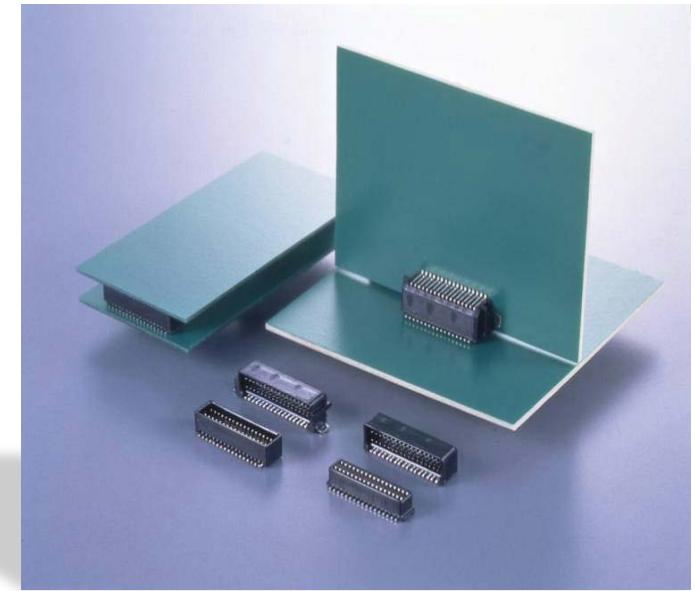
Pin count	30, 40, 60, 80, 90, 100, 120, 140 (in development)
Pitch	0.635mm, Double row
Current rating	0.5A
Voltage rating	50VAC
Voltage proof	AC250Vr.m.s (1 min)
Insulation resistance	100MOhm min
Contact resistance	50m $\Omega$ max
Operating temperature range	-40°C ~ +105°C

## Materials and Finishes

Description	Materials/ Finishes
Insulator	Movable side : LCP Fixed side : LCP
Contact	Copper Alloy : Connecting area: Au plating 0.1 $\mu$ m min over Ni Terminal area: Au flash plating over Ni
Hold-down	Sn plating over Ni
Cap	Stainless steel

## Features

- **Stacking Height:** 4.5mm
- Combinations of socket receptacle (straight) and pin header (straight/right angle) enable vertical and parallel connections
- **High Contact Reliability:** Ribbon type contact resistant to twisting



IL/WX Series Connectors

## General Specifications

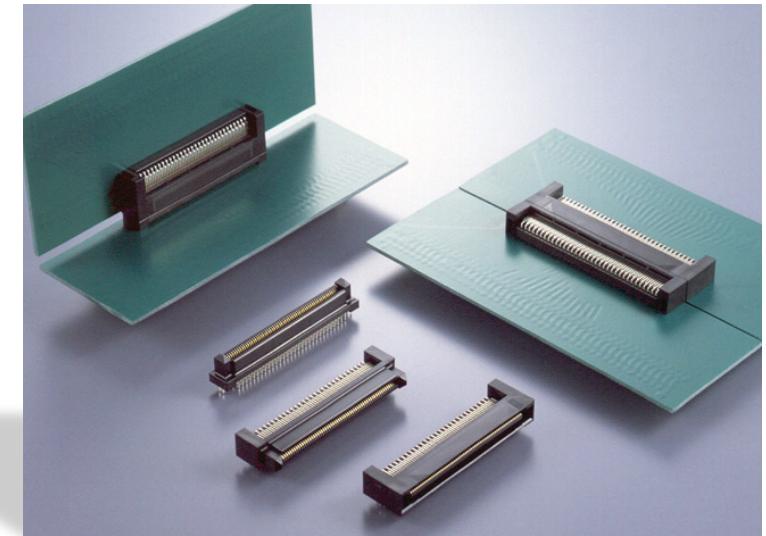
Pin count	6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36
Pitch	0.8mm, Double row
Current rating	0.5A
Voltage rating	AC200V, DC300V
Voltage proof	AC500Vr.m.s (1 min)
Insulation resistance	100MΩ (min)
Contact resistance	20mΩ (max)
Operating temperature range	-40°C ~ +85°C

## Materials and Finishes

Description	Materials / Finishes
Insulator	Glass-filled PPS (UL94V-0, Black)
Contact	Pin Contact: Copper Alloy/Sn plating Socket side: Phosphor Bronze/Sn plaiting
Hold-down	Phosphor Bronze/Sn plaiting

## Features

- **Thru-hole Type Board Connection** available in vertical and horizontal directions
- **Robust Type with Mating Guide**, suitable for rack and panel mounting, and high contact reliability with long stroke
- **Ribbon Type Contacts** withstanding mating/ unmating twisting forces



KX24/25 Series Connectors

## General Specifications

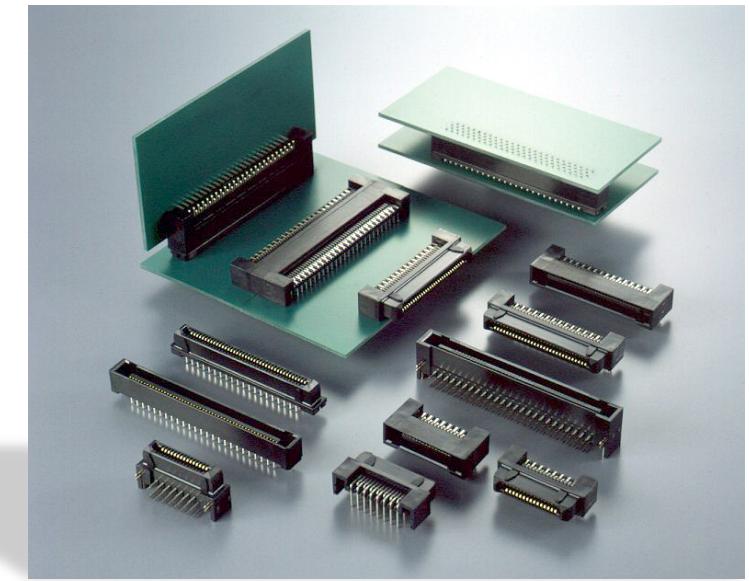
Pin count	80,100,120,140,180
Pitch	0.8mm, Double row
Current rating	0.5A
Voltage rating	200VAC
Voltage proof	AC500Vr.m.s (1 min)
Insulation resistance	100MΩ (min)
Contact resistance	70mΩ (max)
Operating temperature range	-40°C ~ +80°C
PCB Thickness	1.6mm

## Materials and Finishes

Description	Materials/ Finishes
Insulator	Glass-filled PBT
Contact	Copper Alloy : Connecting area: Au plating 0.1µm min over Ni Terminal area: Reflow Sn plating over Ni
Hook pin	Copper Alloy/Reflow Sn plating
Locator	Glass-filled PBT

## Features

- **Parallel Board-to-board Stacking Heights** range from 12 to 24mm in 2mm intervals
- **Ribbon Type Contacts** withstanding mating/ unmating twisting forces
- **Polarizing Key** to prevent reverse insertion
- **Tactile Click Feedback** when mated properly



TX24/25 Series Connectors

## General Specifications

Pin count	30,40,50,60,80,100,120
Pitch	1.27mm, Double row
Current rating	1A
Voltage rating	250VAC
Voltage proof	AC500Vr.m.s (1 min)
Insulation resistance	100MΩ (max)
Contact resistance	40mΩ (min)
Operating temperature range	-40°C ~ +80°C
PCB Thickness	1.6mm

## Materials and Finishes

Description	Materials / Finishes
Insulator	Glass-filled PBT (UL94V-0, Black)
Contact	Copper Alloy/ Copper Alloy : Connecting area: Au plating 0.1µm min over Ni Terminal area: Sn plating over Ni
Hook pin	Copper Alloy/Sn plating