ERNI

PRODUCT SELECTOR GUIDE







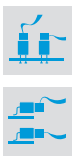


MOUSER ELECTRONICS

ED. 4 | 07.2020
Catalog E 074691

Product Selector Guide

WIRE-TO-BOARD & I/O INTERCONNECT SOLUTIONS

	 MicroCon	 MicroBridge	 MiniBridge | MiniBridge Koshiri	 SMC	 iBridge Ultra	 MaxiBridge	 IDC Terminals	 Power Taps	 PowerElements	 DIN 41612 / IEC 60603-2	 Modular Jacks	 M8 / M12 Circular Connectors
Configurations												
Pin count	16, 26, 40, 50	2, 4, 5, 6, 8, 9, 10, 12, 14, 16	2, 3, 4, 6, 8, 10, 12	12 - 80	2, 3, 4, 5, 6, 8, 10, 12	2, 3, 4, 5, 6, 8, 10, 20	1	1	1	30, 48, 96, 160	4, 6, 8, 10	3 - 17
Number of rows	2	1	1	2	1	1, 2	-	1	1	3, 5	1	-
Pitch (mm)	0.8	1.27	1.27	1.27	2.0	2.54	-	-	-	2.54	-	-
Current rating (A) per contact at 20°C	2.3	up to 9.0 (2 pins)	8.7	1.7	**8**	12	17.5	40	up to 360	2	1.5	1.5 - 12
Data rate (Gbit/s)	3	-	-	3	-	-	-	-	-	<1	1	0.1 - 10
PCB termination	SMT	SMT	SMT	SMT, Pressfit	Solder, SMT	SMT	SMT	Solder, Pressfit	SMT, Pressfit	Pressfit, Solder, THR	Solder, SMT	SMT, THR, SMT/THR
Cable termination	IDC	IDC	IDC	IDC	Crimp	Crimp	IDC	Screw, Faston	Screw, Nut	Crimp, Faston	-	-
Mating cycles	500	100	500	500	**20**	500	-	-	-	400	1000	100
Wire cross section *	AWG 34	0.35 mm²	AWG 22, 24, 26	AWG 30	AWG 22, 24	AWG 18, 20, 22, 24, 26	AWG 22, 24, 26	-	-	AWG 20 - 26, 24 - 28	-	AWG 22 - 26
Latching	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	Optional (housing)	Yes	thread
PCB pegs	Yes	Yes	Yes	Optional	Yes	Yes	No	No	No	No	Yes	Yes

* AWG 18 –> ≈ 0.82 mm², AWG 20 –> ≈ 0.56 mm², AWG 22 –> ≈ 0.35 mm², AWG 24 –> ≈ 0.22 mm², AWG 26 –> ≈ 0.14 mm², AWG 30 –> ≈ 0.06 mm²

Product Selector Guide

BOARD-TO-BOARD INTERCONNECT SOLUTIONS

	 MicroStac	 MicroCon	 MicroSpeed Signal	 MicroSpeed Power Module	 MiniBridge	 SMC	 ERmet 2mm Hard Metric	 ERmet ZD High-Speed	 DIN 41612 / IEC 60603-2 Signal	 DIN 41612 / IEC 60603-2 Power
Configurations										
Pin count	6, 9, 10, 12, 14, 50, 54	12 - 100	50, 91, 133	5	2, 3, 4, 6	12 - 80	35 - 200	20, 30, 40, 45, 48, 60 pairs	20 - 160	11 - 48
Number of rows	1, 2	2	2, 3, 7	1	1	2	5, 8	2, 3, 4	2, 3, 4, 5	1, 2, 3
Pitch (mm)	0.8	0.8	1.0	2.0	1.27	1.27	2.0	2.5 x 4.5 (pair-to-pair)	2.54	5.08, 7.62
Board-to-board height	3, 5	5 - 10	5 - 20	5 - 20	-	8 - 20, 20 - 40 with Adapter	15, 18.4, 25	15, 18	16.8	-
Current rating (A) per contact at 20°C	2.7	2.3	1	up to 18	up to 4.8	up to 1.7	1.5	6	2	up to 15
Data rate (Gbit/s)	3	3	25 +	-	-	3	2	10 - 25	< 1	-
Termination	SMT	SMT	SMT, SMT/ THR	SMT, SMT/ THR	SMT	SMT, Pressfit	Pressfit	Pressfit	Pressfit, Solder, THR	Pressfit, Solder
Shielding	No	No	Yes	Yes	No	No	Optional	Yes	No	No
Mating cycles	10	500	500	500	500	500	250	250	400, 500	400, 500
PCB pegs	Yes	Yes	Yes	Yes	Yes	Yes	Optional	No	No	No

Product Selector Guide

PRODUCT FAMILIES AND VARIANTS

MicroStac







Unique hermaphroditic design ensures two points of contact in a stamped interface. The high-density package supports small outline requirements without compromising reliability or integrity of the interface over the life of the product.

MicroCon







Designed for demanding industrial applications, the MicroCon's Blind-Mate pre-centering with increased catch range ensures secure plugging, while the reinforced outer walls of the connector allow a high degree of robustness.

MicroSpeed | MicroSpeed Power







The MicroSpeed connector system is perfect for high data transmission rates. Thanks to outstanding signal integrity, data rates up to 25+ Gbit/s can be realized. The space-saving, interference-proof connectors are maximally electromagnetically compatible and safe.

MicroBridge



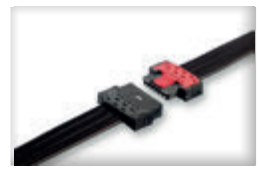
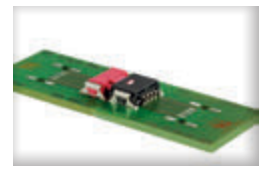




MicroBridge connectors provide high retention and optional electrical CPA (connector position assurance) for secure and correct connections. Thanks to their high temperature resistance, they can be used in high-heat applications such as LEDs for front headlights.

MiniBridge | MiniBridge Koshiri



With a rugged design and low profile, this single-row, versatile product line continues to support commercial and industrial applications where high signal/power and limited space are required. The Koshiri variants of the connectors offer especially high mating reliability.

MaxiBridge







Our Maxibridge connector system is designed for high reliability and high current in a compact design. Additionally, five mechanical and color-coded choices are available with our rugged double-sided latching.

SMC

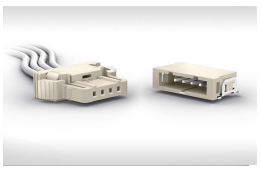






The versatility and high demand for the SMC has resulted in a wide variety of pin counts and configurations over the life of the product family, supporting almost any BtB or WtB application requirement. ERNI also offers full turnkey cable solutions.

iBridge Ultra



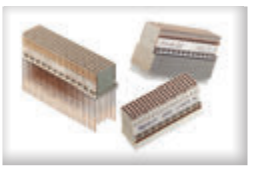




Wherever reliable WtB connections are required, the iBridge Ultra offers suitable solutions. The connectors have a high current carrying capacity and integrated retaining brackets for a secure connection and come in SMT, solder & as cable assemblies.

ERmet (2mm HM | Power | ZD High Speed)

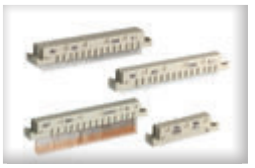






Industry standard connector series that accommodates versatile and cost-effective board-to-board requirements for high density and high-performance applications.

DIN 41612 / IEC 60603-2




This proven connector system supports multiple industry segments, focusing on applications demanding robustness and reliability over the life of product. Our numerous versions are ideal for a wide range of applications and systems requirements.

PowerElements | PowerTaps



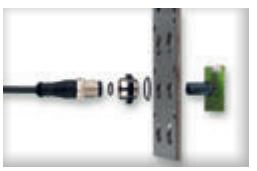
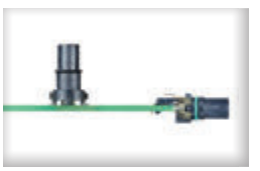
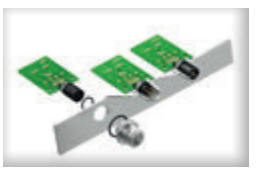




High power, WtB connectors with press-fit terminations. Gas-tight interface to the PCB without the need of high temperature soldering and negative effects on the PCB substrate. Various sizes and configurations available; custom products available upon request.

M8/ M12 Circular



Implement quick and simple connector solutions with this family of modular circular connectors that support multiple industry segments. New offerings include shielded housings and high pin count solutions for high performance/high density I/O requirements.

Others



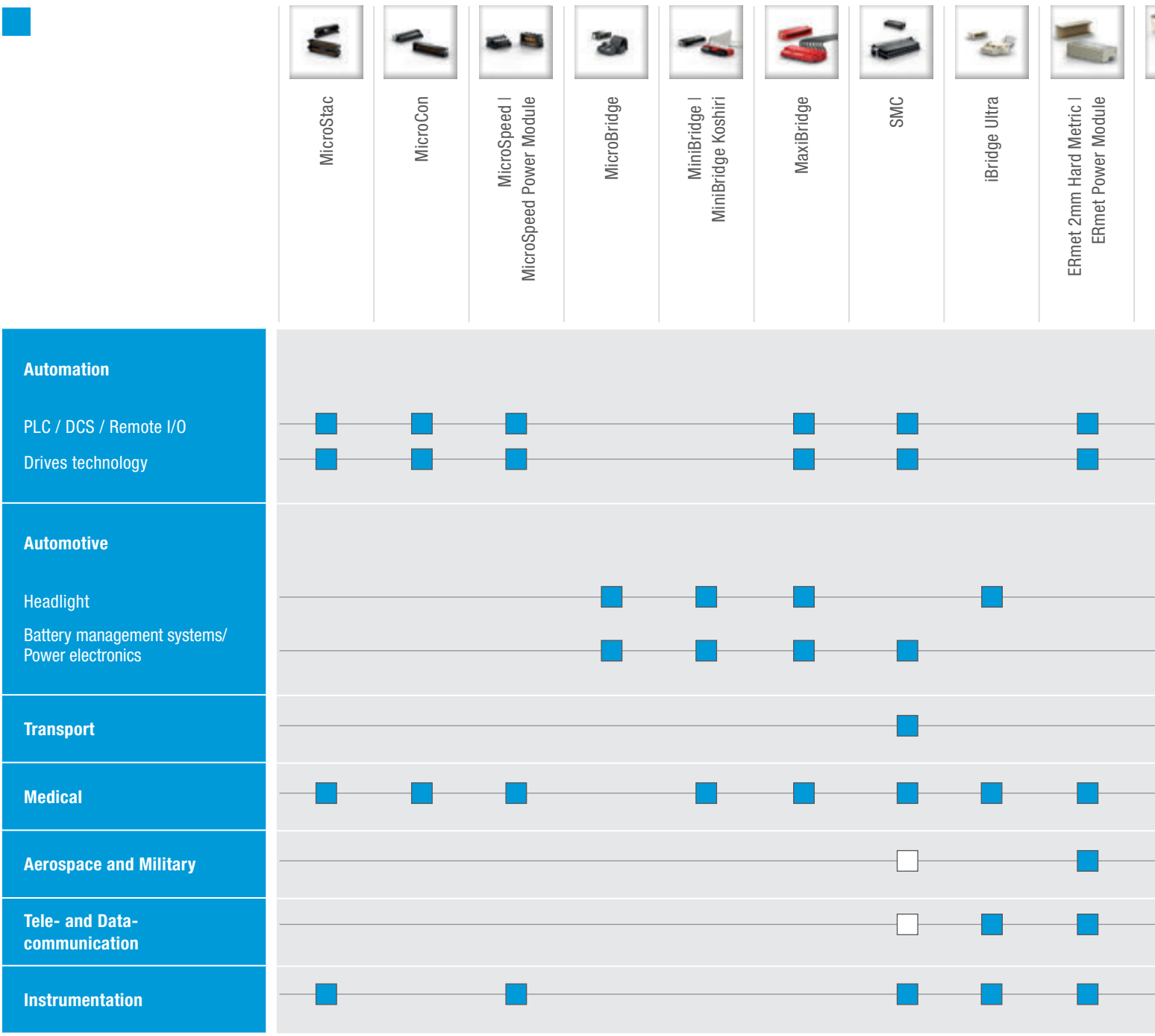




ERNI also offers a variety of other products and solutions like Modular Jacks, ERbic, Housings, IDC-Terminals and Pre-Alignment Modules.

Product Selector Guide

PRODUCT PORTFOLIO AND APPLICATION AREAS



very suitable

very suitable (for special applications)

well suited

Product Selector Guide

ABOUT ERNI

With global headquarters in Switzerland and locations in over 40 countries, privately held ERNI Electronics Inc. is a leading global manufacturer of high-quality electronic connectors and cable assemblies for a variety of industries including automotive, industrial, medical, communications, and more. ERNI is a trusted partner to organizations large and small and our connectors are well known for having miniaturized and rugged design, the ability to stack multiple connectors without signal loss, plus built in ease of alignment and latching.

Regionally, ERNI Americas' headquarters are in Midlothian, VA, a suburb of Richmond, from which the group provides customer support, administration and fulfillment services for local and global customers. ERNI has sales offices throughout the country and sells products directly and through a network of approved distributors. Should an application need a customized solution, ERNI has an in-house staff of design engineers both locally and across the globe.

What sets us apart – ERNI Electronics has been making high quality, robust, miniaturized connector solutions for more than 70 years. We take the time to understand our customers and their needs, enabling us to identify the right solution for each application. At ERNI, we know that when we work together, we do achieve more.

CONFIGURATION KEY

Board-to-Board (BtB)


PCB Mezzanine


PCB Angled


PCB Orthogonal

Wire-to-Wire (WtW)


Wire-to-Wire

Wire-to-Board (WtB)


Wire Angled-to-Board Angled


Wire Vertical-to-Board Angled


Wire Angled-to-Board Vertical


Wire Vertical-to-Board Vertical

Panel


Panel

Follow us on Social Media
LinkedIn -> @ERNI-Electronics-Americas
Twitter -> @ERNIAmericas
Google -> @ERNIAmericas
Sign up for our newsletter -> Click here
Learn more about our products -> www.erni.com

© ERNI International AG 2020 • Printed in USA • A policy of continuous improvement is followed and the right to alter any published data without notice is reserved. ERNI®, ERNI WoR&D®, CONNECTED BY COMPETENCE®, MicroBridge®, MicroCon®, MicroStac®, MicroSpeed®, MiniBridge®, MaxiBridge®, iBridge Ultra®, ERmet®, ERmet ZD®, ERmet ZDplus®, ERmet ZDpro®, ERbic®, ZipCon® and INTERact® are trademarks (registered or applied for in various countries) of ERNI Production GmbH & Co. KG.