

INTERCONNECT
PRODUCTS






Series	Temp. (oC)	Rated Load	Contact Resist	Insulation Resist	Withstanding Volt	Actuating Force	Durability
HDMI	-30°C – +85°C	AC 40 V, 0.5 A	30 mΩ Max	100 MΩ Min	AC500V (50 Hz)/min	10N – 45N	10,000 cycles/min

Connector Series	Pin	Spec	Standards	Features	Description
HDMI - Type A	19 pin	1.0 spec	CEA-861-B	Contact Types	Male, Female
HDMI - Type B	29 pin	1.0 spec	CEA-861-B	Styles	Vertical, R/A
Mini HDMI - Type C	19 pin	1.3 spec	CEA-861-D	Options	w/ Flange, Double Shell
Micro HDMI - Type D	19 pin	1.4 spec	CEA-861-D	Footprint	SMT
Micro HDMI - Type E	19 pin	1.4 spec	CEA-861-D	Interface	Audio, Video

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Series	Temp. (oC)	Rated Load	Contact Resist	Insulation Resist	Withstanding Volt	Actuating Force	Durability
IEEE 1394 Connector	-30°C – +85°C	AC 30 V, 1.5 A	30 mΩ Max	100 MΩ Min	AC500V (50 Hz)/Min	9.8N – 39.2 N	1,500 cycles/min
E-SATA Connector	-30°C – +85°C	AC 30 V, 1.8 A	30 mΩ Max	1,000 MΩ Min	AC500V (50 Hz)/min	10N – 45N	500 cycles/min
SATA Connector	-30°C – +85°C	AC 30 V, 1.5 A	30 mΩ Max	1,000 MΩ Min	AC500V (50 Hz)/min	10N – 45N	500 cycles/min
Battery Connector	-30°C – +85°C	AC 12 V, 2.0 A	50 mΩ Max	500 MΩ Min	AC500V (50 Hz)/min	40gf / Min*	500 cycles/min
SD Card	-25°C – +85°C	AC 30 V, 0.5 A	100 mΩ Max	1,000 MΩ Min	AC500V (50 Hz)/min	2.94N – 40N	10,000 cycles/min
SIM Card	-40°C – +85°C	DC 5 V, 0.5 A	100 mΩ Max	100 MΩ Min	AC500V (50 Hz)/min	1N – 5N	500 cycles/min
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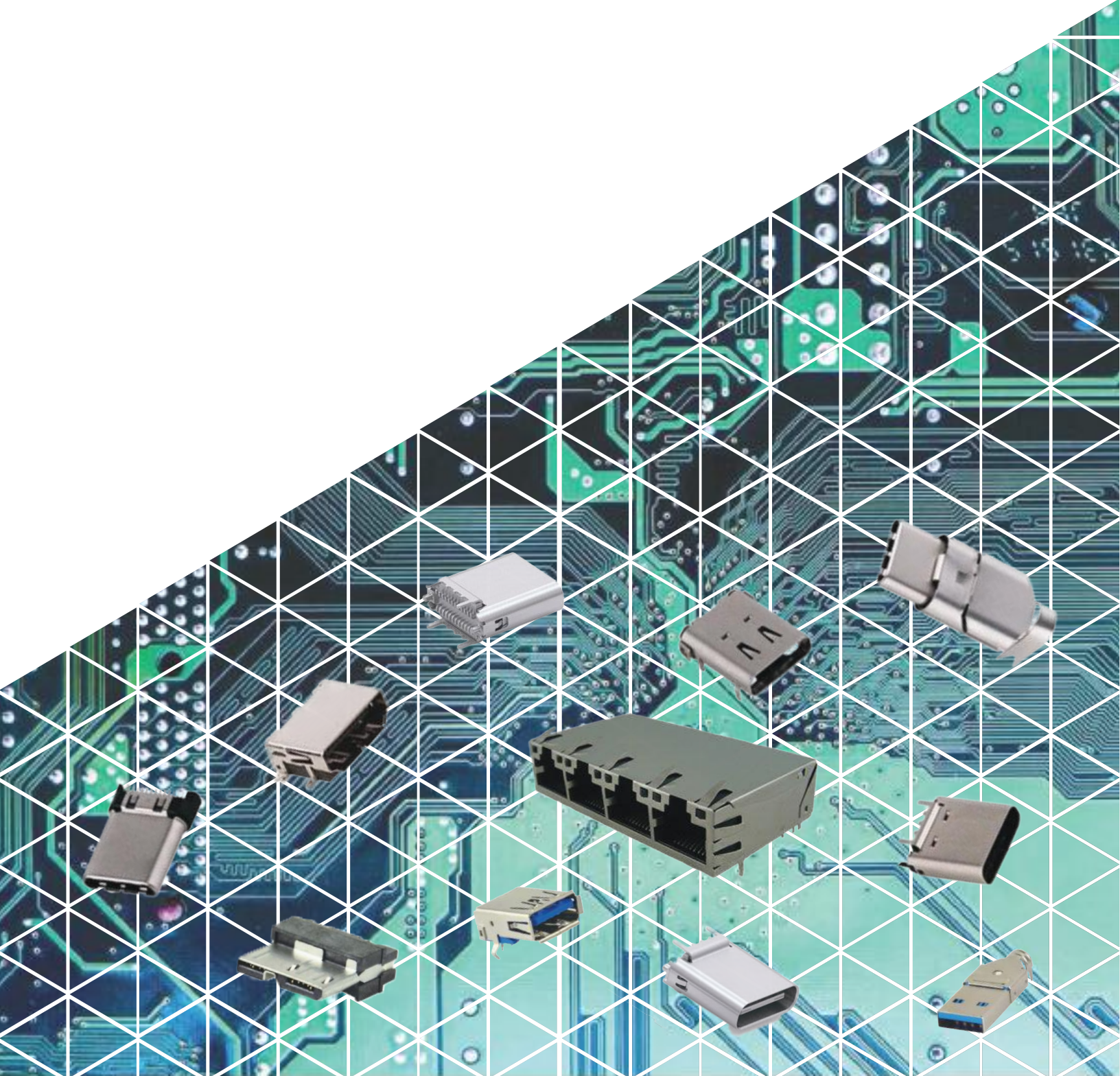
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PalPilot Connector Solutions

Offering engineering & manufacturing solutions for standard and custom connectors, cable assembly, and wire harness products. Our fully integrated in-house design, tooling, and manufacturing utilizes state of the art automated processes. Providing world class quality, superior pricing, and unique flexibility to the interconnect market.

Custom Connector Design

- Fully Integrated Tooling Capabilities
- Custom DFM & Design Tooling
- Engineering Support (2D, 3D files)
- Major Reliability Testing
- EMI Transmission Testing
- Concept to Reality, Capability Support
- Expert Design Team & QA Support
- R&D, Molding, Stamping, Automation

Industries and Applications

- Networking
 - Telecom
 - Medical
 - Consumer
 - Industrial
 - Automotive
 - Green Energy
- VOIP Phones, IP Switch
 - Hubs, Routers, Docking Stations
 - Analyzers, Monitors, Instrumentation
 - Phones, Tablets, TV’s, Set-Top-Box
 - Automation, Robotics, Test & Measure
 - In-Car Power, Data Delivery, Charging
 - Solar, Energy Converters & Inverters

All PalPilot products manufactured to meet industry standards

USB Connector Solutions

Series	Temp. (oC)	Rated Load	Contact Resist	Insulation Resist	Withstanding Volt	Actuating Force	Durability
USB 2.0	-30°C – +85°C	AC 30 V, 1.5 A	20 mΩ Max	100 MΩ Min	AC500V (50 Hz)/Min	10 – 35N	1,500 cycles/min
Micro USB 2.0	-30°C – +85°C	AC 30 V, 1.5 A	30 mΩ Max	1,000 MΩ Min	AC100V (50 Hz)/min	8 – 35N	10,000 cycles/min
Mini USB 2.0	-30°C – +85°C	AC 30 V, 1.0 A	50 mΩ Max	100 MΩ Min	AC100V (50 Hz)/min	35N Max	5,000 cycles/min
USB 3.0	-30°C – +85°C	AC 30 V, 1.8 A	30 mΩ Max	100 MΩ Min	AC100V (50 Hz)/min	10 – 35N	5,000 cycles/min
Micro USB 3.0	-30°C – +85°C	AC 30 V, 1.8 A	30 mΩ Max	100 MΩ Min	AC100V (50 Hz)/min	10 – 35N	10,000 cycles/min
USB 3.1 Type C	-40°C – +85°C	AC 30 V, 5.0 A	40 mΩ Max	100 MΩ Min	AC100V (50 Hz)/min	5 – 20N / 8 – 20N*	10,000 cycles/min
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*insertion/extraction

Types of Configurations

Plug and receptacle options
Multiple speed options (2.0, 3.0, 3.1)
Mechanical Customization available

- Top Mount
 - Mid Mount
 - Vertical
- Straight Formed Shell
 - Deep Drawn Shell
 - Hybrid | SMT | THT

Visit www.palpilot.com for full datasheet of complete series



USB Type C Signal Summary

Signal Group	Signal	Description
USB 3.1	SSTXp1 SSTXn1 SSRXp1 SSRXn1	SuperSpeed USB Serial Data Interface: one transmit different pair, one receive different pair
	SSTXp2 SSTXn2 SSRXp2 SSRXn2	Two pin set to enable plug flipping
USB 2.0	Dp1 Dn1	USB 2.0 Serial Data Interface
	Dp2 Dn2	Two pin sets to enable plug flipping
Configuration	CC1 CC2 (receptacle) CC (plug)	CC channel in the plug used for connection detection, interface configuration, and VCONN
Auxiliary Signals	SBU1 SBU2	Sideband Use
Power	Vbus VCONN (plug) GND	USB Cable Bus Power, USB Plug Power, USB Cable Return Path
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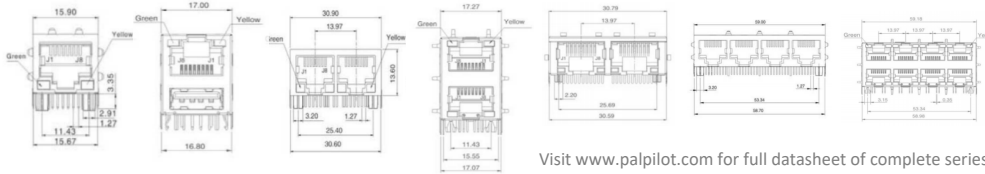
RJ 45 Connector Solutions

Electrical Performance			
Rated Current:	1.5AMPS	Rated Voltage:	125VAC
Contact Resistance:	Before insertion and extraction force		≤ 40mΩ
	After insertion and extraction force		≤ 100mΩ
Insulation Resistance:	Hi - Pot - Test		500m≤ 40MΩ / 500VDC
Testing Conditions:	AC 1,000V / 0.5mA 50Hz & 60Hz per minute		
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Types of Configurations

One-by, Two-by, Mix USB Series in
Tab Down, Tab Up, and Vertical Configurations
Mechanical Customization available



Visit www.palpilot.com for full datasheet of complete series

Mechanical Performance			Material Performance	
Mated Force With Plugs:	Plug Gold Wire Number	Mating Force	Synthetic Plastic Case & Plastic Cord:	A. PA46 + 30% GFUL94V-0
	2C	1.7kg		B. PA66 + 30% GF HB
	4C	2.1kg		C. PBT 30% GF UL94V-0
	6C	2.6kg		D. LCP 30%GF UL94V-0
	8C	3.0kg	Cover:	0.25 thick copper alloy plated with tin and nickel
	10C	3.3kg	Plating Thickness:	1.5μ” 1.8μ” 3μ” 6μ” 15μ” 30μ” 50μ”
Locking Force:	Normal conditions of the PC plug should withstand the pull of 50N per minute		Contact Gold Pin:	A. Round Pin: φ 0.46mm, phosphor copper is plated with nickel. Then plated with gold, tin, and silver
Durability:	Normal conditions of usage should withstand 750 Cycles per minute			B. High Pin: 0.45 x 0.35mm, phosphor copper is plated with nickel. Then plated with gold, tin, and silver
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