



PRODUCT CATALOGUE

DEFENCE

AEROSPACE

AVIONICS

RAILWAY

MEDICAL

INDUSTRIAL

SACA

— electronics —

2020

SACA UK
Liverpool

2019

SACA
Electronics
Ankara

2018

SACA Europe
Eindhoven

2002

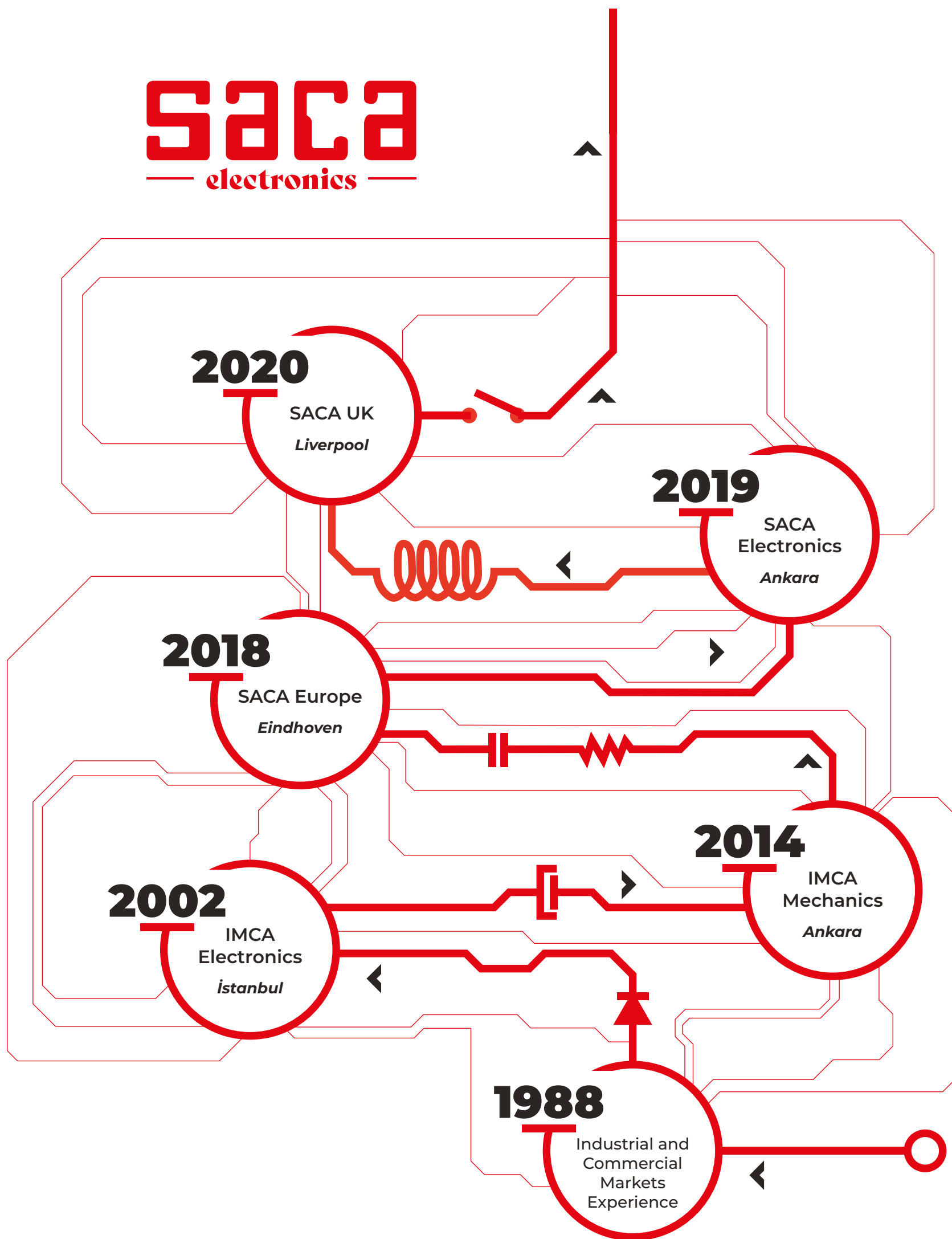
IMCA
Electronics
İstanbul

2014

IMCA
Mechanics
Ankara

1988

Industrial and
Commercial
Markets
Experience



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OMNETICS IS A WORLD-CLASS MINIATURE CONNECTOR DESIGN AND MANUFACTURING COMPANY WITH OVER 30 YEARS OF EXPERIENCE, FOCUSED ON MICRO-MINIATURE AND NANO-MINIATURE HIGHLY RELIABLE ELECTRONIC CONNECTORS AND INTERCONNECTION SYSTEMS. OUR MINIATURE CONNECTORS ARE DESIGNED AND ASSEMBLED IN A SINGLE LOCATION AT OUR PLANT IN MINNEAPOLIS, MINNESOTA.

● **MIL Spec Requirement vs. Omnetics**

| TEST | MICRO - D MIL-DTL-83513 (1.27 mm pitch) | NANO - D MIL-DTL-32139 (.64 mm pitch) |
|--------------------|--|--|
| Content Resistance | 26 mΩ | 71 mΩ |
| | 9 mΩ | 13 mΩ |
| Shock | 50 G | 100 G |
| | 500 G | 500 G |
| Durability | 500 Mating Cycles | 200 Mating Cycles |
| | 2000 Mating Cycles | 2000 Mating Cycles |
| Temperature | -55°C to +125°C | -55°C to +125°C |
| | -270°C up to 260°C | -270°C up to 200°C |

● **Nano-D Connectors/MIL-DTL-32139**

SINGLE ROW NANO-D

| | | | | | | | |
|---------------------|-------------------|---------------------|---------------------------|-------------------------|----------------|--------------|-------------------|
| | | | | | | | |
| Horizontal SMT (AA) | Vertical SMT (VV) | Straight Tails (DD) | Thru-Hole Horizontal (H2) | Thru-Hole Vertical (V2) | Pre-Wired (W2) | Jumpers (JU) | MIL-DTL-32139 QPL |

LATCHING NANO-D

| | | | |
|--------------------|-----------------|-------------------------|----------------|
| | | | |
| Surface Mount (AA) | Flex Mount (FF) | Straight Thru-Hole (DD) | Pre-Wired (WD) |

DUAL ROW NANO-D



Horizontal
SMT (AA)

Vertical
SMT (VV)

Straight Tails
(DD)

Thru-Hole
Horizontal
(H4)

Thru-Hole
Vertical (V4)

Flex Mount
(FF)

Pre Wired
(WD)

Jumpers
(JU)

PANEL TYPE NANO-D



Horizontal SMT (AA)

Straight Tails (DD)

Flex Mount (FF)

Pre-Wired (WD)

• Micro-D Connectors/MIL-DTL-83513

STANDARD MICRO-D



Discrete Wired (WD)

Soldercup (SS)

Power Micro-D

Horizontal Surface
Mount (H0)

Vertical Surface
Mount (V0)



Card Edge Surface
Mount (C0)



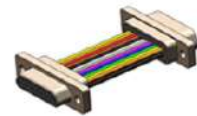
Flex Circuit
Mount (FF)



Straight Thru-Hole
Mount (S2)



Right Angle
Thru-Hole (R2)



Jumpers (WXY)

LATCHING MICRO-D



Discrete Wired (WD)

Horizontal Surface
Mount (H0)

Vertical Surface
Mount (V0)

Card Edge Surface
Mount (C0)

Flex Circuit
Mount (FF)

SINGLE ROW MICRO-D



Soldercup (SS)

Discrete Wired
(WD)

Soldercup (SS)

Wired (WD)

Vertical Sur-
face Mount
(V0)

Straight Thru-
Hole Mount
(S2)

Right Angle
Thru-Hole
Mount (R2)

LOW PROFILE MICRO-D



Discrete Wired (WD)

Right Angle Thru-Hole
(H1)

Right Angle Thru-Hole
(R2)

Solder Cup (SS)

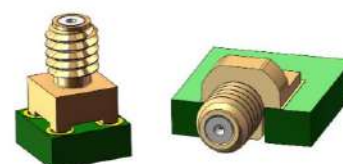
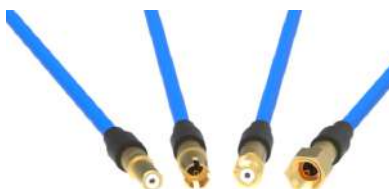
Straight
Thru-Hole (S2)

POWER AND SIGNAL MICRO HYBRIDS: 10A, 5A, 3A



POWER AND SIGNAL MICRO HYBRIDS: 10A, 5A, 3A

Omnetics Nano Coax contacts are available either in a Hybrid Micro-D or as a standalone contact.. The standalone version provides optimal performance in one of the lowest form factors on the market. The Nano Coax contacts are designed to be terminated to a low-loss 29 AWG (.047") 50 coax cable. Cable-Cable: 20GHz / Edge Launch: 20GHz / Thru Hole: 10GHz



MICRO 360® CIRCULAR CONNECTORS

Omnetics' Micro Circular Connector Series utilizes Omnetics' rugged and reliable Flex-Pin contact system, is spaced on 50 mil (1.27mm) centerlines, features a mated length of less than 12.4 mm, and is specified to MIL-DTL-83513.



Micro Plastic Circulares

Micro Threaded Metal Shell Circulares

Micro Twist Lock Metal Shell Circulares

Micro Break Away Circulares

Micro ACME Triple Thread Ratcheting Circulares

NANO 360® CIRCULAR CONNECTORS

Omnetics' Nano Circular Connector Series utilizes Omnetics' rugged and reliable Flex-Pin contact system, is spaced on 25 mil (.64mm) centerlines, has a 9.0 mm mated length, and is specified to MIL-DTL-32139. These ultra miniature circular connectors are ideal for industries that require small and durable performance.



Nano Plastic Circulares

Nano Circular Threaded Metal Shell

Nano Circulars Twist Lock Metal Shell

Nano Break Away Circulares

IP68 MICRO CIRCULARS



Full Keyed Breakaway (M)



Full Keyed Breakaway (F)



Ratcheting - RMCP

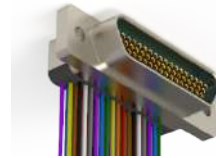


Ratcheting - RMCS

COBRA: BODY-WORN CONNECTOR



90° PREWIRED MICRO-D WITHOUT BACKSHELL



IP68 NANO CIRCULARS



Full Keyed
Breakaway (F)



Full Keyed
Breakaway (M)



Nano 360° USB 3.0 (USB 3.1 Gen 1)
Connector

MICRO STRIP CONNECTORS



Single row: pin count changes up to 48
Dual row: pin count changes up to 97 available with latch

NANO STRIP CONNECTORS



2-60 positions for single row
2-48 for dual row

POLARIZED NANO CONNECTOR (PZN)

This configuration effectively polarizes the connector without the additional space required for guide pins. Termination options include: Pre-Wiring, Straight tail, Horizontal SMT, and Vertical SMT. Up to 24 positions.



Capabilities

OVERMOLDING



EMI SHIELDING



CUSTOM HARNESSING



CUSTOM METAL SHELL





ODU, FOUNDED IN 1942, IS ONE OF THE LEADING INTERNATIONAL SUPPLIERS OF CONNECTION SYSTEMS. OUR COMPANY EMPLOYS 1,650 PEOPLE AROUND THE WORLD. THE GROUP OF COMPANIES HAS ITS HEADQUARTERS IN MÜHLDORF AM INN, GERMANY. ODU ALSO HAS PRODUCTION SITES IN ROMANIA, USA AND CHINA.

● **ODU AMC®**



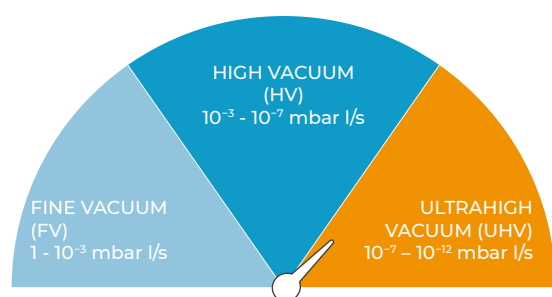
| | | | | | |
|--|---------------------------|---------------------------|---------------------------|---------------------------|---------------------|
| Mating cycles | Up To 5,000 | Up To 5,000 | Up To 5,000 | Up To 5,000 | Up To 2,000 |
| Locking principle | Break-Away | Push-Pull | Break-Away | Break-Away | Screw Locking |
| Coding options (mechanical) | Pin/Groove | Pin/Groove | Pin/Groove | Pin/Groove | Pin/Groove |
| Coding options (optical) | Dot Marking, Color Coding | Dot Marking, Color Coding | Dot Marking, Color Coding | Dot Marking, Color Coding | Color Coding |
| Max. number of contacts | 37 | 55 | 19 | 27 | 26 |
| Transmission options | Signal, Data, Power | Signal, Data, Power | Signal | Signal, Data | Signal, Data, Power |
| Available termination technologies | Solder, PCB | Solder, PCB | Solder, PCB | Solder, PCB | Solder, PCB |
| Max. IP protection in mated condition | IP6K9K | IP6K9K | IP6K8 and IP6K9K | IP6K8 | IP6K8 |

● ODU MINI-SNAP®



| | ODU MINI-SNAP® PIN AND GROOVE CODING | ODU MINI-SNAP® HALF-SHELL CODING | ODU MINI-SNAP® CODING USING SPLIT INSULATORS |
|--|--|-------------------------------------|--|
| Mating cycles | > 5,000 | > 5,000 | > 5,000 |
| Locking principle | Push-Pull | Push-Pull | Push-Pull |
| Coding options (mechanical) | Pin/Groove | Half-Shell | Insulator |
| Coding options (optical) | Dot Marking | Dot Marking | Dot Marking |
| Max. number of Contacts | 40/30 | 27 | 10 |
| Transmission options | Signal, Data, Power | Signal, Data, Power | Signal, Data |
| Available termination technologies | Solder, Crimp, PCB | Solder, Crimp, PCB | Solder, PCB |
| Max. IP protection in unmated condition | IP68 | IP68 | IP68 |
| Max. IP protection in mated condition | IP50/IP68 | IP68 | IP68 |

● Hermetic Sealing



● ODU MINI-SNAP Hermetic Sealing Receptacles

| | G80L0Q- PU5RF00-00V0 | G80L0Q- PU5QF00-00V0 | G81L0Q- PD8RC00-00V0 | G81L0Q- PD8QC00-00V0 | G82L0Q- PI6RC00-00V0 | G82L0Q- PI6QC00-00V0 |
|---|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| ø Panel cut-out | 9.1 mm + 0.1 | 9.1 mm + 0.1 | 12.1 mm + 0.1 | 12.1 mm + 0.1 | 15.1 mm + 0.1 | 15.1 mm + 0.1 |
| Number of contacts | 5 | 5 | 8 | 8 | 16 | 16 |
| | | | | | | |
| Contact style | Pin | Socket | Pin | Socket | Pin | Socket |
| He leakage rate acc. to DIN EN 60512-14-2:2006 | Tested at < 10⁻⁹ mbar l/s | | | | | |
| Insulator material | Glass + PEEK | | | | | |
| Data transfer protocol | USB® 2.0¹ | | Ethernet (CAT 5) | | HDMI®¹ | |
| Data transfer rate | 480 Mbit/s | | 1 Gbit/s | | 14.4 Gbit/s | |
| Single contact nominal current | 4 A | | 3.8 A | | 4.2 A | |
| Nominal current insert | 3 A | | 2.4 A | | 2.1 A | |
| Nominal voltage acc. to IEC 60664 | 10 V AC | 7.5 V AC | 32 V AC | | 32 V AC | |

● ODU Circular Plastic Connectors



| | ODU MEDI-SNAP® PUSH-PULL | ODU MINI-SNAP® PC | ODU MINI-MED® |
|--|---|----------------------|------------------|
| Mating Cycles | 2,000/5,000 | > 5,000 | > 1,000 |
| Locking Principle | Push-Pull / Break-Away | Push-Pull | Break-Away |
| Coding Options (Mechanical) | Pin/groove | Half-shell | Pin/groove |
| Coding Options (Optical) | Arrow marking, color coding | Arrow marking | Arrow marking |
| Max. Number Of Contacts | 26 | 27 | 6 |
| Transmission Options | Signal, power, fluids (liquids and gases) | Signal | Signal |
| Available Termination Technologies | Solder, crimp, PCB | Solder, crimp, PCB | Solder |
| Max. IP Protection In Unmated Condition | IP68 | IP50 | IP50 |
| Max. IP Protection In Mated Condition | IP64/ IP67 | IP67 | IP67 |

● Electrical Contacts



| | ODU SPRINGTAC® | ODU LAMTAC® | ODU TURNTAC® | ODU SPRINGTAC® FLATSOCKET |
|---|-------------------------------|---|---------------------------------|---------------------------------------|
| Primary Attribute | High mating cycles | High temperature & current | Rugged | High mating cycles |
| Contact Technology | Springwire technology | Lamella technology | Turned, slotted contacts | Springwire technology |
| Reliability (Contact Points) | 44 wire springs (size Ø 6 mm) | 19 double contacting lamella louvres (size ø 6mm) | 4 contact fingers (size Ø 6 mm) | 30 wire springs (size □ 6.3 x 0.8 mm) |
| Nominal Current | 100 A (size Ø 6 mm) | 115 A (size Ø 6 mm) | 100 A (size Ø 6 mm) | 27 A (size □ 6.3 x 0.8 mm) |
| Angular Misalignment | +/- 1° | +/- 1° | +/- 5° * | |
| Mating Cycles | > 100,000 | > 10,000 | > 10,000 | > 50,000 |
| Temperature Range Standard Version | -40 °C to 125 °C | -40 °C to 150 °C | -40 °C to 125 °C | -40 °C to 125 °C |
| Temperature Range High-Temp. Version | | on request | | |
| Contact Size | from Ø 0.76 mm | from Ø 1.5 mm | from Ø 1.5 mm | from □ 0.64 x 0.64 mm |
| Standard Plating | Ag / Au | Ag / Au | Ag / Au | Ag / Au |
| Crimp Termination | ● | ● | ● | ● |
| Screw Termination | ● | ● | ● | ● |
| For Busbars (Through-Hole Design) | ● | ● | | |

*max. 5° misalignment in mounting position with corresponding design of the contact chamber.

● ODU MAC®



| | | | | |
|--|--|--------------------------------------|--|---|
| Mating Cycles | > 100,000 | > 100,000 | > 100,000 | > 10,000 |
| Mating Principle | Automatic docking | Automatic docking | Manual mating | Manual mating, automatic docking |
| Automatic Docking Option | | 7 frame varieties, individual length | | 1 frame variety, 4 sizes |
| Locking | | | Per spindle / Locking lever / Snap-In (ZERO) | Per spindle / Locking lever / Push-Pull (PUSH-LOCK) |
| Housing | 3 housing varieties available in plastic and metal | | Available in plastic and metal | Available in plastic and metal |
| Strain Relief Housing | | ● | | ● |
| Highest Packing Density On The Market | ● | ● | ● | Highest packing density in the ODU-MAC® range |
| Non-Magnetic Version | | | ● | |
| EMV-Protection | In metal housing | On module basis | On module basis | On module basis + PUSH-LOCK housing |
| Quick-Change Head Option | ● | ● | | ● |

● Applications



Control and display units for soldiers



Robust mobile router and computer



Holder for tactical headsets



Reliable connection in communication system



Next-generation software defined tactical radio



Tactical Radios



IEH CORPORATION

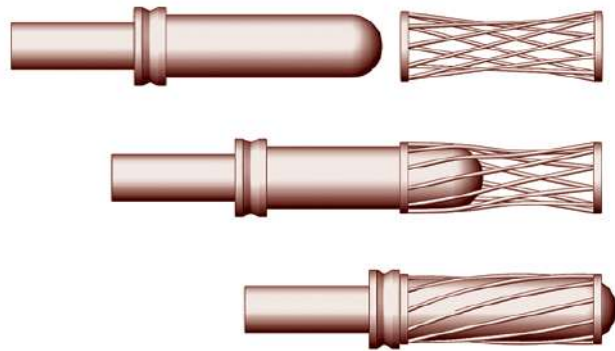
www.iehcorp.com

SINCE 1941, IEH HAS BEEN MANUFACTURING SUPERIOR PRODUCTS FOR DEMANDING APPLICATIONS. WHETHER IT'S PRINTED CIRCUIT BOARD CONNECTORS, SIGNAL OR POWER CONTACTS, OR CUSTOM INTERCONNECTS, FOCUS IS DELIVERING THE RIGHT CONNECTOR SOLUTION.

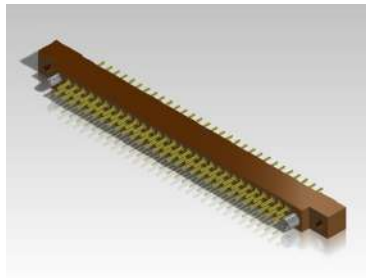
● Hyperboloid Technology

Utilized in all of our receptacle connectors, this unique design offers superior capability in every critical parameter of connector performance:

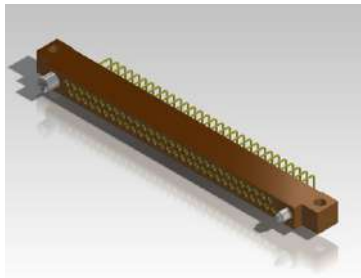
- ◆ Very low insertion force
- ◆ All but impervious to shock & vibration (Test exceed 300 g's without discontinuity.)
- ◆ 100,000 minimum duty cycles
- ◆ Extremely low contact resistance
- ◆ Improved current carrying capacity (The low contact resistance gives a lower °C rise from ambient under load. This feature often allows the user to operate the same size contact under higher load.)
- ◆ High reliability



PCB CONNECTORS



HGM Series - .100" centers
10-208pos
M55302 /55 /64



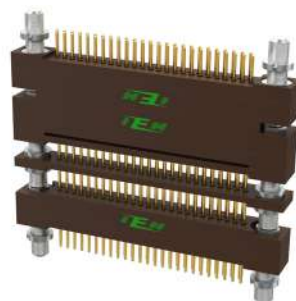
HRM Series - .075" centers
2 & 3 row 10-206pos
M55302 /190 /193



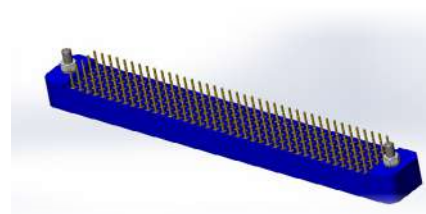
HMM Series - .075" centers
4, 6 & 8 row 58-604pos



HGC/HGS Series
Low-Profile for parallel boards
22-90pos



HVM Series - .050" centers
2-row
10-100pos



HMK Series - .100" centers,
2, 3, 4 & 5 row
17-490pos

HYPERKINETIC® CONNECTORS - HIGH SPEED, HIGH DENSITY MODULAR



HKC (cPCI Series)



HKX (VPX-Compatible Series)

- ♦ Interchangeable with COTS board layout, but with Hyperboloid Contact System
- ♦ 2mm Footprint of cPCI PICMG 2.0
- ♦ LCP Insulator Meets Outgassing Requirements
- ♦ Press-fit or Solder tail Terminations

- ♦ VITA-46 Platform
- ♦ Data Rates up to 10 Gbps
- ♦ 3U, 6U and Custom Configurations
- ♦ Custom Wafer Design for Mixing
- ♦ Differential and Single-ended Circuits
- ♦ Press-fit or Solder tail Terminations

CABLE CONNECTORS / ASSEMBLIES



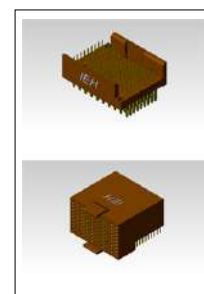
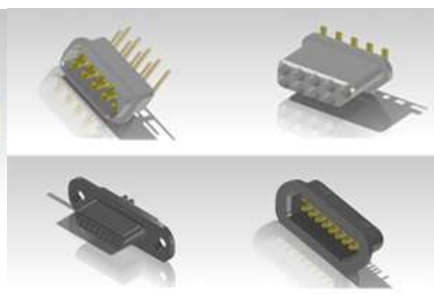
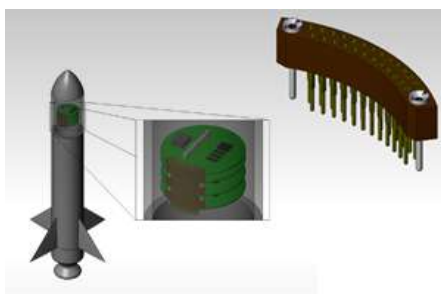
- ♦ Flex Cable
- ♦ Solder or Crimp Terminations

CONTACTS



- ♦ Discrete PCB contacts
- ♦ Power contacts
- ♦ Custom Contacts

CUSTOM PRODUCTS



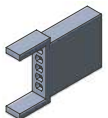
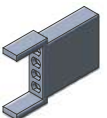
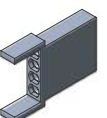
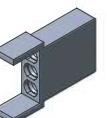

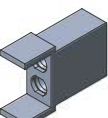
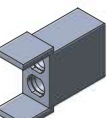
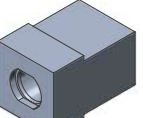
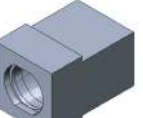

HBH HYBRID POWER/SIGNAL HYPERBOLOID CONNECTORS

This new modular connector series provides the flexibility to mix signal and power contacts within a single housing, to meet the most demanding applications.



- ♦ All socket contacts utilize the Hyperboloid Technology
- ♦ Contact sizes from .016" to .169"
- ♦ Superior Power Density
- ♦ Modular design allows you to choose most any desired connector configuration
- ♦ Terminations include straight and right angle PCB mount, crimp, solder-cup, and complaint contacts
- ♦ Blind mate option available for increased misalignment

MODULE CHART

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| A #28 (.016") 5 CONTACTS MODULE WIDTH: .141"(3.6MM) | B #24 (.024") 4 CONTACTS MODULE WIDTH: .141"(3.6MM) | C #22 (.030") 4 CONTACTS MODULE WIDTH: .185"(4.7MM) | D #20 (.040") 3 CONTACTS MODULE WIDTH: .185"(4.7MM) | E #16 (.062") 2 CONTACTS MODULE WIDTH: .215"(5.5MM) |
|  |  |  |  |  |
| F #14 (.078") 2 CONTACTS MODULE WIDTH: .250"(6.4MM) | G #12 (.093") 2 CONTACTS MODULE WIDTH: .275"(7.0MM) | H #8 (.142") MODULE WIDTH: .575"(14.6MM) | I .169" MODULE WIDTH: .575"(14.6MM) | J RF MODULE WIDTH: .575"(14.6MM) |

IEH SPACE-HERITAGE

IEH has been chosen time and again, by engineers who understood that for immunity to shock and vibration, low-insertion force, high-current carrying capacity and resistance to fretting and corrosion, there is no better solution than IEH's signature Hyperboloid connectors.



From the Apollo Lunar Module to the Orion Spacecraft.



From the Atlas and Vulcan rockets to today's Commercial Space Launches.



On applications as varied as the Europa Clipper, the 16 Psyche asteroid mission, and today's most advanced GPS satellites.





SINCE 1972, PASTERNAK HAS STEADILY GROWN BY ALIGNING ITS OFFERINGS TO MATCH THE NEEDS OF OUR CUSTOMERS. WE MAINTAIN AN INVENTORY OF MORE THAN 40,000 PRODUCTS THAT ARE ALWAYS AVAILABLE WHICH GIVES YOU ACCESS TO PRODUCTS RANGING FROM THE RARE, HARD-TO-FIND SPECIALS TO THE BROADEST ARRAY OF INDUSTRY STANDARDS.

● **The Industry's Largest Selection of In-Stock RF Components**

- ◆ 99.4% Off-the-Shelf Availability
- ◆ Same-Day Shipping Available on more than 40,000 Products
- ◆ ISO 9001:2015 Certified
- ◆ 24/7 Expert In-house Technical Support

● **High Isolation Pin Diode Switches**



Pasternack's new PIN diode switches feature very high port-to-port isolation of greater than 90 dB at 1-2 GHz, 80 dB at 2-4 GHz and 75 dB at 6-12 GHz. Insertion loss of the high isolation switches from Pasternack varies between 1.0 dB and 2.5 dB depending upon the frequency and switching speed performance ranges from 35 and 75 nanoseconds. These new RF switches are designed with complementary-metal-oxide-semiconductor (CMOS) transistor-transistor logic (TTL) drivers, and are fully matched internally for 50 Ohm input and output, which eliminates the customers need for any additional sensitive RF tuning components.

● **Multi-Octave Wilkinson Power Dividers**



- ◆ Covers 0.5 – 2.7 GHz
- ◆ 2-way, 3-way, 4-way and 8-way Splitters Available
- ◆ 10 to 30 Watts Power Handling
- ◆ 1.4:1 Maximum VSWR
- ◆ Cover 3G, 4G, WiFi Frequency bands – Well suited for applications such as Distributed Antenna Systems (DAS)

● Medium & High Power RF Loads



Our RF load terminations are available in 2.4mm, 2.92mm, 7/16 DIN, BNC, C, Mini SMB, Mini SMP, N, QMA, SMA, SMB, SMC, SMP and TNC connector types. RF load terminations from Pasternack are organized into two categories, feed-thru load and RF load. Pasternack Enterprises RF terminations include precision and standard versions with 0.25 Watts, 0.5 Watts, 1 Watts, 2 Watts, 5 Watts, 10 Watts, 25 Watts, 50 Watts and 100 Watts models

● Tunable Band Pass & Band Reject Filters



Pasternack tunable band pass filters and band reject filters (also referred to as band-stop filters or band-rejection filters) are bench top units designed for lab use where they are an integral part of the test lab environment. Six adjustable bandpass filter configurations are available with octave-band tuning from 125 MHz to 3 GHz and a 5% pass band. These variable band pass filters use a tunable 5-section design and have a mechanical direct dial that is accurate within 1%.

● 60 GHz WR-15 Antennas



WR-15 60 GHz millimeter wave horn antennas are available with a square flange on the connection side. Although our millimeter wave WR-15 antennas operate for 60 GHz applications, they are broadband waveguide gain horns that have a minimum frequency range of 50 GHz to 58 GHz and 63 GHz to 75 GHz maximum. Pasternack millimeter wave 60 GHz antenna products come in 0 dB, 20 dB, 24 dB and 34 dB models

● Connectorized RF Amplifiers



Pasternack offers the industry's largest selection of off-the-shelf RF Amplifiers. Selection includes high power amplifiers, high-rel amplifiers, broadband amplifiers, limiting amplifiers, power amplifiers, low noise amplifiers (LNAs), log amplifiers and gain blocks. Frequencies across this amplifier line range from DC to 40 GHz, gain levels ranging from 10 dB to 60 dB, P1dB from 2 mW to 100 Watts, noise figures as low as 0.8 dB and gain variation down to ± 0.3 dB.

These amplifiers are employed across the entire spectrum of commercial and military applications including use in radar, electronic warfare, satcom, wireless communications, test lab instrumentation, commercial air traffic control, antenna ranges, telecom infrastructure, sensors and many others.

● MIL-DTL-17 High Reliability RF Cable Assemblies



Pasternack's military-grade cable assemblies consist of 124 basic configurations from six different cable types for a total of more than 700 part numbers that are all available for same-day shipment. These cables provide operating frequencies of up to 12.4 GHz and VSWR as low as 1.3:1 per connector. They are made from MIL-DTL-17 qualified cable, MIL-PRF-39012 qualified connectors, AS23053 heat shrink and feature J-STD soldering. These commercial off-the-shelf (COTS) cable assemblies are 100% tested and include a test report, as well as material lot traceability.

● Waveguides



Waveguides are available in standard flange sizes from WR-430 through WR-15, which encompasses frequencies from 1.7 GHz to 75 GHz. With regards to a waveguide's size, the term "WR-xxx" stands for "Waveguide Rectangular"; the number indicates the inner width dimension of the waveguide in hundredths of an inch. Our entire line of wave guides are constructed with aluminum bodies for its lightweight characteristics. We are a supplier of waveguide adapters, waveguide horns, waveguide sections, waveguide bends, flexible waveguides, waveguide filters and waveguide terminations.

● Connectors



Category includes 1,700 part numbers, most of which are RoHS and REACH compliant. Our connectors for RF applications are available in 1.0/2.3, 1.6/5.6, 1.85mm, 10-32, 2.4mm, 2.92mm, 3.5mm, 3/4"-20, 7/16, banana, BNC, BNC twinax, C, D-Sub, F Type, FAKRA, FME, GR874, HN, LC, MC-Card, MCX, MHV, mini SMB, mini SMP, mini UHF, MMCX, N Type, QMA, QN, RCA, SC, SHV, SMA, SMB, SMC, SMP, SSMA, SSMB, TNC, UHF or UMCX connector series. Connectors in this category will terminate to either coaxial cable, terminal or printed circuit board (PCB).

● RF Adaptors



Pasternack offers hundreds of in-series and between-series adapter designs including 1.0/2.3, 1.0mm, 1.85mm, 10-32, 2.4mm, 2.92mm, 3.5mm, 3/4"-20 Twinax, 4.1/9.5 Mini DIN, 7/16 DIN, 7mm, BANANA, BNC, BNC Triax, BNC TWINAX, C, D-SUB, F, FME, GR874, HN, LC, MCX, MHV, MINI SMB, MINI SMP, MINI UHF, MMCX, N, PAL, QMA, QN, RCA, SC, SHV, SMA, SMB, SMC, SMP, SSMA, SSMB, TNC, UHF, UMCX and ZMA.

● RF Cable Assemblies



- ◆ Over 250,000 custom cable assembly configurations available.
- ◆ Choose from 1,300 RF coax connectors
- ◆ 114 coax cable types including Twinax
- ◆ Ultra Flexible Test cables
- ◆ Low Loss Expanded Dielectric Flexible Test cables

● RF Cables



Our coaxial and twinaxial cable is designed to precise RF industry specifications and is available in 84 coax and 2 twinax versions. Pasternack coaxial cable can be ordered in 50 Ohm, 52 Ohm, 53 Ohm, 75 Ohm, 93 Ohm or 95 Ohm impedances and our twinax cable in 100 Ohm or 78 Ohm impedance designs. Coaxial cables, as well as twinaxial cables, can be purchased with double, single or triple shielding.

● Armored Test Cables






Pasternack's armored test cables utilize stainless steel connector construction, with the SMA designed to operate to 20 GHz and the N connector to 18 GHz. These new RF test cables from Pasternack are available with in-series configurations only. A robust mechanical connector/armoring interface and strain relief boot increases the overall durability and life of the test cable. The company's armored test cables are built using PE-P142LL coaxial cable which is triple shielded with an expanded PTFE dielectric, guaranteeing low loss performance.



FAIRVIEW MICROWAVE IS A LEADING PROVIDER OF HIGH-QUALITY RF AND MICROWAVE COMPONENTS INCLUDING ADAPTERS, CONNECTORS, ATTENUATORS, COAXIAL CABLES, TERMINATIONS, AND MUCH MORE. SINCE 1992, FAIRVIEW HAS BEEN RECOGNIZED FOR DELIVERING UNSURPASSED QUALITY, BUT OUR TRUE STRENGTH LIES ON OUR CUSTOMER SERVICE. FAIRVIEW BOASTS OVER 5,000 MICROWAVE AND RF PARTS, MOST IN STOCK AND READY TO SHIP, WHICH OVER 1 MILLION PRODUCTS CAN BE BUILT AND SHIPPED AS SOON AS SAME DAY.

• **Huge Selection of Parts in Over 30 Categories**

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Adapters | Connectors | Amplifiers | Attenuators | Cable Assemblies |
|  |  |  |  |  |
| Terminations | Isolators | Circulators | Power Dividers | DC Blocks |
|  |  |  |  |  |
| Bulk Cables | Antennas | Bias Tees | Shorts & RF Caps | Couplers |
|  |  |  |  |  |
| Test & Measurement | Detectors | Dust Caps | Fiber Optic Attenuators | Filters |
|  |  |  |  |  |
| Hybrids | Limiters | Matching Pads | Mixers | Phase Shifters |
|  |  |  |  |  |
| Phase Trimmers | Rotary Joints | Switches | Waveguides | Tools |

L-COM GLOBAL CONNECTIVITY, A PREFERRED MANUFACTURER OF WIRED AND WIRELESS CONNECTIVITY PRODUCTS, OFFERS A WIDE RANGE OF SOLUTIONS AND UNRIVALED CUSTOMER SERVICE FOR THE ELECTRONICS AND DATA COMMUNICATIONS INDUSTRIES.

WIFI ANTENNA, YAGI ANTENNA, WIRELESS ANTENNA AND OMNI DIRECTIONAL ANTENNA PRODUCTS

| | | | | | | |
|--|------------------------------|---------------------------------|-------------------------|------------------------|---------------------------------|--|
| | | | | | | |
| GPS/Cellular/ Wifi Multi-band Antennas | 400 MHZ Antennas | 380-6000 MHZ DAS Antennas | Low PIM DAS Antennas | 900 MHZ Antennas | 1.2 GHZ Antennas | 1.9 GHZ Antennas |
| | | | | | | |
| 2.4 GHZ Wifi Antennas | 2.4/5.8 GHZ Wifi Antennas | 2.6 GHZ Antennas | 3.5 GHZ Antennas | 4.9 GHZ Antennas | 5 GHZ Wifi Antennas | MIMO 802.11n / 802.11ac Antennas |
| | | | | | | |
| Embedded PCB Antennas | Antenna / Radio Kits | Parabolic Dish Radome Covers | Mobile Antenna | Wifi Antenna Mounts | Antenna Replacement Parts | AISG / RET Connectors |









HDMI CABLE, DVI CABLE, VGA CABLE, AND OTHER AUDIO/VIDEO PRODUCTS

| | | | | | | |
|-------------------------------------|---|---|------------------------------------|---------------------------------|--------------------------|------------------------------|
| | | | | | | |
| Adapters, Couplers, Splitters | Digital Video Cables - HDMI, DVI, Other | Analog Video Cables - SVGA, SVHS, Other | 75 OHM Coax Cable Assemblies | Audio Cable Assemblies | External Video Cards | VGA Splitters / Extenders |
| | | | | | | |
| DVI Splitters / Extenders | HDMI Splitters / Extenders | Display Port Extenders | KVM Switches and Extenders | Wall Plates(Pre- Configured) | Video Coax Protectors | Connectors |










SURGE PROTECTOR, LIGHTNING ARRESTOR AND SURGE PROTECTION PRODUCTS

| | | | | | |
|---|---|---|--|---|---|
|  |  |  |  |  |  |
| Coaxial Protectors | Low PIM Coaxial Protectors | Coaxial Protector Cable Assemblies | Cat5/5e/6 & PoE Camera Protectors | Cat5/5e/6 Protectors / PoE Injector | Telephone/DSL/T1 Protectors |
|  |  |  |  |  |  |
| RS422 / RS485 Protectors | Power and Control Line Protectors | AC/DC Control Line Protectors | Load Cell/RTD Protectors | 4-20 mA Current Loop Protectors | AISG / RET Protectors |







USB CABLE, USB ADAPTER, USB CONNECTOR AND OTHER USB PRODUCTS

| | | | | | | | |
|---|---|---|---|--|---|---|---|
|  |  |  |  |  |  |  |  |
| Cable Assemblies | Adapters & Couplers | Connectors & Covers | Bulk Cable | Hubs, Converters, Cards | Extenders | Switch Boxes | Industrial Harsh Environment |

ETHERNET CABLE, ETHERNET ADAPTER, ETHERNET CONNECTOR AND OTHER ETHERNET PRODUCTS

| | | | | |
|---|---|--|---|---|
|  |  |  |  |  |
| Cable Assemblies | Industrial Harsh Environment | Couplers & Adapters | Keystone Jacks | Wall Plates and Surface Mount Boxes |
|  |  |  |  | |
| Wall Mounted Termination Blocks | ISDN Splitters, Terminators | Modular Connectors | Bulk Cable | |

D-SUBMINIATURE PRODUCTS

| | | | | | |
|---|---|---|--|---|---|
|  |  |  |  |  |  |
| Cable Assemblies | Connectors and Covers | Adapters, Couplers, Splitters | Bulk Cable | Switch Boxes | Cable Ties, Heat Shrink, Tubing |

ETHERNET MEDIA CONVERTERS



Commercial Ethernet
Media Converters



Industrial Ethernet
Media Converters



NEMA Hardened
Ethernet Media
Converters



10G Ethernet Media
Converters



SFP Modules

FIBER OPTIC CABLE, OPTICAL CABLE, FIBER CABLE, FIBER OPTIC ADAPTER AND OTHER FIBER OPTIC PRODUCTS



Cable Assemblies



Couplers & Adapters



Ruggedized IP68 LC
Plugs & Receptacles



Attenuators



Connectors



Bulk Cable



Tools



Loopbacks



Kits

MORE PRODUCTS



Bulk Cable



Cable
Assemblies



Secure Data



Firewire/DIN/SCSI/
SATA



IEEE-488 GPIB



KVM Switches



Power
Products



RF Filters / Splitters



Serial Converters /
Cards



Switch Boxes



Telecom Modular
(Ethernet)



Test Equipment



FOR MORE THAN HALF A CENTURY, THE NAME ROSENBERGER HAS BEEN ASSOCIATED WITH THE MOST ADVANCED TECHNOLOGY, QUALITY AND CREATIVITY. ROSENBERGER IS A WORLD-WIDE LEADING MANUFACTURER OF CONNECTOR SOLUTIONS IN THE HIGH-FREQUENCY AND FIBER OPTIC TECHNOLOGY FIELDS.

• AeroSpace & Defense

Rosenberger is a qualified manufacturer according to

- ◆ DIN EN 9100
- ◆ ESCC
- ◆ MIL-PRF 39012

Portfolio

- ◆ Cable assemblies
- ◆ Board-to-board connections
- ◆ Board-to-cable connections



• RF Coaxial Products



- ◆ The Rosenberger product range covers RF connectors, components and accessories and cable assemblies
- ◆ Portfolio – Standard Series
- ◆ SMP, Longwipe SMP, P-SMP, SMP Infinity, Mini-SMP, FMC, MCX, SMA, QMA, SMB, 1.0-2.3, 1.6-5.6, Inserts (Mini-Coax D-Sub), BNC, TNC, UHF, Mini-UHF, N, QN, SnapN, 7-16, 4.3-10, NEX10™
- ◆ Surface mount connectors
- ◆ Reverse polarity connectors
- ◆ RF test switches
- ◆ Adaptors
- ◆ In-series adaptors
- ◆ Between-series adaptors
- ◆ Tools
- ◆ Crimping tools, crimp inserts
- ◆ Stripping tools

• ESCC Space Qualified Products

Nearly all Rosenberger products can be qualified for space application (e.g. acc. to MIL-PRF-39012)



• B2B and Board-to-Cable Connections

Rosenberger provides a wide range of RF coaxial connectors for PCB applications.

Features

- ◆ Small board-to-board distances
- ◆ Equalization of radial and axial misalignments
- ◆ Different holding forces
- ◆ Fast and cost-effective assembly design



• SMP Infinity

Mechanical specification

- ◆ Reliable connection, low insertion force ($\leq 45\text{N}$, like SMP limited detent)
- ◆ Locking sleeve: retention force up to 400 N
- ◆ One piece connector with pre-assembled inner conductor
- ◆ Not intermateable with SMP

Electrical specification

- ◆ Return loss $\geq 25\text{ dB}$ DC-30 GHz for cable HFE100D (tbc)
- ◆ Insertion loss typical $0,05 \times \sqrt{f(\text{GHz})}$ (tbc)
- ◆ RF leakage (-92dB @ 18 GHz) (tbc)

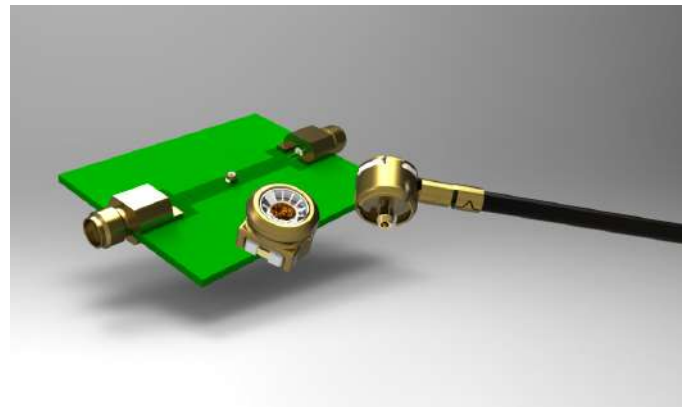
Planned variants

- ◆ Straight and right angle connectors
- ◆ Cable connectors for different cables
- ◆ PCB connectors (pin in paste, solder pin, SMD, rear mount)
- ◆ Bulkhead connectors



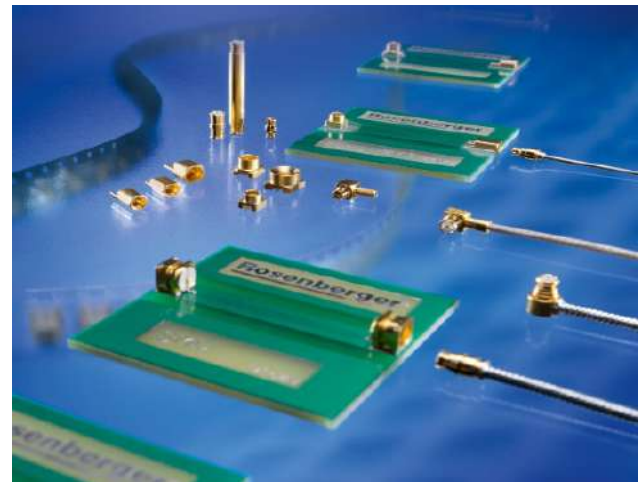
● Micro RF

- ◆ Height 1,5 mm
- ◆ Space on PCB (1,8 x 1,9) mm
- ◆ Designed for DC to 6 GHz
- ◆ Impedance 50 Ω
- ◆ Height switch + cable connector < 2.7mm
- ◆ EMI Shielding: > 40 dB up to 3 GHz
> 35 dB up to 6 GHz
- ◆ Mating cycles > 10000



● SMP

| | |
|--------------------------------------|-----------------|
| <i>Frequency range</i> | : - 40 GHz |
| <i>Power handling</i> | : 65W @ 2.2 GHz |
| <i>Board to Board distance (min)</i> | : 9.05 mm |
| <i>Axial misalignment</i> | : +/-0.3mm |
| <i>Radial misalignment</i> | : 4° |
| <i>Disengagement forces</i> | : |
| <i>Full detent</i> | : >22N |
| <i>Limited Detent</i> | : >9N |
| <i>Smooth bore</i> | : >2.2N |



● Long-Wipe SMP

| | |
|--------------------------------|-------------------|
| <i>Frequency range</i> | : - 6 GHz |
| <i>Power handling</i> | : 100 W @ 2,2 GHz |
| <i>Board to Board distance</i> | : min. 9.35 mm |
| <i>Axial misalignment</i> | : +/-0.7mm |
| <i>Radial misalignment</i> | : 4° |



● P-SMP High Power

- ◆ Frequency range up to 10 GHz
- ◆ Power handling up to 200W @ 2.2GHz
- ◆ Board to board distance min. 12.6 mm
- ◆ Axial misalignment +/-1mm
- ◆ Radial misalignment 4°
- ◆ Right angle connectors for cable application



● Test & Measurement Portfolio



● PCB Connections

- ◆ Modular connector systems for DC frequencies up to 50 GHz
- ◆ Solderless PCB mount connectors for ultra-high frequency up to 110 GHz
- ◆ Spring-loaded coax systems (> 2,500 matings, pairwise phase matching 10 ps standard)

Applications

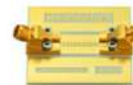
- ◆ High volume industrial production of high end PCB up to 50 GHz
- ◆ Applications with different interfaces on one board
- ◆ Applications with repair friendly products
- ◆ Applications where maintenance is important



Modular Connector Systems



Spring-Loaded Coax



Solderless PCB Connectors



RF-PCB Connectors

● Rosenberger Non-Magnetic Products

- ◆ MRI (Magnetic Resonance Imaging) equipment
- ◆ The aerospace industry
- ◆ Industrial applications

Features

- ◆ Frequency range DC to 18 GHz
- ◆ Current rating typical 2 A
- ◆ Data rates up to 10 Gbps
- ◆ Tolerance compensation > 0.6 mm
- ◆ High number of mating cycles up to > 100,000



SMP Non-Magnetic Connectors



Multi Channel Mini-Coax



QMA Non-Magnetic Connectors



Micro-RF Non-Magnetic Products

● Fiber Optic Products

Sensor systems, Data transmission in high-voltage systems, Medical (MRT, Laser), Robots, Shipbuilding, Offshore oil and gas rigs, Broadcast, Mining, Aircraft, Laser systems



Optical MINI Contacts



Expanded Beam Contacts #12



Optical DIN Contacts



Rosenberger Duplex Connector (RDC)



Optical #16 Contacts



Rosenberger Quad Connector (RQC)



Assistance & Safety System

Surround View, 4K-Camera System



Sustainable Mobility

Hybrid and Electric Drive, Optimized Engine



Connectivity / Infotainment

Control Unit, HD-Display, WiGig, Network Mainframe



● Custom Solutions



High Temperature Connectors



Sensor Cables and Connectors



High Mating Cycle Products



Power Supply and Data Connectors



High Speed Data Connectors



SLC - Spring Loaded Contacts



HEADQUARTERED IN FLORIDA, KONNECT RF IS AN INDUSTRY LEADER

SPECIALIZING IN RF AND MICROWAVE COMPONENTS, CONNECTORS AND CABLE

ASSEMBLIES WITH OVER 30 YEARS OF COMBINED INDUSTRY EXPERIENCE.

Konnnect RF can provide lower-cost alternatives for almost any part in the industry. Whether you need domestically manufactured mil-spec equivalents or you can use high-quality internationally produced parts, they can save you money and grow your bottom line.

- ◆ Founded 2010
- ◆ Located in Southeast Florida
- ◆ Over 600 customers Worldwide
- ◆ Supplying Coaxial Connectors, Adapters, Cable Assemblies and Passive Components
- ◆ Global Network of Contract Manufacturers
- ◆ Source based on Customer Requirements
 - Price/Quality
 - Lead Time
- ◆ All products inspected, packaged, and warehoused in USA
- ◆ Rapid and Cost Effective development of custom products

● **Connectors**

Coaxial cable connectors, PC board receptacles, standard receptacles, field replaceable receptacles, cable terminations.



● **Adapters**

In-Series, Between-Series



● **Cable Assemblies**



● **RF & Microwave Components**

Circulators & isolators, DC blocks, dust caps, power dividers, waveguide products, attenuators



MICROPOL MANUFACTURES AND SUPPLIES CABLE SYSTEMS WITH RUGGED, HIGH-QUALITY FIELD CABLES THAT CAN COPE WITH EXTREME TEMPERATURES. LENGTHS RANGE FROM A FEW DECIMETERS TO UP TO SEVERAL KILOMETERS. WE OFFER DIFFERENT TYPES OF EXPANDED BEAM CONNECTORS, BOTH FOR SINGLE-MODE AND MULTIMODE. TAKE FOR EXAMPLE OUR FALCON CONNECTOR WHICH IS USED FOR HARSH MILITARY AND AEROSPACE ENVIRONMENTS. THEY ARE ALL HERMAPHRODITIC, AND ALWAYS CONNECT CORRECTLY WITHOUT ANY ADAPTER NEEDED.

THE SMALLEST AND LOWEST LOSS EXPANDED BEAM CONNECTOR ON THE MARKET - FALCON

- ♦ FALCON Mini 1-4 channels, Junior 1-12 channels, Senior 1-16 channels
- ♦ Insertion loss < 1.2 dB vs Nato standard < 2.5 dB
- ♦ Operating temperature -57 to +85°C, +100°C optional.
- ♦ Single Mode/Multi Mode
- ♦ Hermaphroditic
- ♦ IP67
- ♦ In accordance with MIL-DTL-83526/20&21



| MECHANICAL | | ENVIROMENTAL | |
|-----------------------------|--|------------------------------|-----------------------------------|
| Coupling type | : Hermaphroditic | Operating temperature | : -55°C to +85°C, +100°C optional |
| Compliant | : ROHS | Water immersion | : 10 m water depth-mated |
| Material | : Hard anodized aluminum | Air pressure | : <25kPa -55°C during 4h |
| Alternative material | : Marine bronze & stainless steel | Corrosion resistance | : 500h salt spray |
| Colour | : Gray | Flammability | : DOD-STD-1678, method 5010 |
| Durability | : 3000 mating cycles | | |
| Free fall | : 500 falls from 1,2 meters height | | |
| Vibration | : 5-500Hz, 0,75mm amplitude at 10 g | | |
| Shaking | : 390 m/S numbers of shakes 3x4000 | | |
| Shock pulse length | : 11ms, half sine at 35g Numbers of axis: 3 (x, y, z) | | |



CABLE REEL

- ◆ 1-16 fiber
- ◆ Mounted on cable reel
- ◆ Split with fanout cable
- ◆ Insertion loss < 1,2 dB
- ◆ Connector size: mini, junior, senior
- ◆ 15 000 000 bendings at 30 mm radius
- ◆ Operational temperature range from -40°C to +85°C
- ◆ Standard configuration up to 500 meters (can be adjusted according to specifications)



BACKPACK CABLE DRUM



CABLE



- ◆ For heavy duty use
- ◆ 1-384 fiber
- ◆ Operating temperature -55°C to +85°C
- ◆ Vertical installation
- ◆ High flex, up to 15 million bends
- ◆ Rodent resistant

MIL-PATCHCORD

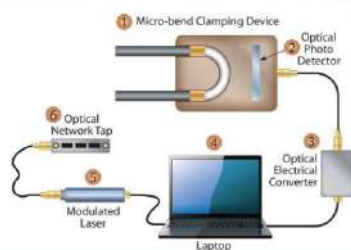


- ◆ Operating temperature -55 to +85°C
- ◆ Connectors with metal outer body
- ◆ Cut resistant
- ◆ Higher spring load
- ◆ Standard and Tailor-made

TEST KITS



CABLE MONITOR



Prevents information tapping,
Detects cable cut off and cable vibrations

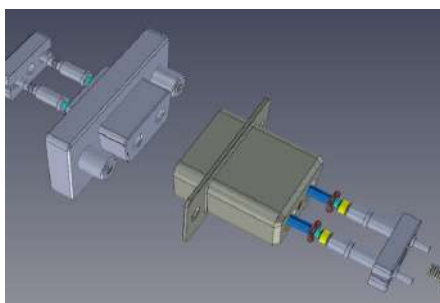
- ◆ Detects cable cut-off
- ◆ Detects specific vibrations of the cable
- ◆ Detects specific vibrations of the cable

DISTRIBUTION FRAMES, PIGTAILS, PATCHCORDS



- ◆ Insertion loss < 0.2dB
- ◆ Return Loss > -55 dB
- ◆ 2-384 fiber

CUSTOM SOLUTIONS



ODF BOXES



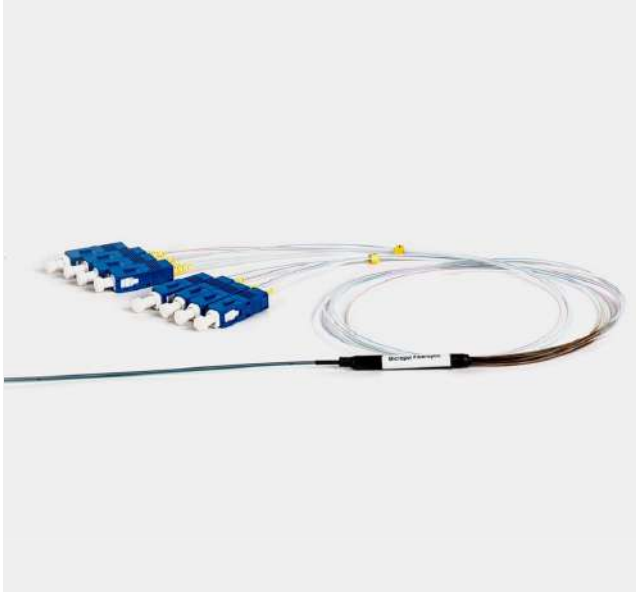
- ◆ Future proof
- ◆ Tailor-made
- ◆ Insertion loss < 0.2 dB
- ◆ Return loss > -55 dB (UPC)
- ◆ Return loss > -65 dB (APC)
- ◆ 2-384 fiber
- ◆ More fiber available on request

ATTENUATOR



- ◆ Metal ion doped fiber
- ◆ High-power light source durability
- ◆ Wavelength independence
- ◆ Attenuation levels ranging from 1 dB to 30 dB
- ◆ 1310 nm, 1550 nm, 1250-1625 nm and 1350/1550 nm dual wave lengths

FAN OUT



- ◆ Single mode/multi mode
- ◆ 2, 4, 8, 12, 16, 24 FIBER
- ◆ Standard lengths 1.6 or 2.4 m
- ◆ Customized lengths on request
- ◆ Rugged fanout
- ◆ Insertion loss < 0.2 dB
- ◆ Return loss > -55 dB (UPC), > -65 dB (APC)
- ◆ Available in S12 color coding

MTP/MTO



- ◆ Data center approved
- ◆ Insertion loss (reference cable) < 0.3 dB/channel
- ◆ Return loss > -65 dB (SM)
- ◆ High density 4-72 fiber
- ◆ MTP-MPO fanout
- ◆ MTP-MPO patch
- ◆ MTP-MPO jumper cable assembly

DIAMOND SA IS AN INTERNATIONAL COMPANY WITH A SOLID KNOW-HOW IN THE DESIGN, MANUFACTURING AND ASSEMBLY OF COMPONENTS FOR PRECISION OPTICAL FIBERS. DIAMOND IS KNOWN FOR THEIR REPEATABLE VERY LOW INSERTION LOSS DUE TO USAGE OF OUR PATENTED ACTIVE CORE ALIGNMENT TECHNOLOGY.

● Avionics and Space Interconnections

Diamond has been supplying the renowned AVIM™ connector for ruggedized applications for over 20 years. Upon completion of qualification under ECSS specifications for the European Space Agency, the AVIM™ and Mini AVIM™ products will be the first fiber optic connectors qualified for space applications.

AVIM® & MINI AVIM® CONNECTOR



Longest heritage of space optical connector (1995)



- ◆ Low IL thanks to Active Core Alignment (A.C.A.)
- ◆ High return loss thanks to Diamond polishing technique
- ◆ High performing polarization extinction ratio (PER), when terminated with PM fibers
- ◆ Miniaturized MIL-style ratchet system with high vibration/shock resistance

HE-2000™ CONNECTOR

- ◆ Bulkhead IP 67 (manual shutter) or IP 54 (automatic shutter)
- ◆ Push-pull mechanism for easy handling
- ◆ IP class: IP67 in connection
- ◆ Easy front-face ferrule access for cleaning & inspection
- ◆ Available on cable reels up to 500 metres in length



MIL-38999 DM4 FAMILY

- ◆ Size 13 and 25 shells (according to MIL std 38999 serie III)
- ◆ Low Insertion Loss and high reliability Typ. IL 0.2dB
- ◆ Available on cable reel up to 500 meters length
- ◆ 4 to 12 channels



MIL-83526 DM4 CONNECTOR

- ◆ IP class: IP68 rated
- ◆ Electrical pin size 20 AWG
- ◆ Easy termini insertion and removal for field termination and repair



X-BEAM CONNECTOR

- ♦ Integrated expanded beam lens system to protect the fiber end-face
- ♦ IP68 rated enclosure, IEC 60529 compliant
- ♦ Hermetic coupling (EN 1779 / DIN EN 13185)
- ♦ Low loss connection and high repeatability
- ♦ Genderless design to simplify mating
- ♦ Available on cable reel up to 500 meters length
- ♦ Loopback bulkheads available



OPTELCON MEDIA CONVERTER

- ♦ Variable mounting in cabinet walls as thick as 4 mm
- ♦ Compact, robust design
- ♦ M50 cutout sealed to IP65
- ♦ Plug and play
- ♦ CE approved



FIELD INSTALLATION AND SERVICES



Zeus D50 HE Fusion splicers

Complete set of all tools required for the full termination process starting from cable preparation to connector assembly (including cleaver and automatic stripper with heated jaws for tough secondary coating 900 µm)

- ♦ Based on Diamond's Crocodile Alberino Fusion
- ♦ Suitable for use with 3-8mm military and outdoor cables
- ♦ Special cable clamps on bearing slides for secure and easy cable handling
- ♦ Removable work plate – compatible with stand

CLEANING AND INSPECTION



Cleaning Kit with hand microscope

After repeated matings or when degraded performance is observed, it may become necessary to clean the individual ferrules and mating sleeve.

DIAMOND's Cleaning Kit contains all necessary tools for proper cleaning and inspection procedures to help ensure optimal connector performance.

- ♦ Easy-to-use, lightweight, robust and field-proven

THE E-TEC FACTORY WAS FOUNDED IN 1973 FOR THE PRODUCTION OF PRECISION PINS FOR THE WATCH INDUSTRY.

As of the 1980's the company expanded it's business into manufacturing of precision pin connectors for the electronics industry (IC sockets, board-to-board connectors) and in 1993 E-tec set-up it's own operations in Taiwan in order to enhance the product range with stamped pin products (PLCC, Pin headers, Female headers, D-Sub's, Switches, etc.).

In 2001 E-tec transferred certain labor intensive productions to its new production plant in Mainland China. With over 40 years experience in connector manufacturing, E-tec has set-up it's own sales network in Europe & Asia, as well as established distributors and representatives in most countries around the world.

E-tec offers flexibility for custom specific products and delivers standard and custom products starting from 0.30mm pitch upwards.

We offer short delivery times from prototype to large volume productions.

Thanks to our in-house product development department and production sites in Switzerland, Taiwan and Mainland China we aim to offer a solution to all your problems.

As a fully approved ISO 9001:2008 manufacturer, quality assurance is an essential part of our production process, since our main objective is to offer products which correspond to the highest quality standards.

- 40 years of experience
- Large range of products
- Good price and good products
- Custom design
- Fast reaction time and short deliveries
- Worldwide presence



BOARD TO BOARD CONNECTORS

I/O CONNECTORS

CUSTOM DESIGNS



TEST SOCKETS AND ADAPTERS

LAN

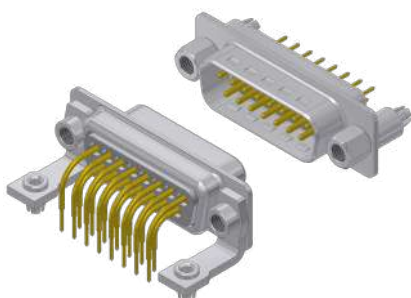
IC SOCKETS



THEY ARE A SWISS D-SUBMINIATURE CONNECTOR MANUFACTURER. CONNECTORS AND HOODS ARE PRODUCED ACCORDING THE STANDARD IEC 60807-2 (DIN41652) / MIL-C-24308 SINCE 1980. TODAY THEY HAVE 130.000 DIFFERENT END-PRODUCTS AVAILABLE THE NUMBER OF DELIVERED DELTRON D-SUB-PRODUCTS REACHED 2 MILLION PIECE IN 2020.

• **D-Sub Connectors**

STANDARD



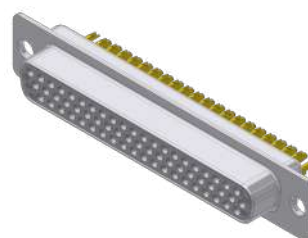
Solder cup or solder pin (straight/angled).
09/15/25/37/50 Pin

WATERPROOF IP 67



Standard, high density, combi and filter versions.

HIGH DENSITY



Solder cup or solder pin (straight/angled).
15/26/44/62 Pin

WIRE WRAP



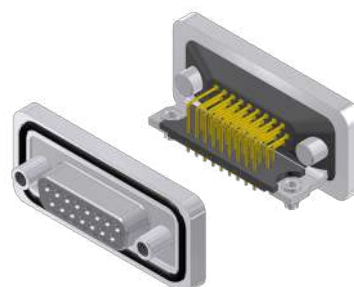
09/15/25/37/50 Pin

FILTER



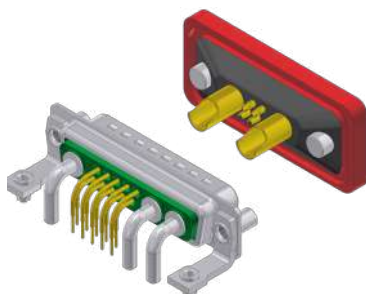
Planar- or Pi-filter. Filter adapter. Many designs and mounting types.

WATERPROOF IP 68



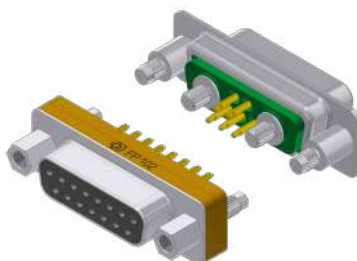
For front or back mounting. Versions: Standard, high density, combi and filter.

COMBI



Versions for signal, power, coaxial and pneumatic contacts.

PRESS FIT

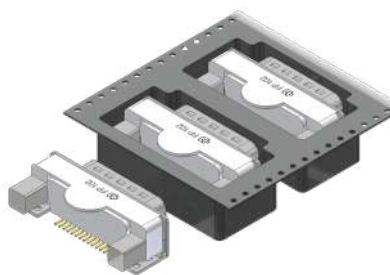


For standard-, high density-, combi- and filter-connectors.

DUAL PORT



Available in various designs.

SMD

Also available taped on reel and with filter.

IDC (FLAT CABLE)

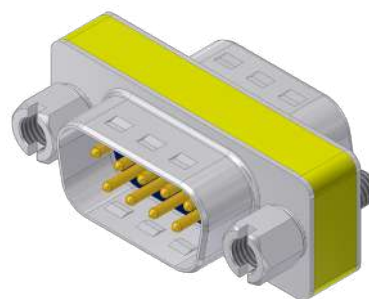
Stamped contacts, suitable for cable AWG 28-26.

CRIMP STANDARD

Crimp contacts and body. Standard and high density execution. Machined or stamped contacts.

CRIMP COMBI

Crimp contacts and body. Signal, power, coaxial.

GENDER CHANGER

In standard and high density versions.

● **D-Sub Hoods**

HOOD WITH STRAIGHT CABLE EXIT

For D-Sub 09/15/25/37/50 Pin. Various versions in plastic or metallized.

HOOD WITH STRAIGHT AND SIDE CABLE EXIT

For D-Sub 09/15/25/37 Pin. Various versions in plastic or metallized.

HOOD WITH 90° ANGLED CABLE EXIT

For D-Sub 09/15/25/37 Pin. Plastic, metal, EMI/RFI shielding.

HOOD WITH STRAIGHT OR SIDE EXIT

For D-Sub 09/15/25/37/50 Pin. Metal, EMI/RFI shielding.

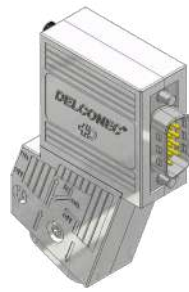
HOOD WITH STRAIGHT AND 2 SIDE CABLE EXIT

For D-Sub 09/15/25/37 Pin. Plastic or metallized.

HOOD IP 67

For D-Sub 09/15/25 Pin. Plastic, waterproof.

BUS CONNECTORS



Profibus, CAN-Bus.

ACCESSORIES



For D-Sub connectors.

Customized D-Sub Solutions



Range of Different Connectors

MINI DIN CONNECTORS



Connectors for PCB (straight and angled) and cable assembly.

CIRCULAR CONNECTORS WATERPROOF



Different series of connectors, plastic or metal body, 2 to 12 pins.

M8/M12 AND ELECTROVALVE CONNECTORS



M8/M12 circular connectors and valve connectors, the complete range for automation.

USB CONNECTORS



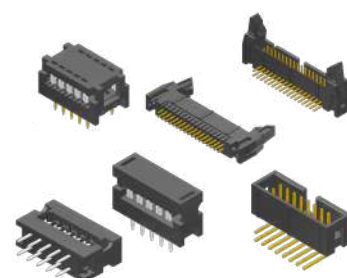
Various Universal-Serial-Bus connectors.

RJ 45 CONNECTORS



Various RJ Modular Jack connectors.

IDC CABLE CONNECTORS



Header, Box header, IDC Socket, Transition plug, Dip plug



INTEGRA OPTICS HELPS NETWORK ENGINEERS, DESIGNERS AND MANAGERS AROUND THE WORLD BUILD OUT NEW FIBER OPTIC NETWORKS, EXTEND THE VALUE OF THEIR EXISTING NETWORKS AND MAINTAIN UPTIME WITH THE MOST RELIABLE TRANSCEIVERS AND FIBER OPTIC COMPONENTS AVAILABLE.

We're providing network solutions for over 300 organizations worldwide. Our customers include:

- ◆ Telecommunications Companies, Cable/MSO Service Providers.
- ◆ Enterprise Data Centers in government, corporations, healthcare, utilities, and education verticals

● **A Vision of More Reliable Uptime**

Integra Optics has quickly become a leader in the telecommunications industry. Recognized for our innovative network solutions, product reliability, technical expertise and personalized customer service, the company is one of the fastest growing telecommunications companies on the INC 5000 list. Today, we're an international organization with a total of 80 employees working in our Latham, NY, headquarters and in satellite locations across the United States, Canada and South America.

Transceiver product line:

- ◆ SFP (GPON/BiDi, CWDM, DWDM, SONET, Ethernet)
- ◆ SFP+ (BiDi, CWDM, DWDM)
- ◆ SFP28 25G
- ◆ XFP (BiDi, CWDM, DWDM- fixed & tunable)
- ◆ AOC & DAC Cables
- ◆ CSFP 100G
- ◆ QSFP28 100G
- ◆ CFP+QSFP (40g Available)
- ◆ Coherent
- ◆ QSFP28-DD 200G & QSFP56-DD 400G

Defined by

- ◆ Form factor
- ◆ Channel
- ◆ Speed of transmission/wavelength
- ◆ Distance it needs to travel
- ◆ OEM platform



SFP / SFP+

XFP

QSFP

CFP

CFP2

CFP4

QSFP28

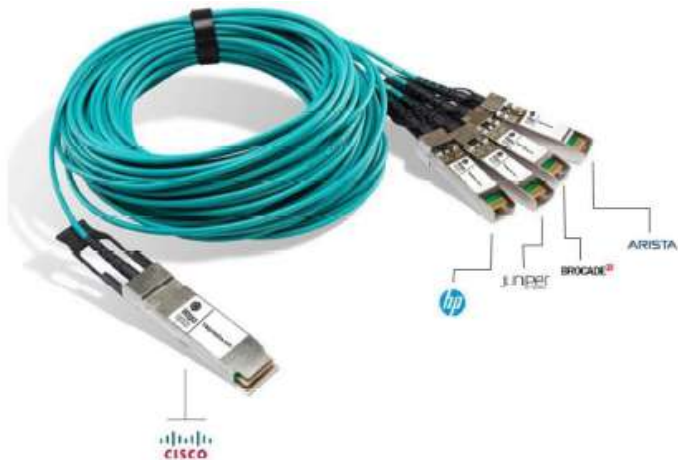
QSFP56-DD

| OPERATING TEMP | ABBREVIATION | ABBREVIATION TEMP RANGE |
|-----------------|-----------------------------------|-------------------------|
| Commercial Temp | Default Temp (no abbreviation) | 0°C to 70°C |
| Extended Temp | E | -10°C to 85°C |
| Industrial Temp | I | -40°C to 85°C |

TRANSCEIVER



BREAKOUT CABLES



DIRECT ATTACHED TRANSCEIVER



JUMPERS



PATCH CORD





WINCHESTER INTERCONNECT™ SPECIALIZES IN QUICKLY UNDERSTANDING
CUSTOMER REQUIREMENTS AND DEVELOPING PRECISION-ENGINEERED
INTERCONNECTS TO SOLVE YOUR MOST DIFFICULT CONNECTIVITY CHALLENGES.

Winchester Interconnect offers standard connectors like SMA, SMP, SMPM & FMA as well as custom connectors and configurations. With a variety of materials such as stainless steel, aluminum and titanium and the ability to join metals through explosion bonding, laser welding, vacuum brazing, and diffusion bonding, we are able to design and build the hermetic connector you need.

Whether it is material, pin count, configuration or practically any other aspect. Winchester Interconnect can turn your concept into a custom hermetic connector.

FEEDTHROUGHS



Solderable
SMP

Laser Weldable
SMPM

Laser Weldable
SMA/SSMA

Laser Weldable
FMA

MULTI-PIN



High Vacuum
Sub-C

High Vacuum
Sub-D

High Vacuum
Micro-D

Laser Weldable
Micro-D

Laser Weldable
Nano Dual Lobe

Laser Weldable
Sub-D

VACUUM PRODUCTS

- ♦ Vacuum Flange, Sub-C
- ♦ Vacuum Flange, Sub-D
- ♦ Vacuum Flange, Power Sub-D
- ♦ Vacuum Flange, Micro-D
- ♦ Laser Weldable Window
- ♦ Vacuum Flange, USB
- ♦ Vacuum Flange, SMA





SENKO ADVANCED COMPONENTS IS A WHOLLY OWNED SUBSIDIARY OF THE SENKO GROUP, WHICH IS HEADQUARTERED IN YOKKAICHI, JAPAN. SENKO ADVANCED COMPONENTS WAS INCORPORATED IN THE UNITED STATES IN THE EARLY NINETIES AND HAS SINCE BEING RECOGNIZED AS ONE OF THE INDUSTRY'S SPECIALISTS IN PASSIVE FIBER OPTICS INTERCONNECT AND OPTICAL COMPONENTS.

● **Standard Connector Series**

| PREMIUM CONNECTOR | PREMIUM CONNECTOR | STANDARD CONNECTOR | ONE PIECE ADAPTER | SC TOP ADAPTER |
|-----------------------|------------------------|--------------------|---------------------|----------------------|
| | | | | |
| SC UPC Connector | SC APC Connector | SC UPC Connector | SC Simplex & Duplex | SC TOP Adapter |
| CONNECTOR KIT | DUPLEX CLIP | SC 4.8MM | FLEX ANGLE BOOT | FC PREMIUM CONNECTOR |
| | | | | |
| SC UPC Connector | Clips for SC Connector | 4.8mm SC Connector | Flex Angle Boot | FC UPC Connector |
| FC PREMIUM CONNECTOR | FC STANDARD CONNECTOR | FC ADAPTER | CRIMP TOOL | ST PREMIUM CONNECTOR |
| | | | | |
| FC APC Connector | FC Standard | FC Adapter | SC, FC, ST, Crimp | ST UPC Connector |
| ST STANDARD CONNECTOR | ST ADAPTER | | STANDARD CONNECTOR | |
| | | | | |
| ST UPC Connector | ST Adapter | | SC, FC, ST, Crimp | |

● **Small Form Factors**

| PREMIUM UNIBODY | STANDARD 2PC | SWITCHABLE UNIBOOT | LC-HD CONNECTOR | MICRO LC |
|----------------------|-----------------------|--------------------|-------------------|-------------------|
| | | | | |
| LC Premium Connector | LC Standard Connector | Special Connector | Special Connector | Special Connector |

| | | | | |
|---|---|--|---|---|
| WATERPROOF LC | CS CONNECTOR | SN CONNECTOR | LC EZ-FLIP CONNECTOR | FLEX ANGLE BOOT |
|  |  |  |  |  |
| Special Connector | Special Connector | Special Connector | Special Connector | Accessories |
| LC ADAPTER | LC TOP ADAPTER | LC ADAPTER WITH INNER SHUTTER | LC STACKABLE ADAPTER | MU ONE PIECE CONNECTOR MU ONE PIECE CONNECTOR |
|  |  |  |  |  |
| Premium Adapter | Premium Adapter | Special Adapter | Special Adapter | MU with 2.0mm Cable boot |
| MU ONE PIECE CONNECTOR | MU ONE PIECE CONNECTOR | MU CONNECTOR KIT | MU ADAPTER | MPO PLUS MINI |
|  |  |  |  |  |
| MU with 1.0mm Fiber boot | MU w/ 1.0mm Fiber Short boot | MU Kit w/ 2.0mm Cable boot | MU Adapters: Simplex, Duplex, and 8-ports | Special Connector |
| MPO MINI 16 | MPO PLUS MICRO LATCH | MPO PLUS BAYONET | MPO PLUS LATCH | MPO PLUS PREMIUM |
|  |  |  |  |  |
| Special Connector | Special Connector | Special Connector | Special Connector | Premium Connector |
| MPO PLUS ADAPTER | MPO PLUS STACKABLE | GEL/STICK CLEANER | MPO PLUS SMART CLEANER | MPO PLUS MANTA PROBE |
|  |  |  |  |  |
| Premium Adapter | Special Adapter | Cleaning | Cleaning | Inspection |
| MPO PLUS TOOLS | MPO PLUS ACCESSORIES | AIR MT MPO PLUS | MPO PLUS DUST SHUTTER ADAPTER | MT-RJ ADAPTER |
|  |  |  |  |  |
| Tools | Accessories | Special Connector | Special Connector | MT-RJ Adapter |
| MT-RJ CONNECTOR | SN CONNECTOR 1.6MM BOOT | SN BTW1 CONNECTOR | SN BTW2 CONNECTOR | |
|  |  |  |  | |

● Speciality Products



● Harsh Environment Interconnect

IP-SERIES WEATHERPROOF CONNECTOR



- ◆ Cost effective solution for in house termination
- ◆ IP water immersion and dust protection for harsh environment
- ◆ Wide range of operational temperature for outside plant -40°C/70°C
- ◆ Compatible with a wide range of cables, 5-8mm OD cable with two 2.0mm to 3.0mm jacketed subunits
- ◆ Chemical Resistance
- ◆ Intermateable to other Industrial LC adaptor per IEC 60603-7
- ◆ Simple assembly requiring no special tools
- ◆ Durable mechanical mating
- ◆ The XP versions allow installers to terminate connectors in the field
- ◆ ODVA Compatible
- ◆ 100lbs Superior pull force
- ◆ Patent design
- ◆ Feed-through

| TYPICAL CHARACTERISTICS | IP-LC | | IP-SC | | IP-MPO LOW LOSS | | IP-MPO | |
|---------------------------------|--------------|--------|---------|--------|-----------------|---------------|---------------|--------------|
| | SM | MM | SM | MM | SM (Low-Loss) | MM (Low-Loss) | SM | MM |
| Insertion Loss (Max) | 0.2 dB | 0.2 dB | 0.2 dB | 0.2 dB | 0.35 dB | 0.3 dB | 0.7 dB | 0.5 dB |
| Insertion Loss (Average) | 0.08 dB | 0.1 dB | 0.08 dB | 0.1 dB | 0.1 dB | 0.08 dB | 0.2 dB | 0.1 dB |
| Return Loss | 55 dB | NA | 55 dB | NA | 60 dB (Angle) | 25 dB (Flat) | 60 dB (Angle) | 25 dB (Flat) |
| Durability | 50 matings | | | | | | | |
| Operating Temperature | *-40°C+70°C | | | | | | | |
| IP Rating | IP68 | | | | | | | |
| Pull Force | 100 lbs | | | | | | | |
| Material | UV resistant | | | | | | | |

IP-ONE OPTICAL 'N' ELECTRICAL POWER/FIBER COMBINED



- ♦ Combined power and fiber in ONE connector
- ♦ Simplify your connectivity with reduced cable and connectors
- ♦ Minimize interface footprint of your equipment
- ♦ Provide reliable protection in outside plant, Rating IP-68
- ♦ Cost effective with easy termination
- ♦ Tamper proof with SENKO Safe Lock
- ♦ Reduced and simplified connectivity
- ♦ DC Power distance - 1Km (-48V, 40W over 12 AWG cable)

| | IP-ONE LC | | IP-ONE MPO LOW LOSS | | IP- ONE MPO | |
|--------------------------|-------------------------------------|--------|---------------------|---------------|---------------|--------------|
| | SM | MM | SM (Low-Loss) | MM (Low-Loss) | SM | MM |
| Insertion Loss (Max) | 0.2 dB | 0.2 dB | 0.35 dB | 0.3 dB | 0.7 dB | 0.5 dB |
| Insertion Loss (Average) | 0.08 dB | 0.1 dB | 0.1 dB | 0.08 dB | 0.2 dB | 0.1 dB |
| Return Loss | 55 dB | NA | 60 dB (Angle) | 25 dB (Flat) | 60 dB (Angle) | 25 dB (Flat) |
| Durability | 50 matings | | | | | |
| Operating Temperature | *-40°C+70°C | | | | | |
| IP Rating | IP68 | | | | | |
| Pull Force | 100 lbs | | | | | |
| Material | UV resistant | | | | | |
| Power Rating | | | | | | |
| DC | 100V 9.3A 930 Watts (12AWG) | | | | | |
| AC | Max AC 240V 4.8A 1.15Kwatts (12AWG) | | | | | |

XP FIT PLUS FIELD INSTALLABLE CONNECTOR



- ♦ Mechanical Splice (index matching gel)
- ♦ Highly Stable & Reliable
- ♦ Perfect Performance
- ♦ Compact Package
- ♦ RoHS Compliant
- ♦ Finished Connector meets UL94-V0 Flammability Rated
- ♦ TIA/EIA 568-C.3 Compliant

IP-SERIES WITH SAFE LOCK WEATHERPROOF CONNECTOR



| | IP-LC | | IP-SC | | IP-MPO LOW LOSS | | IP-MPO | |
|---------------------------------|--------------|--------|---------|--------|-----------------|---------------|---------------|--------------|
| | SM | MM | SM | MM | SM (Low-Loss) | MM (Low-Loss) | SM | MM |
| Insertion Loss (Max) | 0.2 dB | 0.2 dB | 0.2 dB | 0.2 dB | 0.35 dB | 0.3 dB | 0.7 dB | 0.5 dB |
| Insertion Loss (Average) | 0.08 dB | 0.1 dB | 0.08 dB | 0.1 dB | 0.1 dB | 0.08 dB | 0.2 dB | 0.1 dB |
| Return Loss | 55 dB | NA | 55 dB | NA | 60 dB (Angle) | 25 dB (Flat) | 60 dB (Angle) | 25 dB (Flat) |
| Durability | 50 matings | | | | | | | |
| Operating Temperature | -40°C+70°C | | | | | | | |
| IP Rating | IP68 | | | | | | | |
| Pull Force | 100 lbs | | | | | | | |
| Material | UV resistant | | | | | | | |

IP-FAN OUT KITS



The harsh environment (IP) distribution Fan-Out range is designed to be used outdoor and provide many years of reliable service. They incorporate the SENKO IP range of Connectors and Adaptors and can be configured either for initial or with redundancy for future connectivity requirements.

IP-DISTRIBUTION BOXES WEATHERPROOF JUNCTION BOXES



A wide range of sizes and configurations

- ♦ Fibre only or combined Power and Fibre variants
- ♦ Durable
- ♦ Plug and Play
- ♦ IP rated
- ♦ Light and easy to install
- ♦ Pole or wall mounted

Harsh Environment Accessories

PSA (PULLING SOCK ASSEMBLY) PRE-TERMINATION KIT



RUGGEDIZED COMPACT FAN-OUT



RUGGEDIZED SMALL FAN-OUT KIT



SMART CLEANER REPLACEMENT CARTRIDGE TYPE



SMART CLEANER FOR MPO



FIBER CHECKER



MPO 12 SMART CHECKER



THE COMPANY HYDRO GROUP COMPRISES HYDRO BOND ENGINEERING LTD,
HYDRO CABLE SYSTEMS LTD AND HYDRO GROUP ASIA PTE LTD. BUILDING ON
THREE DECADES OF PROVEN CAPABILITY AND INDUSTRY EXPERIENCE, HYDRO
GROUP HAS BECOME THE MARKET LEADER IN PROVIDING BESPOKE ENGINEERED
CABLE/CONNECTOR ASSEMBLY SOLUTIONS FOR SUBSEA APPLICATIONS IN BOTH
DOMESTIC AND INTERNATIONAL MARKETS.

Hydro Group are at the forefront in the development and innovation of subsea product technologies, with involvement from prototype concept through to design, manufacture and project management. Hydro Group manufacture the complete package including FAT at its state-of-the-art facilities in Aberdeen, Scotland; umbilical cables, electrical and optical connection systems / assemblies for data, power and signal transmission.



• Underwater Connector Series



Hydro Group plc designs and manufactures subsea Underwater Matable Connectors and Surface Matable Connectors and to client specifications. Our proven engineering expertise means that we can design Underwater Matable and Surface Matable Connectors for any underwater application.

Hydro Group plc holds the certification approval to ISO 9001 to design and manufacture harsh environment subsea electrical and optical connectors.



• Cable



Hydro Group design and manufacture subsea underwater electrical cables, fibre optic cables, hybrid cables, tethers and umbilicals for the subsea oil and gas, renewable energy and defence industry. Our focus is on product innovation, design, engineering and manufacturing of harsh environment composite power cables for subsea, underwater, topside and onshore applications. Hydro Group are able to manufacture complete cable harnesses at very short notice and are able to supply short lengths to customers for system trials and system design proofing. High grade materials such as are used in manufacture to produce cables with superior abrasion resistance, flexibility and reliability.

Materials: Polyurethane, EPR, Hytrel, TPR, Megalon, Polyethelen, Cross-linked

● Hose Bundle Series



Hydro Group plc has the in-house capability to lay-up hoses, electrical cables, fibre optics and other components into one 'twisted' composite bundle.

Laying-up: Our purpose built lay-up process allows hoses, cables, strength members and other components to be integrated into complex bundles. These bundles may be utilised in umbilicals as a composite assembly. The composite assembly may be taped, bound or oversheathed to assist handling. Hose bundles with such properties are used in many applications for the offshore subsea oil & gas industry. **Strength Members:** Hydro Cable offer a range of umbilical strength members including aramid braiding, steel wire central members and aramid rope central members.

● Manned and Unmanned Penetrator Series



Hydro Group plc designs and manufactures subsea underwater high Integrity manned penetrators and unmanned penetrators. Our proven engineering expertise means that we can design Manned and Unmanned Penetrators for any underwater application. Our fully blocked penetrators are available in both single-mode and multi-mode with all optical or optical / electrical combinations. Our penetrators have been pressure tested up to 10,000psi.i.

Benefits

- ◆ Easy to use
- ◆ Cost effective
- ◆ Less connections to worry about
- ◆ Low optical losses
- ◆ Low failure rate
- ◆ Fast Delivery lead times
- ◆ Wide variety of insert configurations allows cost effective system design
- ◆ Wide variety of metal options allows for best corrosion resistant design.

● Gland Series



Hydro Group plc designs and manufactures subsea Submarine Through Hull Glands and Equipment Glands to client specifications. Our proven engineering expertise means that we can design Submarine Through Hull Glands and Equipment Glands for any underwater application.

Hydro Group plc has been working closely with the M.O.D. to develop fiber optical copper configuration to include both existing Submarine Through Pressure Hull Glands (PHG) standards and Equipment Glands. Submarine Through Pressure Hull Gland's and Equipment Glands have been successfully deployed on S, T and V class submarines. Submarine Through Pressure Hull Glands and Equipmet Glands carry an extremely high capacity of data and therefore can help to reduce the previous level of equipment fitted to submarines, and in the case of communication and control systems reductions could be as great as 50%. Other benefits include fewer penetrations to the submarine hull which will increase the integrity of the hull as degradation can occur at the point of penetration, as well as water leakage at weakened interfaces. In addition, inspection and maintenance can be dramatically reduced over the life cycle of the submarine which is likely to exceed thirty years.



COMPAERO MANUFACTURE AND SUPPLY AN EXTENSIVE RANGE OF CONNECTOR ADAPTERS TO SUIT HARSH ENVIRONMENTS ACROSS LAND, SEA AND AIR.

Available solutions can provide both environmental and non-environmental sealing capabilities, effective EMI and RFI shielding and impressive strain relief options for almost any application.

Standard range adapters can be customized from a huge selection of options to ensure that your Compaero product is fully fit for purpose, whilst our team of experienced design engineers are on hand to work with you to provide bespoke solutions for more specific needs.



EMI/RFI SHRINK BOOT ADAPTERS
Example Shown: Series 46



ENVIRONMENTAL ADAPTERS
Example Shown: Series 60



EMI/RFI ENVIRONMENTAL ADAPTERS
Example Shown: Series 80

• Cable Clamps



Compaero manufacture and supply an extensive range of connector adapters to suit harsh environments across land, sea and air. Available solutions can provide both environmental and non-environmental sealing capabilities, effective EMI and RFI shielding and impressive strain relief options for almost any application.

Standard range adapters can be customized from a huge selection of options to ensure that your Compaero product is fully fit for purpose, whilst our team of experienced design engineers are on hand to work with you to provide bespoke solutions for more specific needs.

• Protective Covers



Compaero's full line of protective covers provide effective moisture and dust protection for almost every known circular connector. Covers are assembled to order from stock in as little as 48 hours with a wide selection of lanyard types and lengths. Security rings and eyelets of all sizes are also available.

• Accessories



Compaero can produce and supply a full range of accessories to be used in conjunction with your chosen termination solution. Approved M85049 termination bands, constant force springs and synthetic rubber bushings are all available from stock.

| DESCRIPTION | COMPAERO | GLENAIR |
|--|----------|---------|
| Stamped buckle standard band Straight | CPTB-111 | 600-052 |
| Stamped buckle standard band Extended straight | CPTB-112 | 600-090 |
| Stamped buckle mini band Straight | CPTB-12 | 600-057 |
| Stamped buckle mini band Extended straight | CPTB-122 | 600-083 |



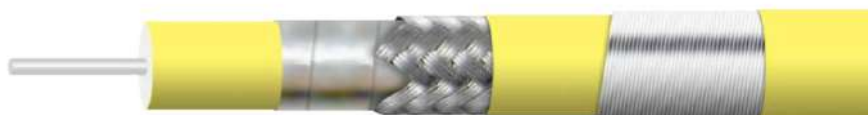
FOUNDED IN 1970, IW DEVELOPED A UNIQUE PTFE LAMINATION PROCESS AND APPLIED IT TO MANUFACTURING WIRE AND CABLE. THIS PROCESS ALLOWED IW TO MANUFACTURE PRODUCTS OF UNPRECEDENTED RELIABILITY ALONG WITH SMALLER DIAMETERS , FROM .050" TO 0.500" .

- ♦ Phase matching, amplitude matching, and time delay measurements up to 67 GHz are available when required.
- ♦ All assemblies are tested for VSWR and insertion loss before leaving the factory
- ♦ High Power cables:
 - 2801 – up to 1.9KW (c.w) @ 2 GHz
 - 4806 – up to 3.2KW (c.w) @ 1 GHz
 - customer proven to 15KW at 13.56MHz
 - 7506 – theoretical 5KW (c.w) @ 1 GHz
- ♦ 75ohm cables: 2801/75, 1801/75, 1151/75
- ♦ Low loss phase stable dielectric: 1571 cable 64dB/100ft. @ 40 GHz – 4dB/100ft. less than Micro Coax

CHOOSE YOUR CONNECTOR

| Cable Series | Frequency (GHz) | | | | | | | | |
|--------------|--|----|----|------|----|----|----|----|----|
| | 4 | 11 | 18 | 26.5 | 32 | 40 | 50 | 65 | 70 |
| 115 | GPO/GPPO, 1.85mm (V™), 2.4mm, 2.92mm (K™) | | | | | | | | |
| 125 | GPO/GPPO, 1.85mm (V™) | | | | | | | | |
| 140 | 2.4mm | | | | | | | | |
| 150 | SMA, TNCA, N, 3.5, 2.4, 2.92mm (K™) | | | | | | | | |
| 160 | N, SMA, TNCA, SMP, K™ | | | | | | | | |
| 170 | 2.92mm (K™) | | | | | | | | |
| 180 | N, SMA, TNCA, 3.5mm, 2.92mm (K™) | | | | | | | | |
| 230 | N, SMA, TNCA, SC, 3.5mm | | | | | | | | |
| 280 | N, SMA, TNCA, SC | | | | | | | | |
| 480 | N, 7/16, SC&C | | | | | | | | |
| RF047 | SMA, 2.92mm (K™), 2.4mm, 1.85mm (V™), GPO/GPPO | | | | | | | | |
| RF085 | Industry Standard 085 SR Connectors | | | | | | | | |
| RF141 | Industry Standard 141 SR Connectors | | | | | | | | |
| RF250 | SMA, TNC, N, SC | | | | | | | | |

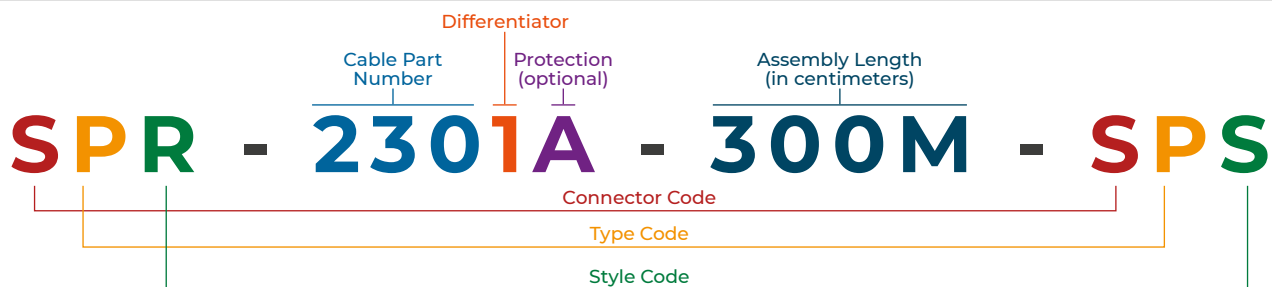
Connector types listed are preferred matching for referenced cables.
 Additional connector types can be provided. Please consult factory.





CABLE ASSEMBLIES

METRIC PART NUMBER



Note: Metric part number format is X.XX meters - 300M defines a 3m length assembly; a 10m assembly part number with the same connectors as shown above is SPR-2301A-1000M-SPS

Custom Solutions

In addition to our internally ruggedized cables, IW has a wide range of materials and processes designed to protect the integrity of our cable assemblies. These include a variety of metallic and non-metallic external sheaths to address your specific application. Please contact us for details.

- 1 ZEL** Tefzel Jacket
- 2 LC** Low Smoke/ Zero Halogen Polyurethane
- 3 NX** Fire resistant NOMEX* braid *Nomex is a registered trademark of the DuPont Corporation
- 4 A** Interlocked stainless steel armor, crush resistant up to 400 lbs per linear inch
- 5 N** Neoprene weather proof jacket
- 6 ALC** Armor with extruded Polyurethane jacket

Re-Flex

To provide improved electrical and mechanical performance over traditional hand-formable designs, Insulated Wire presents Re-Flex™.

Both RF085 and RF141 are industry standard line sizes, consequently a wide range of connector types and styles can be used with these cables, including: SMA, TNC, N, GPO™, GPPO™, 2.92mm/K™, 2.4mm and 1.85mm/V™, with performance up to 60GHz. RF250 is commonly used for higher power applications with SMA, TNC, N, SC and HN connectors available.

Cable part numbers are TPRFEP085, TPRFEP141 and TPRFEP250.

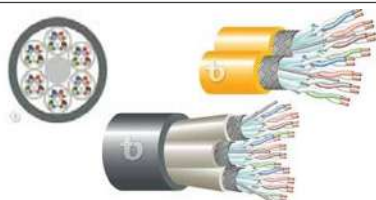


| CABLE TYPE | MAXIMUM FREQUENCY (CABLE ONLY) | ATTENUATION (DB/FT., MAX) | | | | BEND RADIUS (INCH) | REPLACES |
|--------------|--------------------------------|---------------------------|--------|--------|--------|--------------------|----------|
| | | 10 GHZ | 18 GHZ | 32 GHZ | 60 GHZ | | |
| RF085 | 62 GHz | 0.60 | 0.91 | 1.28 | 2.01 | 0.125 | RG405 |
| RF141 | 32 GHz | 0.41 | 0.60 | 0.88 | - | 0.250 | RG402 |
| RF250 | 19.5 GHz | 0.29 | 0.44 | - | - | 0.375 | RG401 |

TELDOR CABLES & SYSTEMS LTD. MANUFACTURES A WIDE RANGE OF WIRES AND CABLES FOR TELECOMMUNICATIONS, ELECTRONICS, AND ELECTRICITY, AND IS A LEADER IN THE DESIGN AND PRODUCTION OF HIGH DATA-RATE COPPER AND OPTICAL LAN CABLES, INDUSTRIAL BUS, INSTRUMENTATION AND CONTROL CABLES.

The factory was established in 1966 at Kibbutz Ein-Dor, in Israel's Lower Galilee. TELDOR is a leading manufacturer in the development and production of advanced electronic, FiberOptic and data communication cables, as well as outside plant Telecom cables.

• Category Cable Data Center Solutions



Cat.5e, Cat.6, Cat.6A, Cat.7, Cat.7A solutions for data centers, patch cords and hybrid cables. Industrial Ethernet Outdoor Data Solutions.

• Instrumentation Cable Solutions



Indoor and Outdoor Cables for the Process Industry, Petrochemical Industry, Unshielded and Shielded, Armored and Unarmored for Automation, Bus Cable and Hazardous Areas.

• Signal & Control Cable Solutions



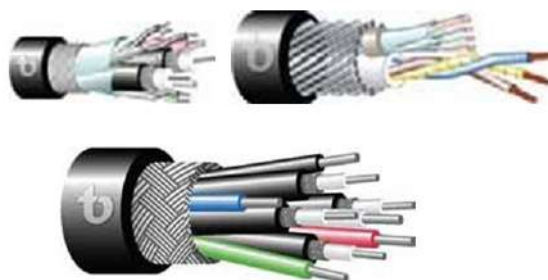
Instrumentation, Thermocouple, Bus Cables and Security Cables.

• Optical Cable Solutions



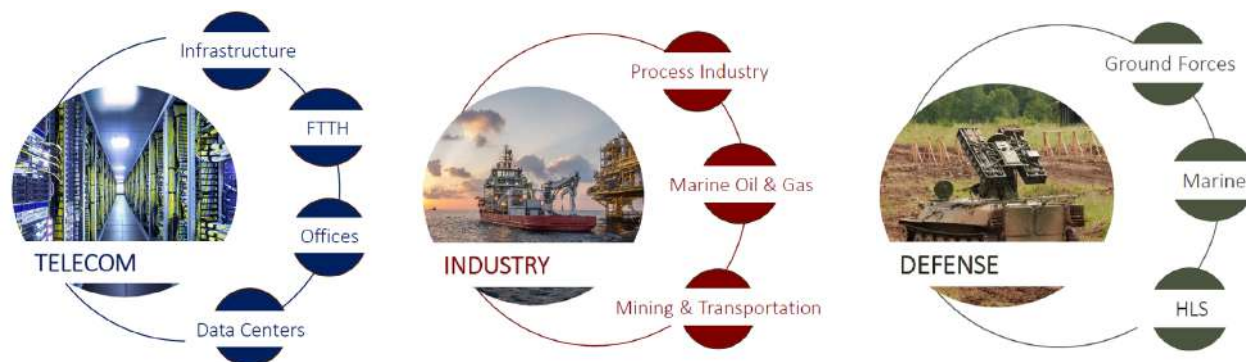
Optical Cables for Indoor, Outdoor, Distribution, Breakout, Tactical and Jumper Applications. Rus Approved.

• Military & Special Cable Solutions



Tactical Cables, Tailor-Made Cables with Special Armoring and Sheating Materials for Medical, Oil & Gas, Military and Special Applications with Different Conductor Sizes within the Cable; Composite or Hybrid Cable Design.

MARKET SEGMENTS



Defence Line Overview

- ◆ Specialty cables (EPD, Custom Design)
- ◆ Tactical Fiber Optic cables
- ◆ Tactical Data (Category) cables
- ◆ Marine & Underwater Cable
- ◆ Hybrid and Composite cables
- ◆ Wires

Armoring

- ◆ Long life cycle & high reliability
- ◆ Designed to fit system and operational needs
- ◆ Endurance in harsh environmental conditions
- ◆ Excellent mechanical properties
 - Galvanized Steel Wires (SWA)
 - Steel Braid Armor (SBA)
 - Corrugated Steel Armor
 - Copper Braid Armor
 - Bronze Wire Armor
 - Dielectric/Glass Armor

Standards & Certifications

We design cables to meet

- ◆ **MIL-DTL-24643**
Low Smoke Zero Halogen Shipboard cable
- ◆ **MIL-DTL-24640**
Lightweight, Low Smoke, Electric Cables for Navy Shipboard Applications
- ◆ **MIL-DTL-3432**
Cables (Power and Special Purpose) and Wire, Electrical (300 and 600 Volts)
- ◆ **MIL-49291/3**
Performance Specification: Fiber, Optical, General Specification
- ◆ **MIL-PRF-85045**
Performance Specification: Cables, Fiber Optics, General Specification including Tactical
- ◆ **MIL-C-17**
Cable, Radio Frequency, Coaxial
- ◆ **MIL-STD-810-F**
Test Method Standard for Environmental Engineering Considerations and Laboratory Tests

Computer & LAN Cables

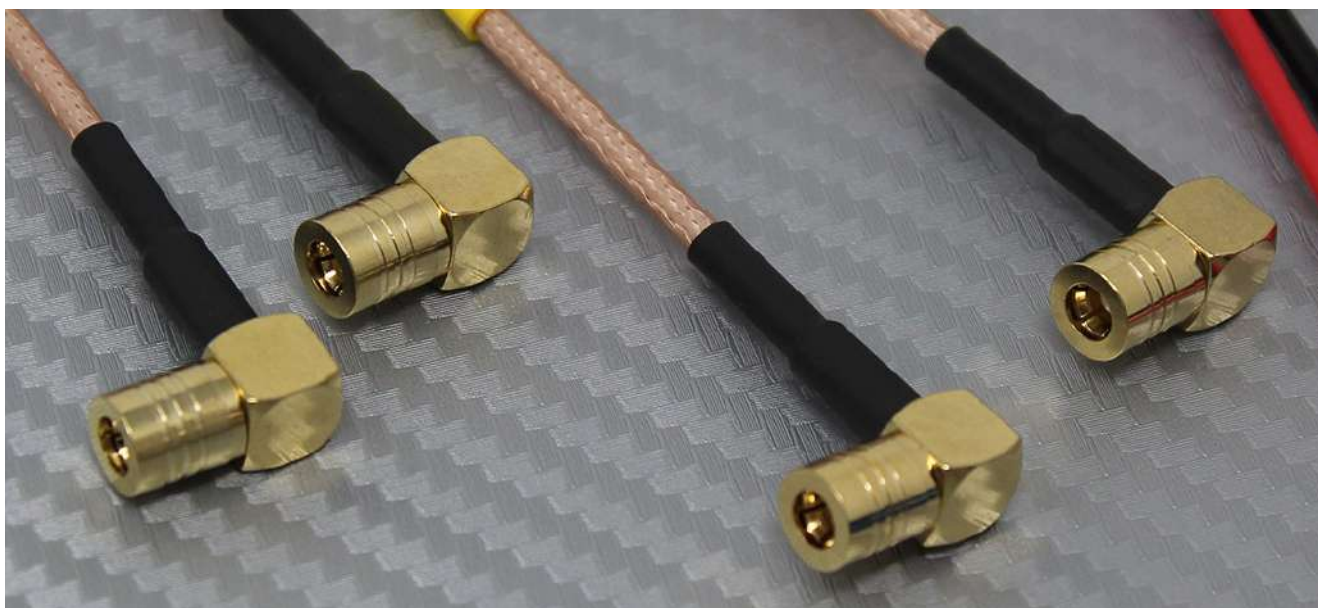
| BANDWIDTH (MHZ) | APPLICATION | CAT. | STANDARTS |
|-----------------|--------------------------------|------|--|
| 100 | 10/100 BaseT 1 GBaseT(1GbE) | 5e | ISO/IEC 11801, IEC 61156-5/6, TIA/EIA 568B/C |
| 250 | 10/100 BaseT 1 GBaseT(1GbE) | 6 | ISO/IEC 11801, IEC 61156-5/6, TIA/EIA 568B/C |
| 500 | 10 GBaseT | 6A | ISO/IEC 11801, IEC 61156-5/6, TIA/EIA 568C |
| 600 | 10 GBaseT ++ | 7 | IEC 61156-5/6 |
| 1000 | 10 GBaseT +++ | 7A | IEC 61156-5/6 |
| 1200 | Multiservice | N/A | IEC 61156-7/8 |
| 2000 | 40GB/s | 8 | ISO/IEC 11801, IEC 61156-9/10, TIA/EIA 568C |



ESTABLISHED IN 1990, AT FIRST SCOTT CABLES WERE KNOWN AS SELECT ENTERPRISES THAN REBRANDED AS SELECT CABLES, AND IN 2012 BECAME SCOTT CABLES. WHATEVER SCOTT CABLES HAS BEEN CALLED, THEY HAVE ALWAYS PROVIDED HIGH-QUALITY PRODUCTS AND EXEMPLARY CUSTOMER SERVICE. AND ALL OF THE MANUFACTURING IS DONE IN THE UK.

● **RF Cable Assemblies**

At Scott Cables, we have a long history of supplying high-quality RF cable assemblies, either phased matched or delayed depending on your requirements. All our RF cable assemblies are fully performance-tested to make sure they match your needs.



Our customers come to us for applications in:

- ◆ Military, aerospace and rail communication systems
- ◆ Wireless networks in the telecommunication industry
- ◆ Commercial uses for sound and vision broadcast

RF Cable Assembly Types

We can supply you with high-performance flexible and semi-rigid RF cable assemblies, including microwave cable assemblies up to 40GHz. Due to our automated coaxial cable preparation equipment, you will benefit from reduced build times and high volume production runs. This helps to keep your costs down too.

● **Wiring Harnesses – UK Manufacturer**

Scott Cables is a UK manufacturer of bespoke wiring harnesses (or wiring looms as they are also known) for a vast range of power, data and signal applications. We have a highly skilled and experienced team and have been supplying wiring harness products to our customers for thirty years. Our products support a wide variety of market sectors including critical applications in defence, aerospace and rail.



Wiring Harness Types

Our customers come to us for:

- ◆ Open looms, assembled using tape, cable ties or lacing cord.
- ◆ Fully sealed systems, using heat shrink tubes, moulded parts and conduit.
- ◆ Electrically shielded harnesses, using braid or foil screening to eliminate interference in critical applications.
- ◆ Multicore cables, where consistency of your product is guaranteed, with the precise number, colour and specification of inner wires to suit your application.

We manufacture wiring harnesses using all types of connector systems, in both crimp and solder termination styles, including:

- ◆ Military Circular
- ◆ Industrial
- ◆ D-Type/D-Sub
- ◆ IDC

● **Electro-Mechanical Assemblies**

Scott Cables can provide you with complete, ready-to-install electro-mechanical assembly units comprising of a combination of electrical wiring with a PCB or a range of electrical devices, including switches, relays and bulbs. Ordering a block of components as a single-part number assembly from us helps keep your project running more efficiently, by reducing your purchasing administration burden and assisting your supplier rationalisation initiative.



Electro-Mechanical Assembly Types

Our electro-mechanical assemblies include:

- ◆ Control panels and boxes
- ◆ Distribution boxes
- ◆ Rack and panel assemblies
- ◆ Cabinet wiring

The assemblies are often supplied housed in either metal or plastic enclosures, and we can provide these housings and any bracketry custom-made to your own requirements. Any metalwork can be machined, painted or plated to your specifications.

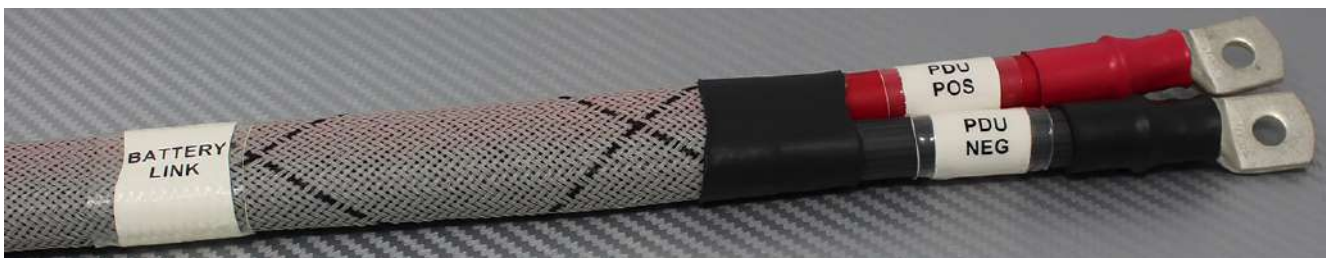
In addition, our well-equipped on-site tool room allows for rapid modification of standard off-the-shelf housings.

● **Power Leads and Battery Cables**

With 30 years in the business, Scott Cables understand the importance of good quality power leads and battery cables to ensure your electrical circuits work efficiently. We have cut, strip and termination equipment suitable for high-power assemblies built with large cross-sectional area cables. The automated processing equipment means that we can supply you with high volume runs with reduced build times at a low cost to you.

Our UK-based business produces quality, performance-tested battery cables and power distribution systems for:

- ◆ Electric and hybrid vehicle drivetrains
- ◆ Industrial and military generators
- ◆ Electrical power transmission lines in rail and energy applications.



Power Lead and Battery Cable Types

We offer a wide range of bespoke insulated power cable assemblies for both low voltage and high voltage applications, as well as braided earth straps that can be built to your own specification.



METTEX HAS BEEN SUPPLYING COPPER BRAIDED SOLUTIONS SINCE 1973. WE ARE NOW THE LARGEST UK COMPANY WHOSE ACTIVITIES AND SKILLS ARE FOCUSED SOLELY ON THE MANUFACTURE OF FLEXIBLE WIRE BRAID, STRAND AND RELATED VALUE ADDED PRODUCTS AND SERVICES.

Our abilities have led us to achieve approved supplier status to many prestigious organisations such as Rolls-Royce, 3M, Alstom, Bombardier, BAE, London Transport and including market leaders within the consumer and services industries. Around 50% of all products manufactured at Mettix are now exported around the world, throughout Europe, America and the Far East.

We have an extensive client base spanning across the general electrical, automotive, aerospace, communications and defence sectors amongst others, where our products meet and exceed the strictest of requirements.




● **Sleeving & Screening Braid**




DIRECT EQUIVALENT TO RAY101

- ◆ Screening of cables from electromagnetic, electrostatic and RF interference
- ◆ Mechanical support
- ◆ Protection against abrasion and corrosion
- ◆ EMC & EMH applications
- ◆ Copper wire braid earth continuity purposes
- ◆ Nickel-plated copper elevated temperatures and harsh environments (abrasion- corrosio)
- ◆ Industry standard coverage of minimum 90% or 95%
- ◆ Wide range - from 2mm up to 70.0mm Ø
- ◆ Excellent expansion ratios
- ◆ Normally supplied on removable PVC former
- ◆ Options for bespoke requirements
- ◆ Sample packs available for prototyping
- ◆ Stainless steel or galvanised wire is an option

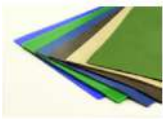


| REFERENCE (EQUIVALENT TO RAY 101) | I/D MM | MINIMUM OPTICAL COVERAGE | USEABLE RANGE | | BRAID SECIFICATION | CROSS SECTIONAL AREA (SQMM) |
|---|-----------|--------------------------------|-----------------|-----------------|-----------------------|--------------------------------------|
| | | | MIN DIA (MM) | MAX DIA (MM) | | |
| MBS 95 3.0 | 3 | 95% | 2,00 | 5,00 | 16/10/0.10 | 1,23 |
| MBS 95 4.0 | 4 | 95% | 3,50 | 7,50 | 24/7/0.13 | 2,23 |
| MBS 95 6.0 | 6 | 95% | 4,50 | 9,50 | 24/9/0.13 | 2,87 |
| MBS 95 7.5 | 7,5 | 95% | 7,00 | 14,00 | 24/14/0.13 | 4,47 |
| MBS 95 10.0 | 10 | 95% | 8,00 | 22,00 | 36/12/0.13 | 5,73 |
| MBS 95 12.5 | 12,5 | 95% | 11,00 | 24,00 | 36/15/0.13 | 7,16 |
| MBS 95 20.0 | 20 | 95% | 16,00 | 38,00 | 48/16/0.13 | 10,21 |
| MBS 95 25.0 | 25 | 95% | 22,00 | 38,00 | 48/18/0.13 | 11,49 |
| MBS 95 30.0 | 30 | 95% | 27,00 | 40,00 | 36/18/0.20 | 20,36 |

| PRODUCTS | KEY FEATURES | BUSINESS AREAS |
|--|--|------------------------------------|
| FLAT & ROUND BRAID  | Earth Connections | Defence Aerospace |
| | Power interconnection | Rail transportation |
| | Lightening protection | Automotive Electronics |
| | Flexible links | General Electrical Sector |
| | Tight Bend Radius; Overcome vibration/ alignment problems/ space restrictions | |
| FLEXIBLE STRAND OR ROPE  | Power interconnection | Defence Aerospace |
| | Applications involving a high level of flexing | Power Generation & Control |
| | Lightening protection | Transportation |
| | Vibration resistant | Electronics |
| | Earth Connections | General Electrical Sector |
| KNITTED (WOVEN) WIRE MESH TAPE  | EMC/RFI shielding for cables | Rail Transportation |
| | Cable jointing | Communication |
| | Repairing armoured cable | Electronics |
| | Mechanical Cushion (springy nature of the tape; mechanical cushion) | Power Distribution & Service |
| | | Electrical Component Manufacturers |

| PRODUCTS | KEY FEATURES | BUSINESS AREAS |
|---|---|------------------------------------|
| STOCKING BRAID | Earth Continuity for MV & HV Joints | Power Generation |
|  | Continuous rating from 60 amps to 470 amps | Power Distribution |
| | Cross sectional areas from 6.0mm ² to 150.0mm ² | Component Suppliers & Distributors |
| | Range of diameters up to 220mm 'push back' | Service Installers |
| | High short term fault current capacity | Electrical Component Manufacturers |
| FLEXIBLE CONNECTOR ASSEMBLY (Up To 400A) | Overcome vibration/alignment problems | Defence Aerospace |
|  | Interconnectors for LV power distribution units | Transport |
| | Earth connections | Switchgear & Control Equipment |
| | Battery connections | Power Generation |
| | Cable jointing kits | Electrical Equipment Manufacturers |
| FLEXIBLE BUS BAR (Over 800A) | Heavy-duty power interconnection | Power Generation |
|  | Overcome vibration/alignment problems | Power Distribution |
| | Expansion joints | Switchgear & Control Panels |
| | Variable terminating positions | Marine Propulsion |
| | | Rail Transportation |

P & P TECHNOLOGY WAS FORMED IN 1989 BY A SMALL GROUP OF ENGINEERS, EACH WITH MANY YEARS OF EXPERIENCE IN THE DESIGN AND PRODUCTION OF EMI SHIELDING COMPONENTS. SINCE THEN WE HAVE GROWN TO BECOME ONE OF EUROPE'S LEADING MANUFACTURERS OF RADIO FREQUENCY AND ELECTROMAGNETIC INTERFERENCE (RF & EMI) SHIELDING PRODUCTS, AND HAVE DEVELOPED A DIVERSE PORTFOLIO OF PRODUCTS AND CLIENTS.



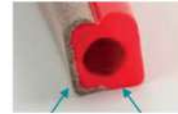
Conductive Elastomers



Conductive Elastomers



Conductive Elastomers
Moulded 'O' Rings



Co-extrusion Conductive
Gasket



Aluminium Honeycomb Vents



Round Aluminium
Honeycomb Vents



Steel Honeycomb Vents



Oriented Wires in Silicone



Knitted Wire Mesh



Knitted Wire Mesh over
Elastomer Core



Knitted Wire Mesh with
Enviromental IP Carrier



Knitted Wire Mesh Moulded
to Silicon-Fluorosilicone



Fabric Over Foam



Neoprene Sponge



Copper & Aluminium
Conductive Foil Tape



Shielded Windows



Compressed Mesh 'O' Rings



Conductive Sponge Material



Thermal Graphite



Composite Wire Mesh



Expanded Wire Gasket



Co-extrusion Conductive



Thermal Gap Pad



Connector Gaskets



Silicone



Copper Fingerstock



Shielded Windows



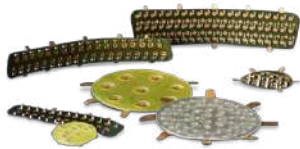
Thermal Pad



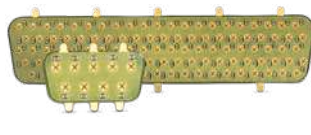
HEADQUARTERED IN OUR EXPANDED FACILITY IN IRVINE, CALIFORNIA, OUR COMPANY WAS ESTABLISHED IN 1996 BASED ON THE DEVELOPMENT OF OUR FLEXFILTER INSERTS FOR EMI FILTERING. OVER THE YEARS, EMI SOLUTIONS HAS STEADILY GROWN BY DIVERSIFYING OUR PRODUCT OFFERING TO MEET OUR CUSTOMER'S NEEDS.

• **Flexfilter Inserts**

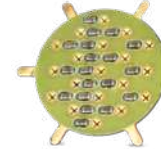
MIL-CIRCULAR



D-SUB



ARINC



Meets requirements for:

DO-160

MIL-STD 461

MIL-STD 810G

- ♦ Quick turn
- ♦ Cost effective
- ♦ High Reliability
- ♦ Simple installation - configured to your existing connector
- ♦ Suited for High Voltage and Severe Environments
- ♦ Select Components (Caps, Resistors, Diodes and more) on a pin by pin basis

• **Filtered MIL-Circular Connectors**



Designs for all Mil-Circular Connectors including:

D38999

M26462

M5015

Pi Filters

- ♦ Highest Performance with minimal resonance Insertion Loss of 70 – 80 dB
- ♦ Limited number of available capacitances and variations

Planar Arrays or Discoidal Capacitors

- ♦ Very good broadband performance
- ♦ Insertion loss of 50 – 60 dB
- ♦ Can be combined with Inductors (L) for improved performance

Chip Capacitor

- ♦ Good for “notch” type filtering
- ♦ Reduced higher frequency performance due to chip cap resonance
- ♦ Insertion Loss of 40 - 45 dB
- ♦ Wide variety of capacitances and variations available

● Filtered D-Sub Connectors



Designs for all Mil Spec D-Sub Connectors:

MIL-24308

MIL-83513

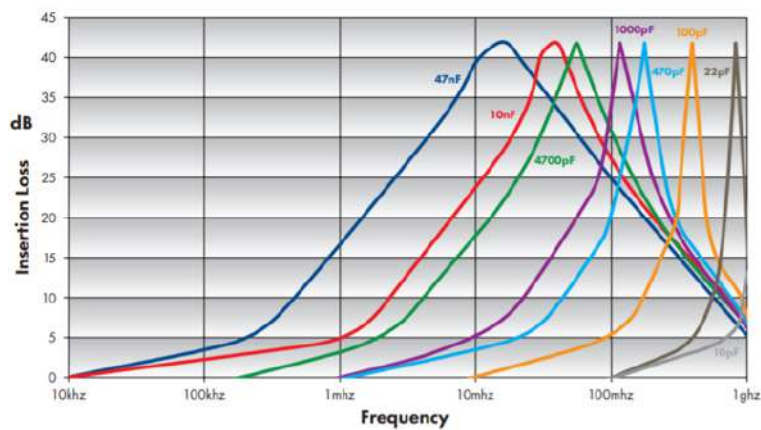
C & Pi Filters

- ◆ Highest Filter Performance with Minimal Resonance
- ◆ Insertion Loss of 70 - 80 dB
- ◆ Limited number of available capacitances and variations

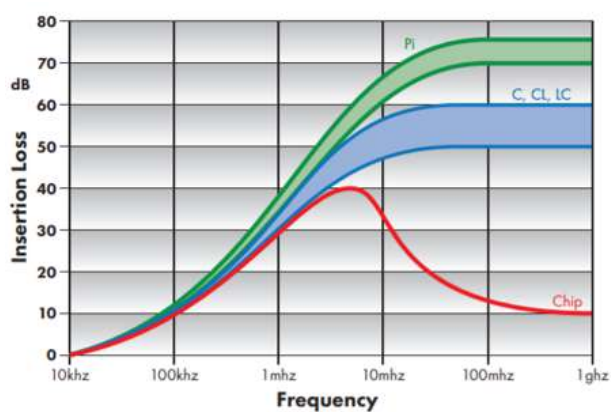
Chip Capacitor

- ◆ Good for “notch” type filtering
- ◆ Reduced higher frequency performance due to chip cap resonance
- ◆ Insertion Loss of 40 - 45 dB
- ◆ Wide variety of capacitances and variations available

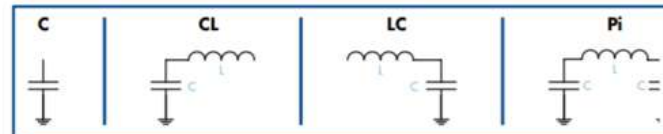
● Chip Capacitor Filter Performance



● Filtered Connector Performance



| | Capacitance Options | Filter Performance |
|-------------------------|---------------------|--------------------|
| Pi with Planar Arrays | 100 pF – 1 uF+ | 70+ dB |
| Pi Tubes | 47 pF – 12,000 pF | 70+ dB |
| Discoidal Capacitor (C) | 470 pF – 40,000 pF+ | 50 – 60 dB |
| Planar Array (CL & LC) | 100 pF – 1 uF+ | 50 – 60 dB |
| Chip Capacitor | 3 pF – 47,000 pF+ | >40 dB |



| PI FILTERING | C, C-L OR L-C FILTERING | CHIP CAPACITOR FILTERING |
|---|--|------------------------------------|
| Built with Pi Tubes, Discoidal or Planar Arrays | Built with Chip Caps, Discoidals, Planars or C Tubes | 40+ dB Insertion Loss |
| Provides C-L-C Component Configuration | | Quick Turn |
| Highest Performance: 70+ dB Insertion Loss | 45 - 60 dB Insertion Loss | Lowest Cost Option |
| Very Good High Frequency Performance | Good Broad Spectrum Filter Performance | Limited High Frequency Performance |

• Termination Options



• Feed Thru Filters

- ◆ Solder in, Screw in, or Press in versions
- ◆ Ideal for RF Applications
- ◆ Circuit types: C, CL, LC, Pi
- ◆ Typical Capacitance: 1.0pF to 20,000+ pF
- ◆ Operating Temp: -55°C - +125°C
- ◆ Hermetic Seal option
- ◆ Various sizes and threads
- ◆ High Working Voltage Rating: 50-500V typical
- ◆ Custom versions available



CONNECTORS

OMNETICS
CONNECTOR CORPORATION

ODU
A PERFECT ALLIANCE.

TEH

PE PASTERNAK
an INFINITI® brand

Fairview Microwave
an INFINITI® brand

L-com
an INFINITI® brand

Rosenberger

Konnect RF

MICROPOL

DIAMOND
the fiber meeting

E-tec
Interconnect

integra optics
an INFINITI® brand

Winchester
Interconnect.

Hydro Group
plc.

COMPAERO

CABLES

INSULATED WIRE
INCORPORATED

TEL DOR
Cables & Systems Ltd.

mettlex
Braids, Strands & Flexible Connectors

PE PASTERNAK
an INFINITI® brand

L-com
an INFINITI® brand

Hydro Group
plc.

Fairview Microwave
an INFINITI® brand

Rosenberger

MICROPOL

Konnect RF

E-tec
Interconnect

DIAMOND
the fiber meeting

SENKO
Advanced Components

EMC/EMI SOLUTIONS

EMI
SOLUTIONS INC

P&P
TECHNOLOGY



İSTANBUL

Acıbadem Mah. Çeçen Sok. Akasya Evleri Sitesi A Kule Blok No:
25 A/197, 34660 Üsküdar/İstanbul TURKEY

Tel: +90 216 504 0787 | Fax: +90 216 504 0786

ANKARA

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Caddesi No:57/84 06530 Çankaya/Ankara TURKEY

Tel: +90 312 557 5424 | Fax: +90 312 483 3912