

# Rosenberger

[www.rosenberger.com](http://www.rosenberger.com)

## Rosenberger

About EMC EMI shielding solutions EMCEMI Staff have between them, over 50 years' experience in the manufacturing processes involved in making high quality & reliable EMC & RFI components, while specialising in the manufacture and supply of a wide range of products which are manufactured at our brand new factory in Essex in the United Kingdom. We manufacture components to MIL83528C specification.



### 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



PRIZM®  
Light Turn®



VIA® - Variable Interface  
Adaptor



P-SMP



Mini-SMP



SMP



FMC



Longwipe-SMP



Micro-RF



EIC - Elastic Board-to-Board  
Connection

### AeroSpace & Defense

Rosenberger is a qualified manufacturer according to

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

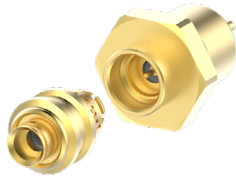
#### Portfolio

- ◆ 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



## • SMP Infinity

### Mechanical specification

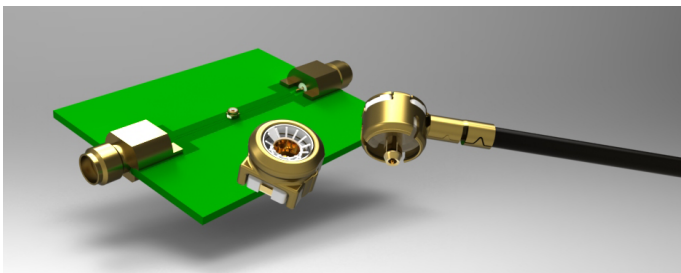
- ◆ Reliable connection, low insertion force ( $\leq 45\text{N}$ , like SMP limited detent)
- ◆ Locking sleeve: retention force up to 400 N
- ◆ One piece connector with pre-assembled inner conductor
- ◆ Not intermateable with SMP

### 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  $\Omega$
- ◆ Height switch + cable connector < 2,7mm
- ◆ EMI Shielding: > 40 dB up to 3 GHz  
> 35 dB up to 6 GHz
- ◆ Mating cycles > 10000

## • SMP

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



## • Long-Wipe SMP

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



Coaxial Calibration Kits



Microwave Test Cables



VNA Test Port Cables



Compact Calibration Kits



Verification Kits



Test Port Adaptors



Test Devices



Precision Connectors



Precision Adaptors

## 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



QMA Non-Magnetic Connectors



Multi Channel Mini-Coax



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



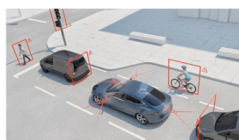
Rosenberger Duplex Connector (RDC)



Optical #16 Contacts



Rosenberger Quad Connector (RQC)



### Assistance & Safety System

Surround View, 4K-Camera System



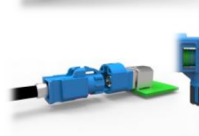
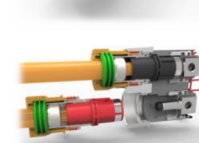
### Sustainable Mobility

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