

SMP-MAX Evolution

More RF Board2Board for less



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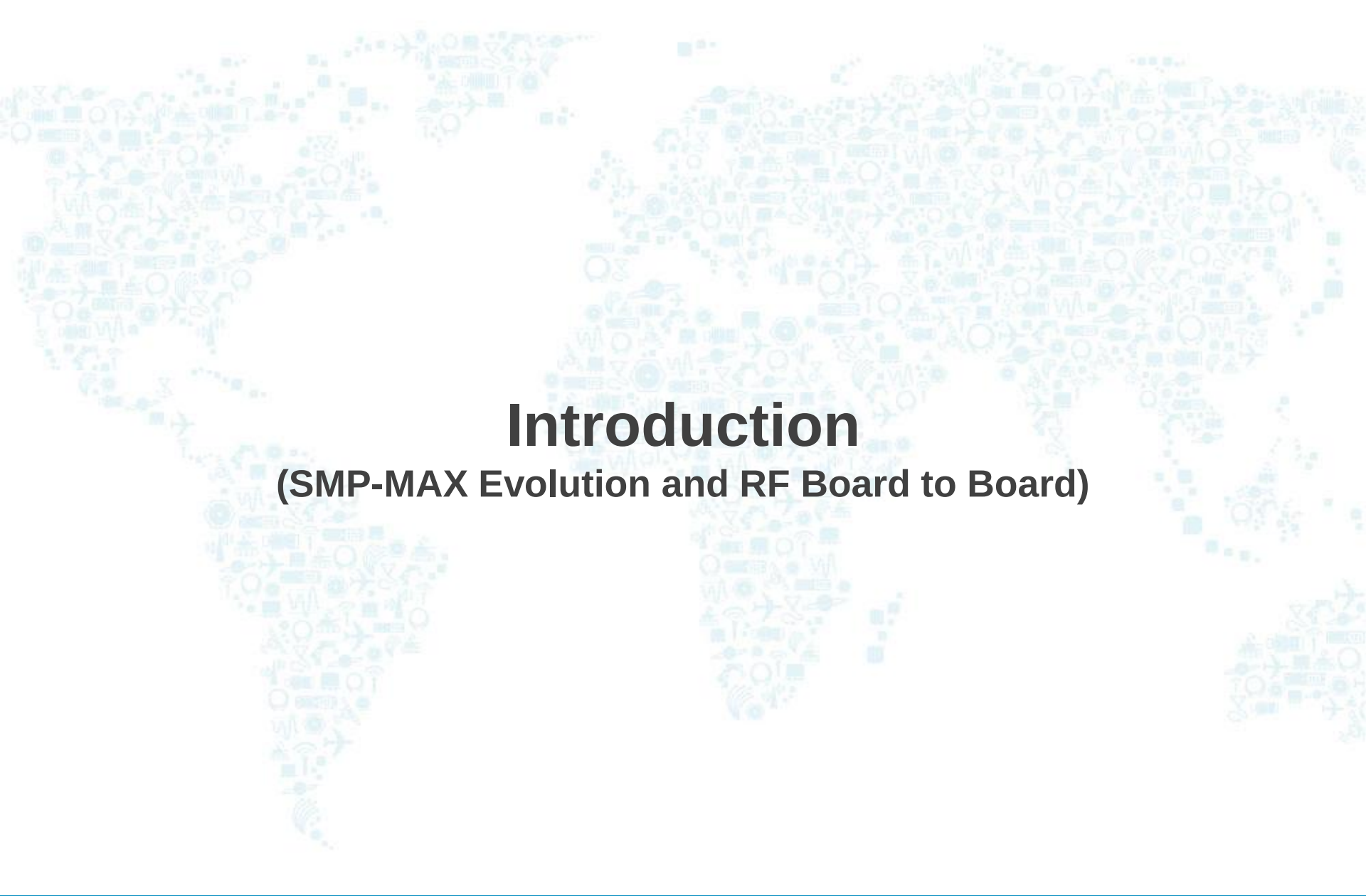
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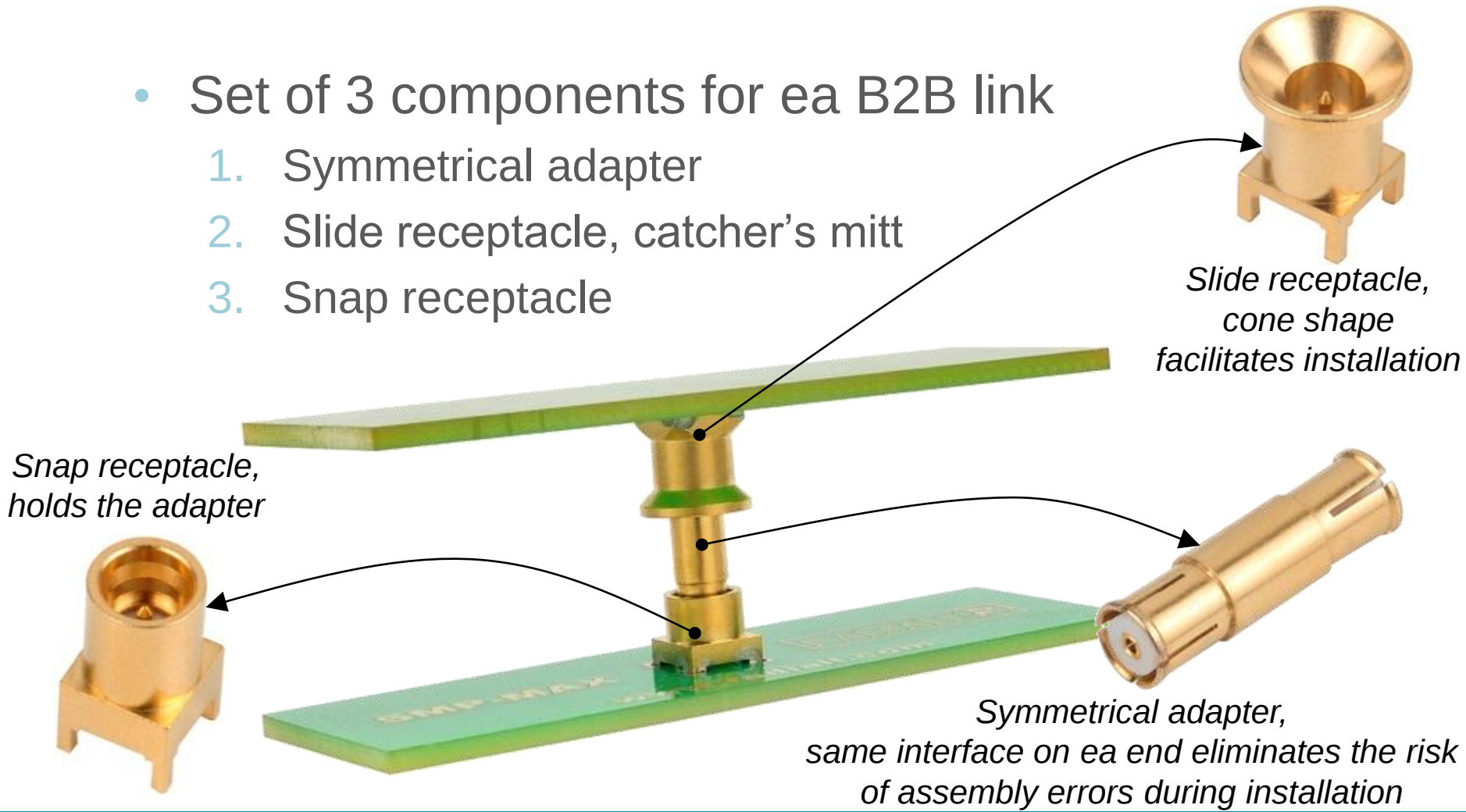
A world map where the landmasses are filled with a dense pattern of small, light blue electronic and communication symbols. These symbols include various waveforms, circuit components like resistors and capacitors, and communication icons like Wi-Fi and cellular signals. The background is a very light blue, and the overall effect is a global network of technology.

Introduction

(SMP-MAX Evolution and RF Board to Board)

SMP-MAX basics

- Set of 3 components for ea B2B link
 1. Symmetrical adapter
 2. Slide receptacle, catcher's mitt
 3. Snap receptacle

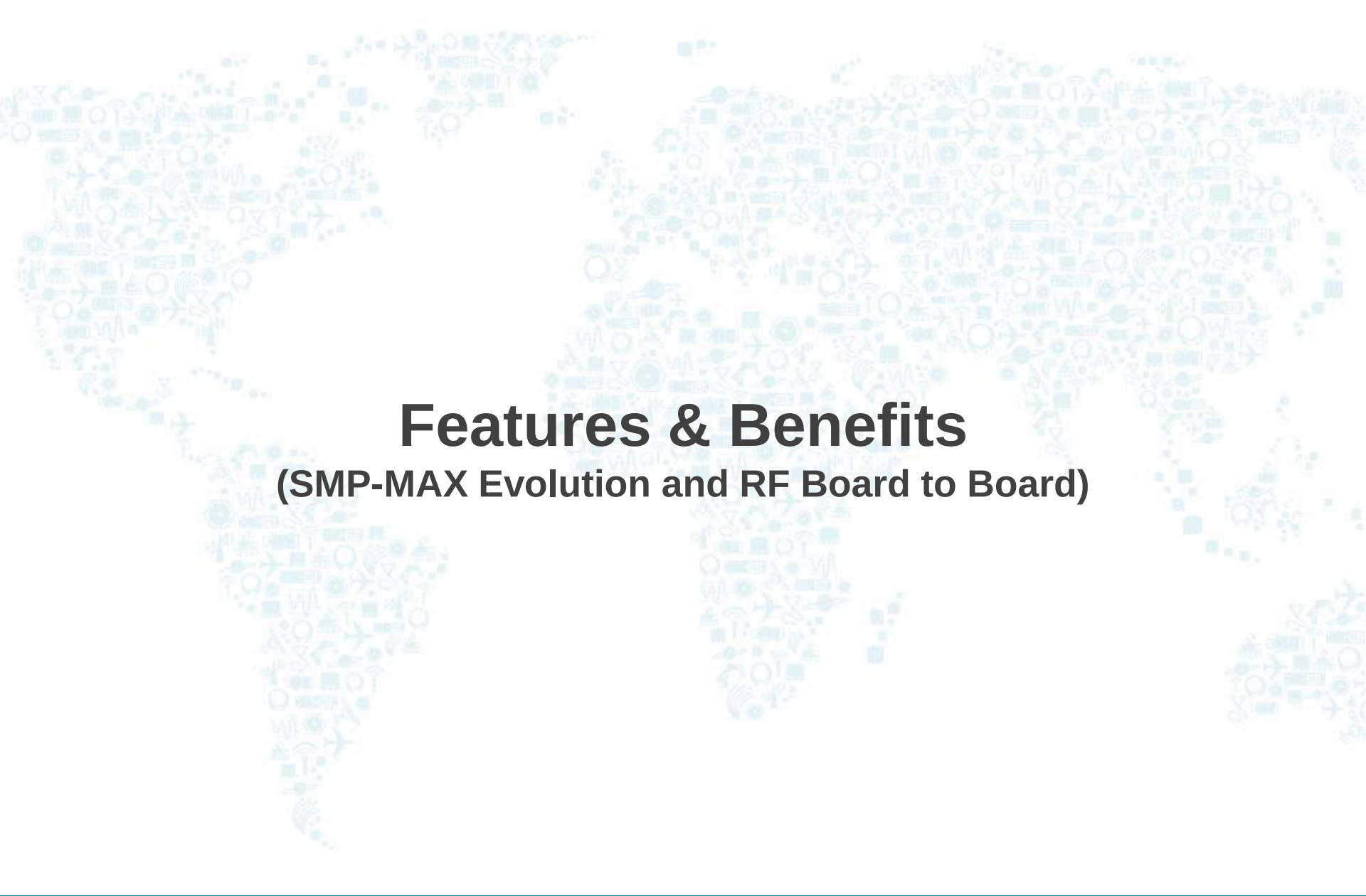


Why SMP-MAX Evolution?

- SMP-MAX is chosen as RF B2B solution by several OEMs



- Aggressive cost reduction target
- Without compromising on performance
- Larger axial tolerance required

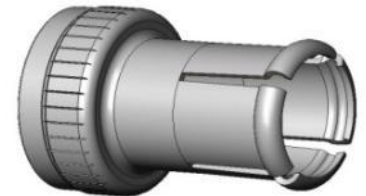
A world map where the landmasses are filled with a dense pattern of small, light blue icons representing various technologies and communication concepts, such as Wi-Fi symbols, airplanes, and network nodes.

Features & Benefits

(SMP-MAX Evolution and RF Board to Board)

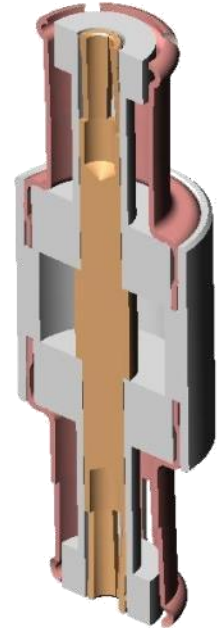
Adapter Re-design

- Outer contact obtained from deep-drawn technology
 - Same unique outer contact for all adapters, and in stock availability, means shorter leadtime



Adapter Re-design

- 3 pieces body design
 - Lower cost brass vs CuBe2
 - higher flexibility for long distance bullets
 - Larger outside diameter improves robustness
- BBR plating provides lower cost vs gold



Slide Receptacle Re-design

- Composite molded Catcher's mitt reduces amount of gold required for plating
- Longer center pin for larger axial misalignment tolerance
- Improved pull-in range



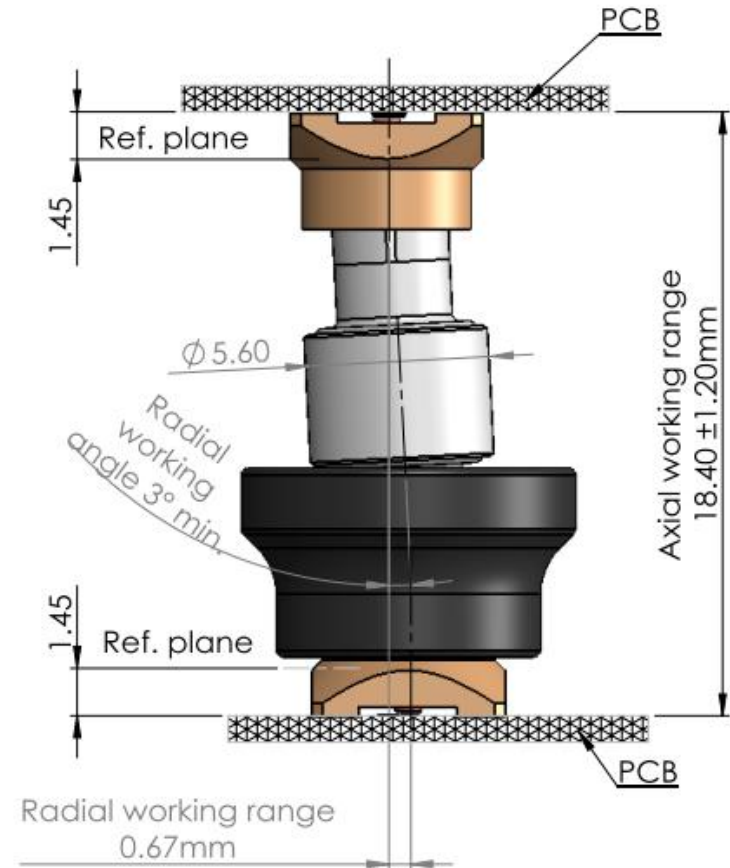
Snap Receptacle

- Reduced body height for cost saving
- Suitable for B2B configurations only (not board to cable)
- LCP insulators provide good center contact captivation and short B2B distance



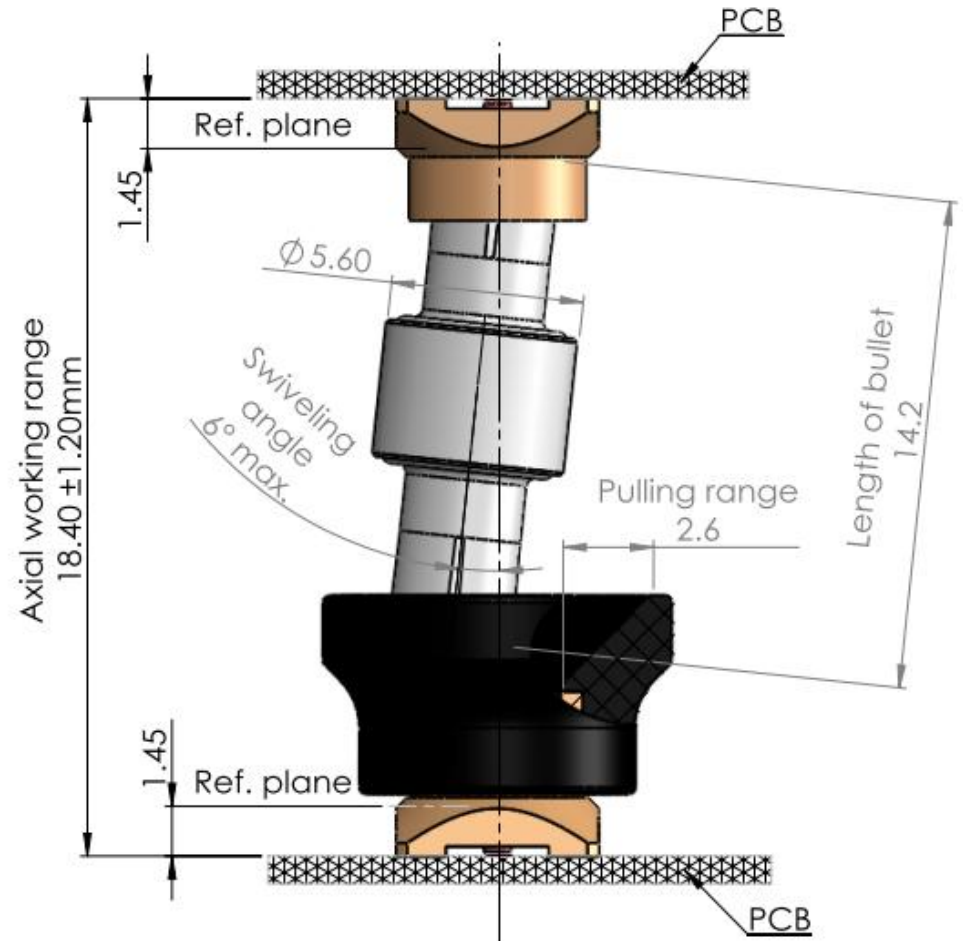
Working Range

- Minimum bullet length
 - 14.2mm
- Optimum BtB distance
 - 18.4 +/-1.2mm
- Axial misalignment
 - +/-1.2mm
- Radial misalignment
 - 3°
- Larger adapter diameter
 - 5.6mm



Working Range

- Pull-in range
 - 2.6mm
- Swiveling range
 - 6°



Characteristics

Mechanical Characteristics	SMP-Max Evolution	
	Snap Type	Slide Type
Mating cycles	100	500
Engagement force	<45N	<14N
Disengagement force	>9N	<9N
Center contact retention force	>7N	
Mini BtB distance	18.4 +/-1.2mm	
Axial misalignment	+/- 1.2mm	

Test report available

Electrical characteristics	SMP-Max Evolution	
Impedance	50 ohm	
Frequency	0-6 GHz	
	Misalignment	0-3 GHz
VSWR	0 °	1.05
	1 °	1.05
	1.3 °	1.06
	2 °	1.13
	2.3 °	1.14
Insertion Loss	0 °	0.073
	2.3 °	0.091



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Product Range

(SMP-MAX Evolution and RF Board to Board)

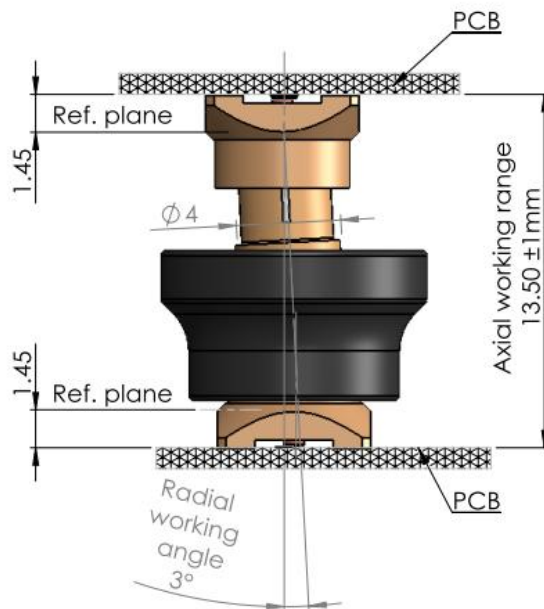
Product Offering

- New part numbers are introduced R222.Mx**3**.xxx
- Snap receptacles
- Slide receptacles
 - Composite catcher's mitt alignment cone can be installed on most PCB receptacles
- Bullet adapters
 - Min length $\geq 14.2\text{mm}$

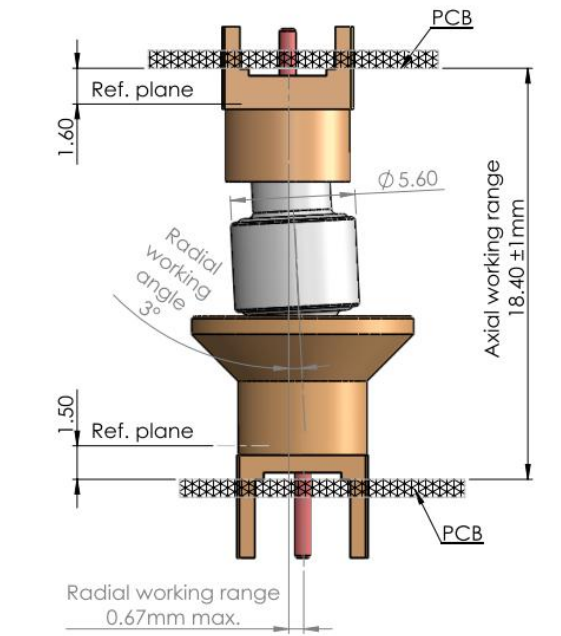


Compatibility

- SMP-MAX Evolution is fully compatible with standard SMP-MAX

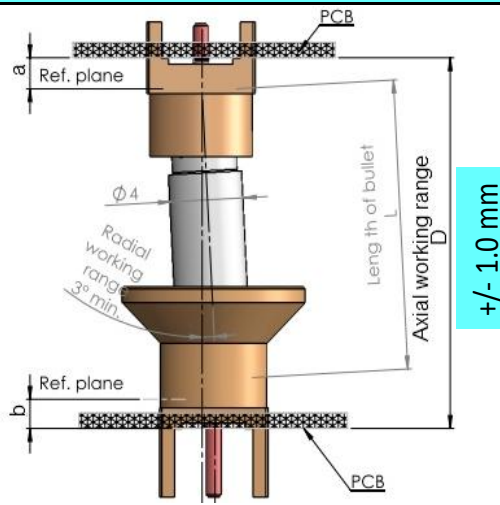
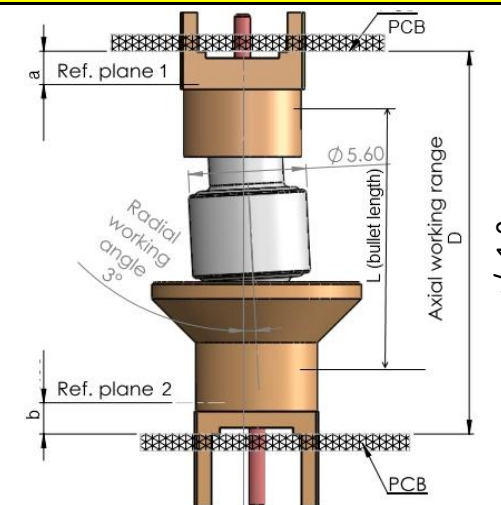
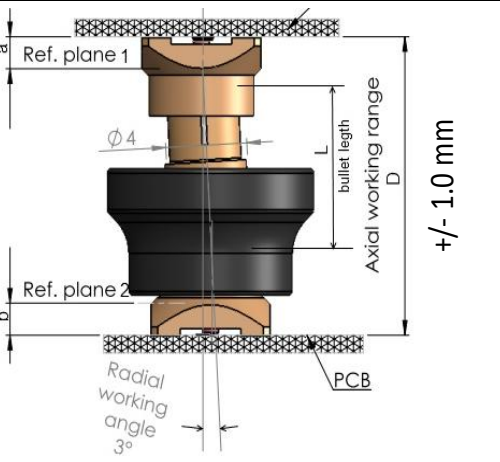
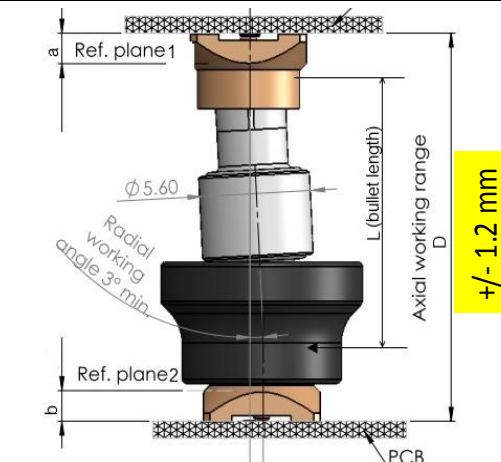


*SMP-Max Evo receptacle
+ standard Bullet*



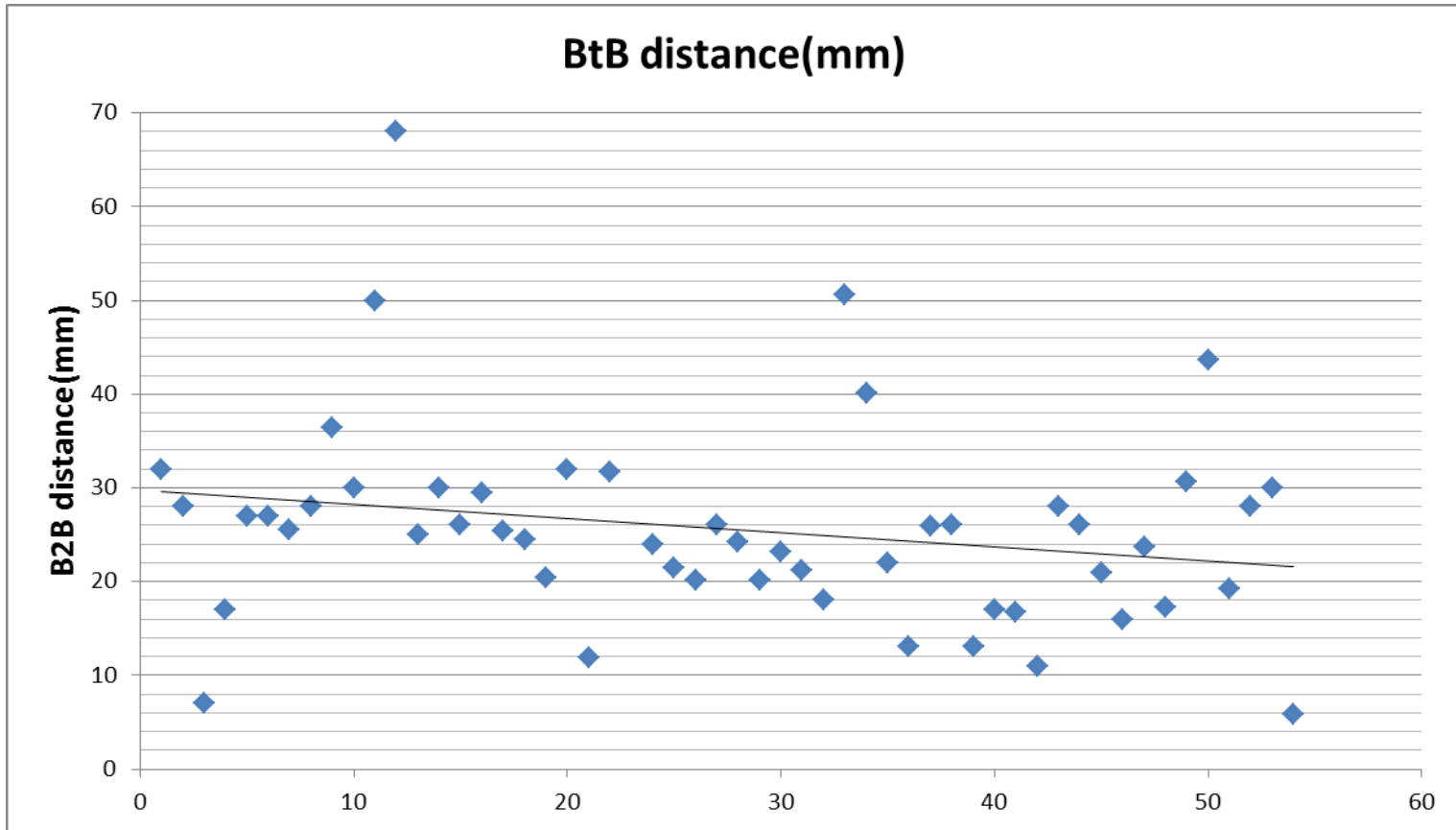
*SMP-Max standard receptacle
+ Evolution Bullet*

Configuration Matrix

		SMP-MAX standard bullet	SMP-MAX Evolution bullet
B2B distance and misalignment for different mating situations	SMP-MAX standard receptacle		
	SMP-MAX Evolution receptacle		

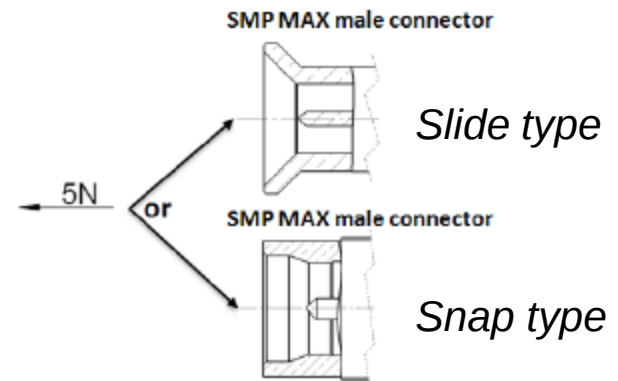
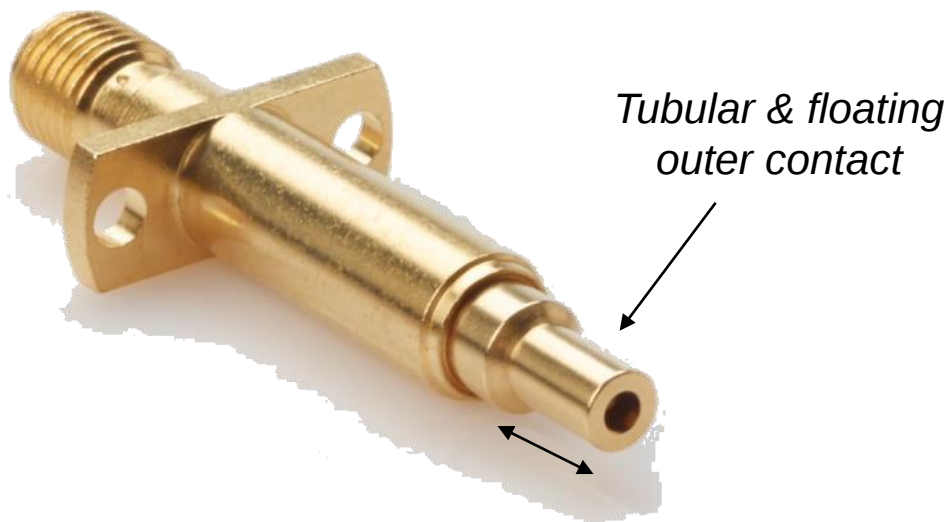
Largest range available

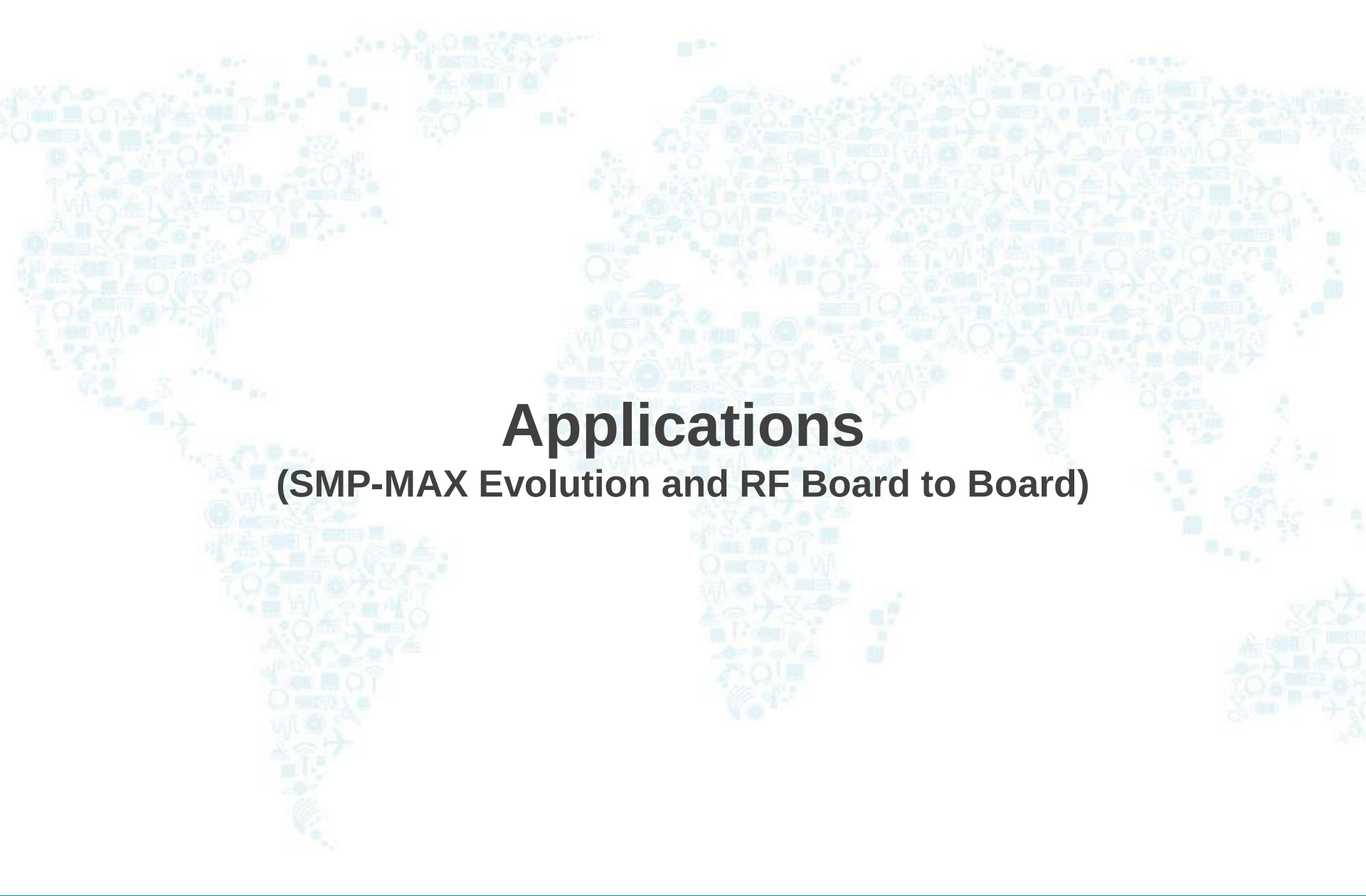
- SMP-MAX & SMP-MAX Evolution combined



Test Probe

- SMP-MAX female to SMA female probe
 - P/N: R191.553.800
- Life cycle
 - 100,000 mating



A world map where the landmasses are filled with a dense pattern of small, light blue icons representing various technologies and communication concepts, such as Wi-Fi symbols, airplanes, and signal waves.

Applications

(SMP-MAX Evolution and RF Board to Board)

Applications

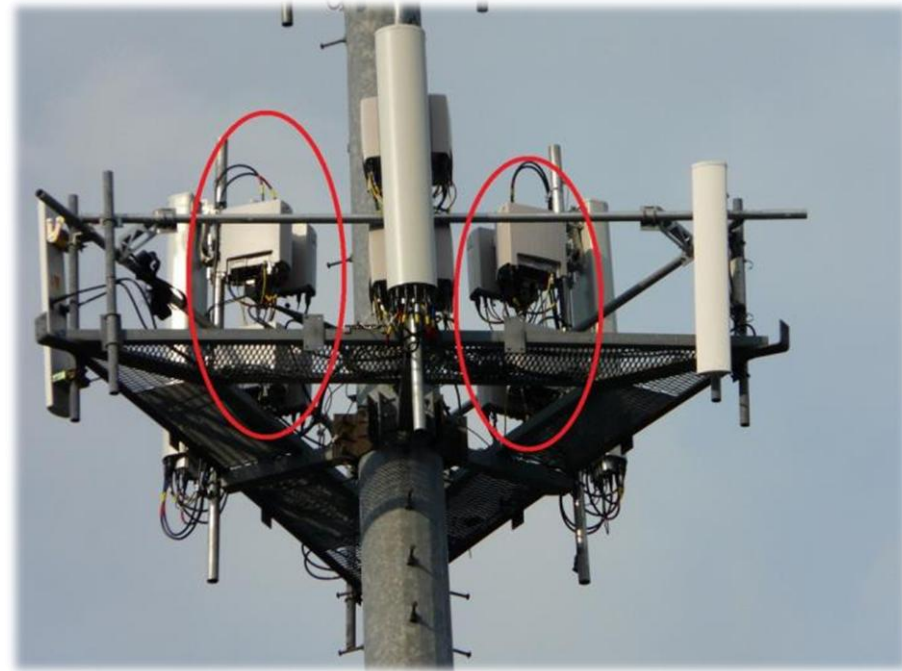
- Telecom infrastructure fronthaul equipment
- 3G, 4G, LTE, Wimax
- Board to board, board to cable, board to module (filter) applications
- Substitution for SMP-MAX for price sensitive customers



Applications



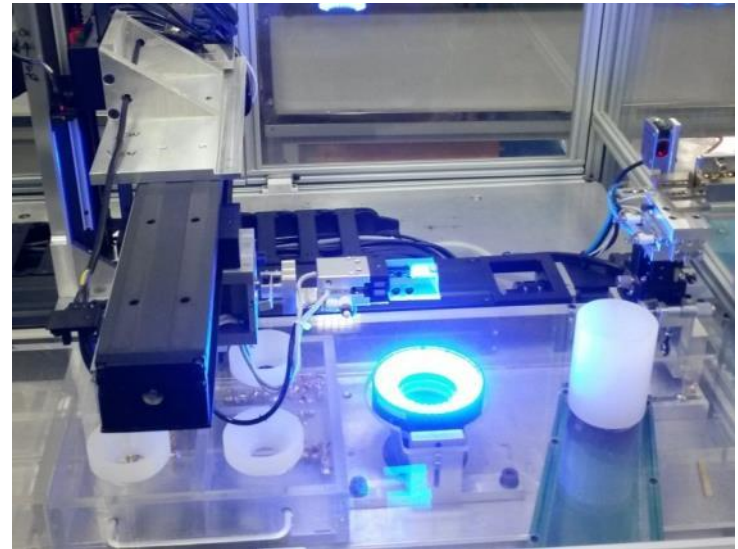
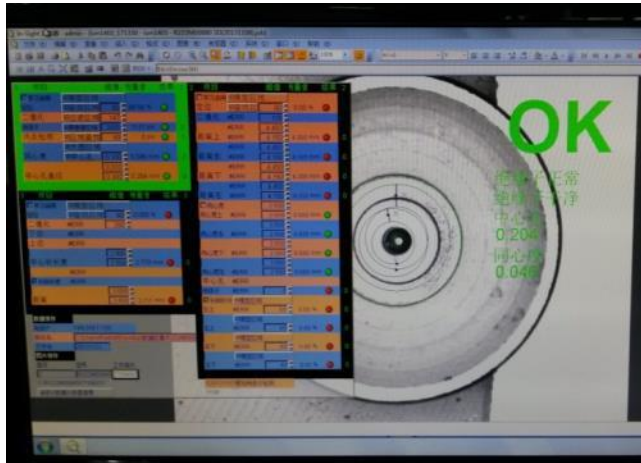
Outdoor small cell



Macrocell RRH/RRU

Radiall competitive advantage

- 100% automated interface control
 - Automated video acquisition in production line
 - Center contact concentricity and dimensions



- SMP-MAX Evolution offers same performance as SMP-MAX at a lower cost
- SMP-MAX Evolution is fully compatible with standard SMP-MAX
- Excellent cost to performance ratio
- B2B distance 18.4 +/-1.2mm
- Symmetrical bullet
- Robust design
- **THANK YOU!**

