

Company Overview

Total Solution Value Creator for Next Generation Connectivity



withwave
Next Generation Connectivity

About Withwave

WithWave believe people matter, and taking care of our customers and our employees is paramount in how we approach our business. We are committed to globally interconnecting service and technology to take the industry further faster.

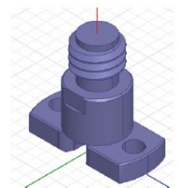
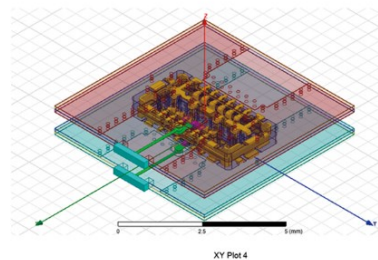


Capabilities

WithWave's in-house capabilities encompass design, development, manufacturing, and testing, enabling us to respond quickly and accurately to customer's needs.

Engineering

- 3D EM Modeling
- Advanced Microwave IC & System Design
- CAD / CAM & Solid Modeling
- Precision Mold Design & Simulation
- Automation Design and S/W Programing
- Reliability Analysis



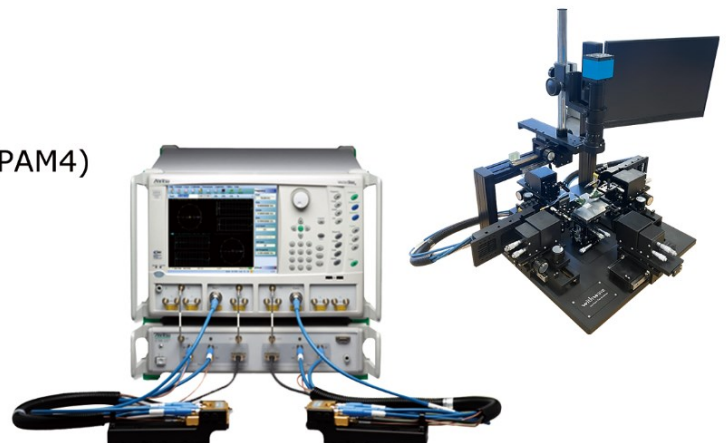
Manufacturing

- Precision Mold Injection & Machining Shops
- Connector, Contact & Cable Assembly
- Semi-Auto PCB Assembly & Inspection
- Automated Test & Packaging
- Validation Testing



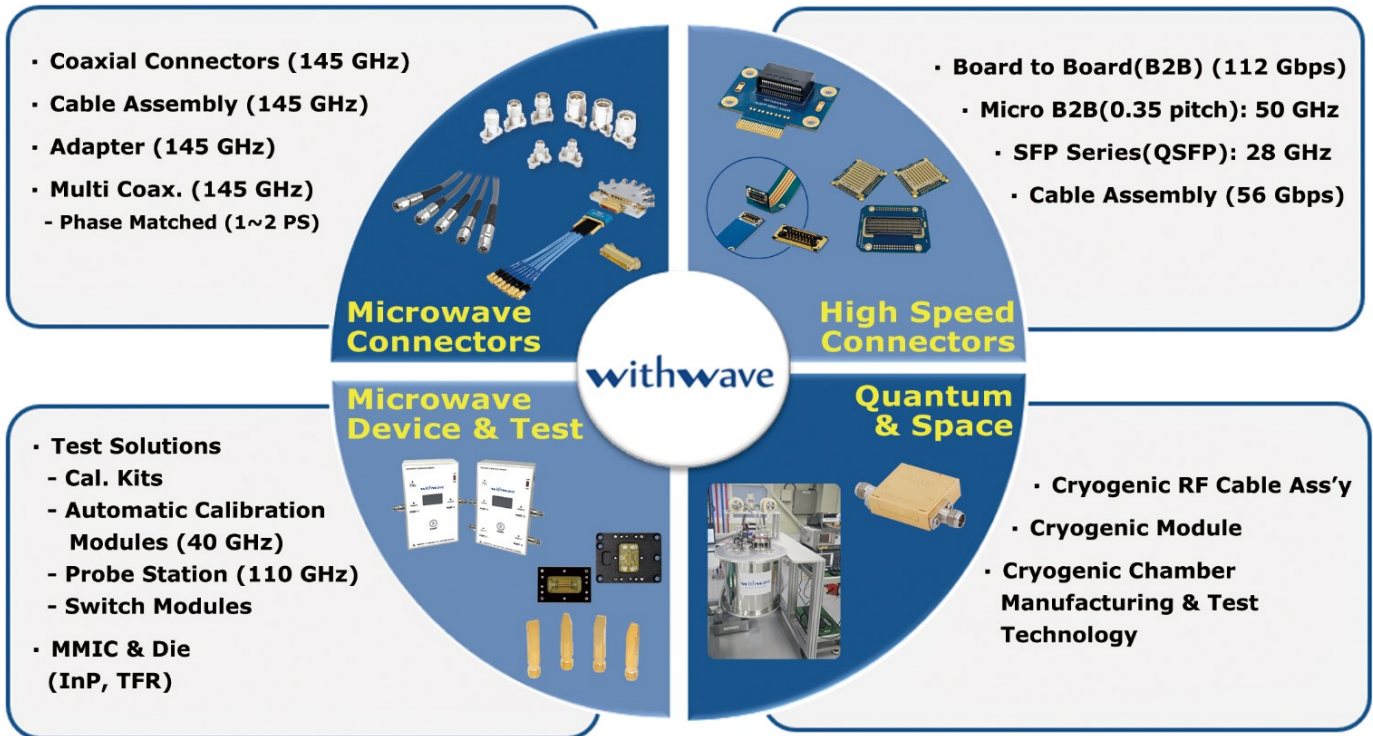
Testing/Qualification

- RF Testing up to 145 GHz (0.8 mm)
- High Speed Digital Testing up to 400 Gbps (PAM4)
- MMIC Probing up to 67 GHz
- Vision Inspection Programing
- RF Calibration Kit & Module
- PIM Testing



Core Technology

Core Technologies of WithWave for Microwave & High Speed Total Solution



Product Family



Product Lineup

Microwave Connectors

- End Launch Type : SMA, 2.92 mm, 2.4 mm, 1.85 mm, 1.0 mm & 0.8 mm (145 GHz)
- Vertical Launch Type : SMA, 2.92 mm, 2.4 mm, 1.85 mm, 1.0 mm & 0.8 mm (145 GHz)
- Panel Mount Type : SMA, 2.92 mm, 2.4 mm
- SMT Type : SMP, SMPM, SMPS (67 GHz)
- Non-magnetic Connectors : SMA, 2.92 mm, 2.4 mm



Microwave Adapters

- In Series & Between Series
- Straight Type : SMA, N, 2.92 mm, 3.5 mm, 2.4 mm, 1.85 mm, 1.35 mm, 1.0 mm, 0.8 mm (145 GHz)
- Right Angle Type : 2.92 mm, 2.4 mm, 1.85 mm
- Low PIM type : DIN, 4.3-10, N- & SMA



Microwave Cable Assemblies

- Ultra Low Loss : SMA, 2.92 mm, 3.5 mm, 2.4 mm
- Flexible & Phase Stable : SMA, N, 2.92 mm, 2.4 mm, 1.85 mm, 1.0 mm, 0.8 mm (145 GHz)
- Semi-Rigid & Semi-Flexible : SMA, N, 2.92 mm, 2.4 mm
- Push on : SMP/SMPM/SMPS to 2.92 mm & 2.4 mm



RF Switches/ Cryogenic Modules

- Absorptive Switch Modules (MMIC)
 - SP4T (10, 18, 44 GHz) · SP8T (8 GHz) · SP10T (18, 44 GHz) · SP12T(44 GHz)
- Reflective Switch Modules (MEMS)
 - SP4T (18 GHz) · SP10T (18 GHz) · 4-Port Matrix Switch (20 GHz)
- Cryogenic LNA - InP HEMP type (4 to 8 GHz, NF : 0.04 to 0.05 dB)
- Cryogenic IR Filters - Low cut-off (500 MHz) - High cut-off (10 GHz)



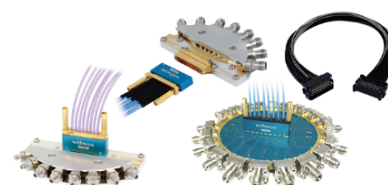
High Speed Connectors

- High Speed Board to Board Connectors (0.9 & 1.0 mm pitch) : 56 Gbps NRZ, 112 Gbps PAM-4
- High Speed Micro-Miniature Board to Board Connector: Hermaphroditic Type (50 GHz)
- QSFP28 Connector (0.8 mm pitch) : 28 Gbps



High Speed & Interconnect Solution

- High Speed Multicoax Cable (WMX Series)
 - Vertical & Edge Mount type · 20, 40, 50, 67, 110 & 145 GHz
- High Speed Multicoax Cable (SMPM & SMPS Series)
 - Vertical & Edge Mount type · 40 & 67 GHz
- High Speed Cable (56 Gbps NRZ)
 - Right Angle & Vertical type (24 differential Pair, 92 Ohm)



Calibration Kits & Test Probes

- Mechanical Calibration Kits : N-type (8 GHz), 3.5 mm(9 GHz)
- Automatic Calibration Modules : N-type (18 GHz), 3.5 mm(26.5 GHz) in 2-& 4-Ports
- T-Probe (Pogo Type) : GSG, GS type (20 & 40 GHz)
- Hyprobe test socket : 0.175~0.35mm pitch (40 Gbps)



Absorber Sheets

- LS Series (< 6 GHz) ▪ MD Series (< 24 GHz) ▪ HS Series (< 40 GHz)
- MT Series (< 18 GHz) ▪ HT Series (< 40 GHz) ▪ MS Series (< 18 GHz)
- Flexible Form Type
- LF Series (<18 GHz), HF Series (>18 GHz)

