

Partner with Flex for 5G & O-RAN Design, NPI, Manufacturing, Supply Chain & Logistics Solutions

5G continues to be deployed rapidly around the world with over 180 commercial networks as of September 2021, while Open RAN (O-RAN) is quickly gathering momentum with several commercial deployments and many trials ongoing. This presents new challenges in terms of bringing products to market faster, with quality, while minimizing total cost of ownership.

Flex can help you accelerate time to market and reduce initial investment for your next 5G & O-RAN product. Through a design and manufacturing partnership, we can develop your products, build prototypes, scale to volume production and provide the supporting supply chain, logistics, and global services you need.

State-of-the-Art Design Center

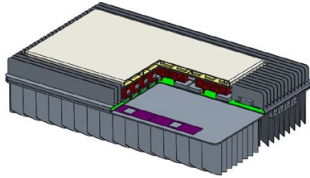
Located in Oulu Finland, we have a team of 80 engineers with over 25 years' experience developing cutting edge products from 2G to 5G to O-RAN, and from small cells to macro radios to Massive MIMO for sub 6 GHz and mmWave bands. Our center is equipped with world class design tools and test equipment, including a 14,000 cubic feet compact antenna test range capable of testing and characterizing products up to 200 GHz.

We provide a full range of design services from initial concept to product certification:

- Requirement definition and advise on product specifications
- System architecture and joint optimization of all system blocks
- Design of antenna, filter, power amplifier (from transistor level), radio board, and power supply
- Mechanical design for the most demanding environmental requirements including IP65 compliance
- Optimization of the product design for size, weight, power efficiency and TCO
- Product testing, validation, characterization and pre-certification

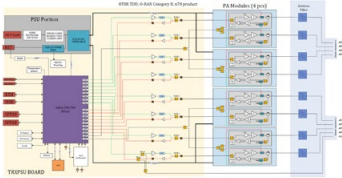
Customizable Reference Designs

We have developed a portfolio of customizable reference designs, which can be leveraged to accelerate your time to market and reduce initial investment.



64T64R mMIMO Radio

- 5G, Band n77, 400 MHz IBW, 200 MHz OBW
- 320W conducted power, EIRP > 77 dBm
- 450 x 700mm, < 30 kg, IP65, -40C to +55C
- 3GPP & O-RAN compliant



8T8R Radio Card

- 5G/LTE, Band n77, 400 MHz IBW, 200 MHz OBW
- 3GPP, O-RAN 7.2x, Category B, CUSM planes
- 2 x 8 UL/DL carriers
- SyncE, 1588 PTP (LLS C1-C3)

Deep Manufacturing Expertise and Global Footprint

Our 5G manufacturing sites have decades of experience with macro radios, Massive MIMO, small cells and baseband / distributed units, from 2G to 5G to O-RAN. We'll handle the process and test development, new product introduction and volume production.

Our global footprint includes sites around the world, producing over 1 million units per year in:

- **Americas:** Austin Texas, Guadalajara Mexico, Sorocaba Brazil
- **EMEA:** Tczew Poland, Timisoara Romania, Migdal HaEmek Israel
- **APAC:** Chennai India, Penang Malaysia, Suzhou & Wuzhong China

Extensive Supply Chain, Vertically Integrated with Logistics and Global Services

Beyond design and manufacturing, Flex provides a range of additional solutions:

- Supply chain management – 1M+ components, 15,000+ suppliers, \$21B+ annual spend
- Infinex components and Flex power modules to optimize product cost
- Flex Pulse for real time supply chain monitoring, to quickly adapt to supply disruptions
- SimFlex for value chain modeling and optimization of landed cost
- Global Support Services (GSS) including: logistics, warehousing, vendor managed inventory, configure-to-order, spare parts management, repair, refurbishment, and remanufacture; ensuring supply chain resiliency and enabling the circular economy

Flex (Reg. No. 199002645H) is the manufacturing partner of choice that helps a diverse customer base design and build products that improve the world. Through the collective strength of a global workforce across 30 countries and responsible, sustainable operations, Flex delivers technology innovation, supply chain, and manufacturing solutions to various industries and end markets.

For more information, visit flex.com.

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