

IceWings™ Product Brief

4x4 Multi-standard Low Power RF Transceiver



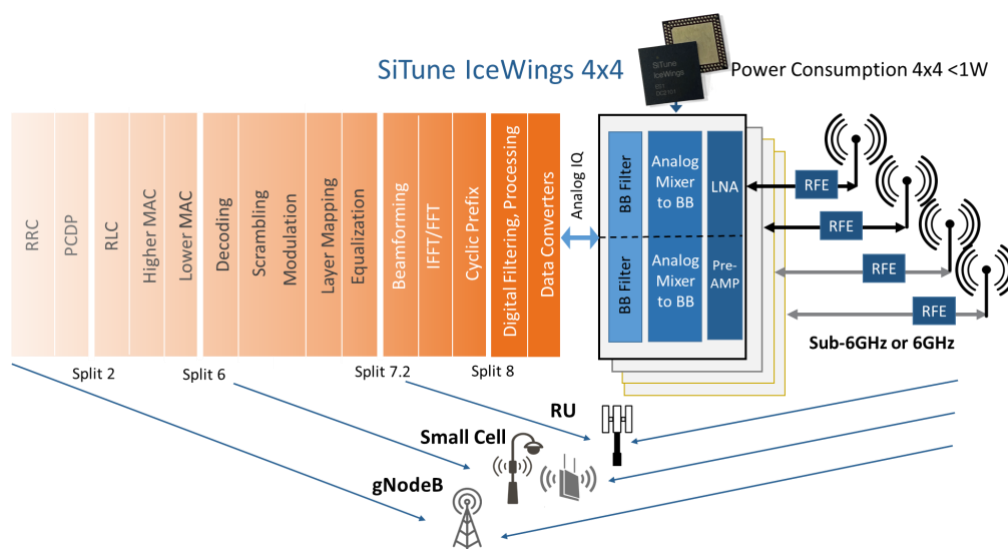
General Description

IceWings™ is an innovative RF transceiver with 4 integrated transmitters and receivers that supports a wide range of standards with signal frequencies below 7.2GHz and mmWave applications for intermediate to baseband conversion. IceWings™ targets cost-optimized low-power 5G solutions for a wide range of applications including indoor and outdoor small cells, private network access points, Fixed Wireless Access (FWA) CPEs, O-RAN compliant Radio Units and User Equipments. IceWings™ is part of SiTune's suite of world's first multi-standard ultra-wide-band RF transceiver solutions specifically designed to facilitate the virtualization of cellular ecosystem and disaggregation of hardware and software in 5G networks. These products are derived from a unique, patented high speed and ultra-wide-band RF/Mixed mode technology used in multiple generations of SiTune's products currently in deployments.

Benefits

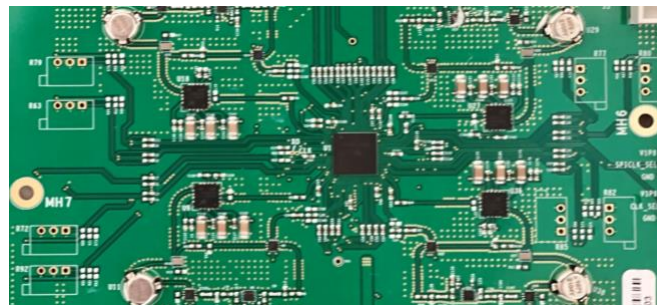
- **Lower power consumption:** Accelerate the deployment of 5G by offering new technology perfect for reducing overall power consumption of the Radio.
- **Multi-standard interface:** Support for a wide range of wireless standards with a flexible scalable interface design.
- **High-performance solutions:** Complying with 5G NR, WiFi, WiFi 6/7 and 4G LTE specifications and offering superior performance.
- **Scalable support:** Supports various 5G applications including gNodeB, private networks, Enterprises, IoT, and Small Cells.

Use Case



Features

- Quad Tx/Rx, Analog RF technology
- Compliant with 3GPP LTE/NR release 15 and 16 specifications
- Compliant with WiFi 802.11ax, 802.11a, 802.11b/g, 802.11ac/n, 802.11d, 802.11e, WiFi – 6 specifications including LVDS gain control support
- 4 Wide-band single-ended RF inputs covering RF ranges of 600MHz to 7.2GHz
 - Port 1: 600MHz-965MHz
 - Port 2: 1400MHz-2700MHz
 - Port 3: 3300MHz-5200MHz
 - Port 4: 5000MHz-7125MHz
- Reduces the number of RF switches in multi band designs
- Integrated LNA and PA Pre-amp
- FR1 support: 40MHz/100MHz/200MHz BW, 600MHz-7.2GHz RF IN
- FR2 support: 400MHz, IF frequency 3.3GHz-7.12GHz
- Integrated 2 Low phase noise fractional synthesizers supporting TDD, FDD and two 2x2 in TDD
- Lo Sync mechanisms, allowing multi chip Lo synchronization
- Sub-1W Power consumption for TDD 4x4 Transceiver
- Support for 400MHz bandwidth for mmWave applications.
- Support for linearization (DPD) of 100MHz IBW
- Each TX and RX path independently turn off to save power
- RF port impedance (single ended) = 50 Ohms
- IceWings includes a temperature sensor



IceWings™ Evaluation Board

About SiTune Corporation

SiTune Corporation is an innovator of multiple generations of state-of-the-art RF and Mixed signal System on a Chip for 5G wireless transceivers and broadcast receivers based on SiTune's patented revolutionary Hardware Intelligent Circuits, HIC™, technology. SiTune is currently shipping products including tuners for advanced multi-channel TVs, Set-top Boxes, spectrum monitoring for Cable head-ends and tuners for Mobile TVs. For more information, please visit www.situne-ic.com.