The Versatile Base Station

The OCTBTS 4000 is a proven one, two, or three sector base station platform suitable for micro cell and outdoor pico cell applications. The OCTBTS is a complete solution that includes all hardware and radio physical layer (PHY) software from Octasic, and is pre-integrated with Layer 2/3 software from several leading vendors. The OCTBTS 4000 allows OEMs to get a reliable, complete base station solution to market quickly and with minimal risk, while applying their own expertise to value-added applications and integrated solutions.

OCTBTS 4000 Applications

- Outdoor micro cell base stations with full mobility and extended range
- Private networks for public safety and industrial applications
- Deployable networks for disaster recovery and first responders
- Custom waveforms and Mesh networks
- Self-contained Network-in-a-Box (NIB)

KEY FEATURES

- 1, 2, or 3 sectors
- Aggregate 80 users
- 20 Km range for all cellular standards
- Software-controlled frequency agility
- Concurrent multi-standard support for GSM, HSPA and LTE
- Compact form factor: 170 x 170mm (6.7” x 6.7”)
A Powerful SDR Platform

The OCTBTS 4000 platform integrates the complete base station signal and packet processing chain, from the RF front end to the Ethernet backhaul interface. The OCTBTS 4000 supports two Octasic OCT2224W SoCs and three Analog Devices radio transceivers, enabling simultaneous 2G, 3G and 4G operation on up to 3 radio sectors.

The OCTBTS 4000 includes a COM Express module equipped with an Intel Atom™ application processor to host the Layer 2/3 software, element management clients, customer-developed applications, or even a complete core network for autonomous operation.

An Easy-to-Use Building Block

The OCTBTS 4000 offers 20 Km of range for all cellular standards, thanks to flexiPHY, Octasic’s line of 3GPP physical layer software, and purpose-built accelerators in the OCT2224W SoC. flexiPHY is pre-integrated with Layer 2/3 software from leading vendors including Aricent, Radisys, and Base7. With the OCTBTS 4000, OEMs can complete phone calls and data transfers just hours after receiving the platform.

The OCTBTS 4000 offers frequency agility from 400 MHz to 3 GHz. Capacity ranges up to 32 active users per sector for broadband data and voice services.

GSM/EDGE Small Cell Physical Layer

The OCT2224W SoC and Intel Atom™ processor integrate Octasic’s flexiPHY GSM, GPRS, and EDGE PHYs through an API accessible from the application CPU. The API enables quick software integration with Abis over IP to build a complete BTS system.

HSPA Small Cell Physical Layer

The OCT2224W SoC and Intel Atom™ processor integrate Radisys’ Trillium Femtotality RNC & luh stacks with Octasic’s flexiPHY WCDMA and HSPA PHYs, through a common API built on the Small Cell Forum’s FAPI interface.

LTE Small Cell Physical Layer

The OCT2224W SoC and Intel Atom™ processor integrate Aricent and Radisys Layer 2/3 stacks with Octasic’s flexiPHY 2x2 MIMO FDD-LTE PHY, through a common API built on the Small Cell Forum’s Layer 1 FAPI interface.

SDR Development

The OCTBTS 4000 is a fully-programmable SDR base station platform. It supports standard cellular air interfaces, as well as proprietary waveforms, over a wide range of frequencies and channel bandwidths.

Octasic provides a complete set of development tools for customers wishing to integrate their own Layer 2/3 software, or develop their own PHY layer and waveform code, including:

• Opus Studio, an integrated development environment (IDE) for code editing, compiling, simulation, debugging, and profiling.
• OCTBTS Evaluation and Development Kit; including both OCTBTS 4000 hardware and trial versions of the flexiPHY software
• Source code licenses for flexiPHY, allowing users to customize flexiPHY air interfaces for particular applications.

If you are interested in custom SDR development on the OCTBTS 4000 platform, please contact Octasic for further details.