World's first ultrawideband (UWB) transceiver based on the Multiband OFDM Alliance (MBOA) specification. This transceiver can be operated by a UWB MAC* or by RS232 commands. The SC1010D PHY Transceiver is designed for use in UWB evaluation, test and measurement, antenna performance and evaluation, and MAC integration. When combined with Staccato's SC1020D MAC PCI Card they become an ideal platform for application development for Wireless USB, Wireless 1394, and other Wireless Personal Area Network applications.

**Ultrawideband Multiband OFDM Physical-Layer Transceiver**

**Key Features**
- Designed to MBOA v0.9 specification, upgradable to the v1.0 specification
- Variable transmit gain control
- UWB MAC* Interface
- PC control, with MatLab support

**Applications**
- Interference and Co-existence testing
- Regulatory testing and measurement
- Antenna performance and evaluation
- MAC Integration
- Development Platform
**Technical Specification**

**Transmit power:** -41.3 dBm/MHz  
**Spectrum usage:** Group A, operates in the UWB unlicensed spectrum  
**Frequency of operation:** 3 bands with $f_C$ at 3432, 3960 and 4488 MHz  
**Sub-band bandwidth:** 528MHz ($\div 4^{**}$)  
**Unintentional radiation:** Per FCC ET Docket 98-153 and FCC 02-48 First R&O

**OFDM subcarriers:** 128 (12 pilot, 10 user defined, 6 null, 100 data)  
**Subcarrier modulation:** QPSK  
**Supported modes:** 55, 80, 110, 160, 200, 320, 480 Mbps ($\div 4^{**}$)  
**Maximum uncoded data throughput:** 620Mbps ($\div 4^{**}$)

**PC Requirements**

- **OS:** Windows XP
- **RAM:** 256 MB
- **Hard Disk:** 1 MB free
- **UART:** capable of 115,200 baud
- **MatLAB support:** version 6.5

**Dimensions**

- **Width:** 17.6 in (448.0 mm), 19 in (483.0 mm) with rack flanges
- **Height:** 3.5 in (89 mm), standard 2U rack
- **Depth:** 11.8 in (300.7 mm)

**Input Range:** 100 – 240 Vac  
**Frequency:** 50 – 440 Hz

**Package Contents**

- SC1010D development system, RS-232 cable, Control Panel UART Software (on CDROM) and User’s Manual (on CDROM), AC power cable

---

*IEEE 802.15.3/MBOA MAC compliant  
**SC1010D baseband is currently implemented in an FPGA and is limited to 1/4 rate of the MBOA specification. Full speed baseband will be available in Staccato silicon products in 2005.*

---

Staccato Communications Inc., a fabless semiconductor company based in San Diego, California, is devoted to developing innovative Ultrawideband (UWB) technology and products. Founded in 2002 by industry veterans who have been pioneering CMOS RF and UWB technology since 1996, Staccato has an experienced engineering team that has built several of the only high-speed CMOS RF silicon devices shipping in volume today. The company is leading industry development of the first UWB silicon in all-CMOS to enable universal wireless connectivity of high-speed devices using available UWB spectrum. Staccato has forged strategic industry alliances with major semiconductor foundries, consumer electronics manufacturers, PC and PC peripheral companies, and others in all parts of the UWB ecosystem. Staccato is active in promoting industry standards through IEEE, WiMedia, 1394TA, Wireless USB-WG, and Staccato is among the founding members of the IEEE 802.15.3a committee, 802.15.4a committee (as well as chair), Multiband Coalition and Multiband OFDM Alliance.

In support of developing the best overall solution for the emerging market in ultrawideband-based technology, the Multiband OFDM Alliance (MBOA) was formed in June 2003 and now numbers over 50 member companies. These companies support a UWB specification that is based on an OFDM approach, originally introduced by Texas Instruments in March 2003, which will enable the broadest possible range of applications and satisfy the requirements of consumers and regulatory agencies worldwide. The MBOA has been working closely to leverage its collective expertise in the creation and publication of a Multiband OFDM specification for UWB PHY technology and will work in harmony with other UWB standards bodies such as iEEE, WiMedia, Wireless USB Working Group, 1394 TA, CEA, and others as appropriate. The companies in MBOA are united in their desire to arrive at the best overall solution for UWB with maximum emphasis on peaceful coexistence with other wireless services. These companies have created the MBOA with a consensus that the best technique to achieve these objectives is Multiband OFDM.

**Purchasing Contact:** sales@staccatocommunications.com  
Staccato Communications, Inc. 5893 Oberlin Drive, Suite 105 • San Diego • California 92121  
858.642.0111 • www.staccatocommunications.com