



Accelerate ZigBee™ Product Development

Validate System Design & Simplify Testing

Helicomm's IEEE 802.15.4-based, ZigBee-Ready Signal Generator (ZRSG-0100) helps semiconductor vendors and OEMs simplify the process of interoperability and compliance testing. The powerful DSP-based, PHY Baseband and MAC software along with easy-to-use graphical interface allows you to quickly and conveniently generate 15.4-compliant modulated Baseband test signals. Validate the receive chain of your IC design, test product manufacturing process stability, and pre-certify products prior to submission to a certified ZigBee interoperability test house.

The ZRSG-0100 works across all three IEEE 802.15.4 radio bands — including 2.4GHz, 915MHz and 868MHz — providing you with bit-level control over a complete 15.4 data stream. Easily generate and test all ZigBee frame types (Beacon, Data, ACK, Command) in either burst or continuous mode. The flexible Channel Mode feature allows you to model signal/noise ratio, in-band interference, multi-path loss and frequency offset. The ZRSG-0100 also supports Guaranteed Time Slots, BPSK and O-QPSK modulation techniques, with a full suite of security and encryption options.

Main Features

- 2.4GHz, 915MHz & 868MHz bands
- BPSK & O-QPSK modulation schemes

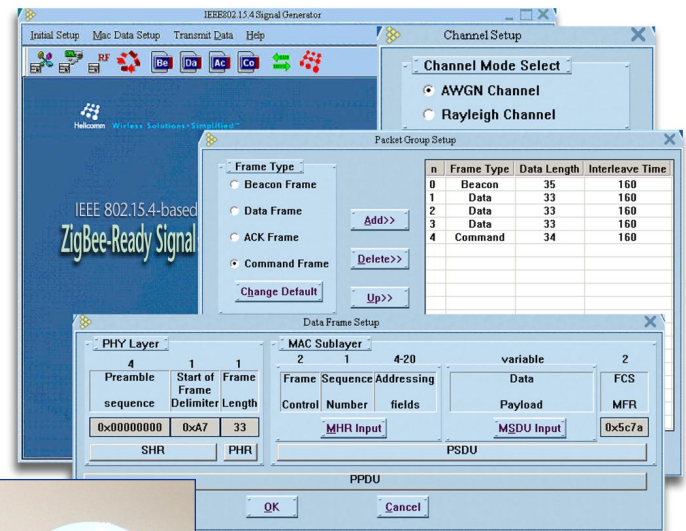
Eliminate the need for customized PHY Baseband and MAC testing tools — while saving development time and money.



- Multiple channel interference sources including AWGN, Rayleigh, signal/noise ratio and carrier offset
- Complete, bit-level control over MAC frame elements including Beacon, Data, ACK and Command frame types
- Customized frame groups including Super Frames with Guaranteed Time Slots
- Full security suite for encryption and authentication

Saves Development Time and Money

- Allows IC vendors to test their RF receiver chain, verify PHY Baseband and MAC functionality, validate RF-



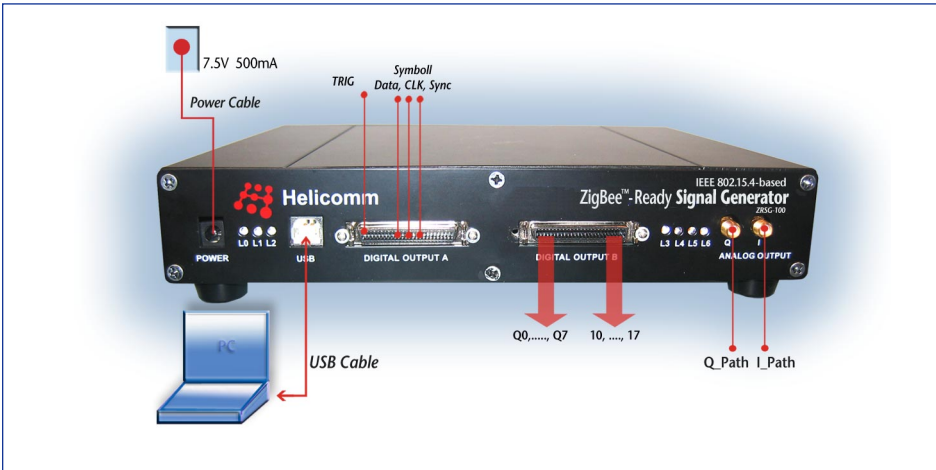
Helicomm's ZigBee-Ready Signal Generator combines a powerful DSP-based platform with an easy-to-use interface to accelerate your product development.

MCU integration and simplify ZigBee Level 1 Testing

- Allows OEMs to validate production test process stability and to pre-certify products prior to submission to a certified third party ZigBee interoperability test house.

System Includes

- ZigBee-Ready Signal Generator
- 868MHz band filter board with two matching cables
- 9V power supply
- CD with software and documentation
- Rugged metal case
- \$9,999.00



ZRSG-0100 output ports and cable connections

ZRSG-0100 Specifications

- Two Analog output SMA connectors (50 ohm nominal)
- DB 40 Male Connector (A, B)
- USB (B) XS3 Connector
- Seven LEDs

Environmental

Operating Temperature: +15°C to +45°C

Operating Humidity: Up to 95% relative humidity to 40°C (Noncondensing)

Power

AC/DC Adapter: 7.5V DC, 800mA

Mechanical

Dimensions: 40 mm (H) x 200 mm (D) x 240 mm (W)

Weight: 1.5 kg

Designed for rack mounting

Computer

- Pentium® Processor or higher; 32 MB RAM or more; 200 MB available space on hard drive
- Microsoft Windows® XP or Windows® 2000

Functionality

Operation Frequency Bands	2.4GHz, 915MHz and 868MHz
Modulation Modes	O-QPSK, BPSK
Output Signal Options	
<i>Modulated Baseband Digital</i>	O-QPSK/BPSK modulated I- and Q-channel baseband signals (analog and 8-bit digital)
<i>Analog Signals</i>	
<i>MAC Frame Formats</i>	Beacon, Data, ACK, Command, Super frame and user defined
<i>Direct MAC Frames</i>	Unmodulated packet data
Security Suite Options	AES data encryption CBC-MAC authentication AES-CTR security suite CCM combined authentication & encryption
Channel Simulation	
<i>Channel Models</i>	Variable signal-to-noise ratio Variable multipath delay time