

## Announcing a 2.4 GHz radio transceiver module for industrial applications

---

Circuit Design, Inc, the leading supplier of low power radio modules, has announced the release of the STD-502-R, an embedded 2.4 GHz radio transceiver modem for industrial use.

The STD-502-R operates in the 2.4 GHz band available worldwide. Designed to be embedded in equipment, this radio transceiver module was developed for industrial applications that require stable and reliable operation. With battery operation, it achieves line of sight radio communication beyond 300 m.

Besides using highly noise-resistant direct-sequence spread spectrum (DSSS) modulation, the module has a true diversity receiver function for preventing signal dropout due to multipath fading. This ensures highly stable and reliable radio communication in the congested 2.4. GHz ISM band.

These main functions are incorporated in a newly designed, proprietary ASIC. Using the ASIC allows the product to be supplied over the long term without relying on RFICs.

The transceiver uses a transparent input/output interface, enabling users to use their own protocols. In addition, the transceiver can transmit data that includes long consecutive identical bits that cannot be transmitted with conventional radio modules.

Besides the STD-502-R, Circuit Design's product line includes the STD-302N-R industrial-use transceiver covering 300 MHz to 1.2 GHz, providing coverage of the ISM bands around the world.

Samples will be available from January 2013. Production is planned to start in May 2013. Circuit Design will exhibit the product at the Electronica trade fair in Munich, Germany from November 13 to 16, 2012.

The technical features and applications of the STD-502-R are as follows.

### Technical features

- Direct sequence spread spectrum (DSSS)
- True diversity receiving
- Communication range 300 m (LOS)
- Low power operation 10 mW 3.3 V 68 mA
- Data rate 9.6 kbps / 19.2 kbps
- Built-in data frame coincidence detection function
- Operating temperature range -20 to +65 °C
- Compliance with European EN 300 440, American FCC Part 15.247, and Japan ARIB STD-T66 regulations

### Applications

- Remote control of industrial equipment
- Industrial telemetry and monitoring systems



Download the image

<http://www.cdt21.com/dl2/pr/index.asp>

#### About Circuit Design

Circuit Design, Inc. designs and supplies low power radio modules for various application fields such as telecontrol, telemetry, alarms, serial data transmission and audio. The products comply with European ETSI, US FCC and Japanese ARIB standards..

Quality is assured with an ISO 9001-certified design and manufacturing process based in Japan.

---

Enquiries | Development | Manufacturing

Circuit Design, Inc., Sales Division

7557-1 Hotaka, Azumino, Nagano 399-8303, Japan

TEL: +81 (0)263-82-1024 / FAX: +81 (0)263-82-1016

e-mail: [info@circuitdesign.jp](mailto:info@circuitdesign.jp) URL: [www.circuitdesign.jp](http://www.circuitdesign.jp)