

Press release

September 17, 2013

Announcing the launch of the STD-502-R 2.4 GHz radio transceiver module for industrial applications

Circuit Design, Inc, the leading designer and manufacturer of radio devices (Head Office: Azumino, Nagano), has started production of the STD-502-R, a radio transceiver module for control of industrial machinery. The STD-502-R operates in the 2.4 GHz band used worldwide and complies with the ARIB, CE, and FCC standards in Japan, Europe, and the U.S.



Designed to be embedded in equipment, the STD-502-R was developed as a radio module for industrial applications that require 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 multi-path fading. This ensures highly reliable radio communication in the congested 2.4 GHz ISM band.

The module itself has no built-in communication protocol. Instead, it has a transparent data input/output interface, enabling users to employ their own protocols without modification. In addition, it can continuously transmit a LOW or HIGH signal without restriction, which was not possible with earlier models.

Circuit Design developed its own ASIC with DSSS modulation and a true diversity function in order to guarantee the long-term supply of key radio components required for industrial devices. Therefore, the STD-502-R is not reliant on components from other companies for its main functions.

Circuit Design already offers the STD-302N-R and LMD-400-R transceivers that cover the 300 MHz to 1,200 MHz frequency bands of various countries. With the addition of the STD-502-R transceiver for the 2.4 GHz band, we have established a product portfolio that meets diverse requirements around the world.

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

- Communication range 300 m (LOS)
- RF Power 10mW
- Low power operation 3.3 V 65 mA
- Data rate 9.6 kbps / 19.2 kbps
- Transparent data input/output interface (Synchronous communication)
- Direct sequence spread spectrum (DSSS)
- True diversity reception
- Built-in data frame 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
- RP-SMA RF connector

Applications

- Remote control of industrial equipment
- Industrial measurement systems

Industrial radio transceiver product portfolio

Products	Certificate	Europe	USA	ASIA
STD-302N-R 	CE (EN300220)	434 MHz (EU) 458 MHz (UK) 869 MHz (EU)		335 MHz (India) 419 MHz (China) 429 MHz (Japan) 447 MHz (Korea) 1200 MHz (Japan)
LMD-400-R 	CE (EN300440) FCC (Part 90)	438 - 442 MHz 458 - 462 MHz	458 – 462.5 MHz	
STD-502-R 	CE (EN300 440) FCC (Part 15.247) ARIB (STD-T66)	2.4 GHz	2.4 GHz	2.4 GHz (Japan)

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.

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