

Announcing a Lineup of Low Power Transceivers for Europe and Asia

Long range FM narrow band radio module for industrial applications.

Circuit Design, Inc. has recently developed and released a full lineup based on the highly successful industrial use radio transceiver module STD-302, with 458 MHz (UK), 447 MHz (Korea), and 419 MHz (China) versions.

These 3 frequencies are in addition to the 434 MHz, 869 MHz (EU), and 429 MHz (Japan) versions already on the market, with the result that the major European and Asian markets are now covered. * Note

The pin assignment in all frequency versions is the same so that by changing the frequency program to suit the various frequencies, the user is able to provide products that meet the radio regulations of each country.



* Note: Compared to the 2.4 GHz band which offers good line of sight transmission, the 400 MHz band benefits from good dispersion of radio waves in places with a lot of obstructions, due to the diffraction phenomenon of the waves. This waveband is available in all countries as a frequency band for industrial applications (telecontrol and telemetry), although assigned frequencies are not the same between countries.

The STD-302 achieves an accelerated TX/RX switching speed of 5 ms, a level that was difficult to obtain in the past with FM narrowband (<25 kHz step) multi-channel transceiver radio modules. Thanks to this capability, the STD-302 is finding applications primarily in the field of industrial use telecontrol as a remote radio control unit incorporating an answer-back function, an area where time delays are not acceptable during the operation of equipment.

The features of the STD-302 are explained below.

1. Fast TX/RX switching time

- The difficulty of accelerating TX/RX switching time for 2 VCO FM narrowband multi-channel transceiver radio modules has been solved, using 1 VCO instead. With the use of a sharp SAW filter, the unwanted emissions that are a demerit of 1 VCO are suppressed to within the standard values of spurious emissions of each country.

2. Industrial use transceiver

- A design that offers the reliability, shock resistance, vibration resistance and high quality required for use in industrial applications
- Achieves an operating temperature range from -20 to 60 °C using our unique temperature compensation circuit
- Uses a custom SAW filter to avoid radio interference from GSM mobile phones and other radio equipment
- Achieves stable operation with all high frequency circuits enclosed inside the casing
- High receiver sensitivity using double superheterodyne receiver circuits

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