

## UHF Narrow Band Multi Channel Transmitter/Receiver **CDP-TX-02E-R/CDP-RX-02E-R 434MHz**

The unique and compact CDP-TX/RX-02E-R is a frequency selectable radio data module for the 434MHz UHF band. Both CDP-TX-02E-R (transmitter) and CDP-RX-02E-R (receiver) are equipped with a frequency synthesizer system including microprocessor. 32 RF channels are selectable using an onboard 4-bit switch. 8-pin frequency selection is available as CDP-TX-02EP-R and CDP-RX-02EP-R. Its small size, low voltage operation, and frequency selectability of CDP-02E-R make it ideal for various applications in sites where many radio transmitters are operated.

### Feature

- 32 frequency synthesized RF channels
- 1 mW / 10 mW selectable
- Low voltage operation
- High sensitivity receiver
- FM narrow band modulation
- R&TTE (EN 300 220) / RoHS compliance

### Application

- Industrial remote control
- Factory automation M2M
- Security systems
- Alarms
- Telemetry systems



### Common

Item	Specification (All ratings at 25 degree C unless otherwise noted)
Communication form	One way
Oscillation system	PLL controlled VCO
Modulation / Demodulation	FM narrow
Frequency range	433.875 MHz to 434.650 MHz
Number of RF channels	32 ch
Channel step	25 kHz
Frequency stability	+/- 4.0 ppm or less (-20 to + 60 degree C)
Data rate	300 to 4800 bps (Min. pulse width 208 us, Max. pulse width 20ms)
Operating temp. range	-20 to +60 degree C (No dew condensation)

### CDP-TX-02E-R (Transmitter)

Transmitter type	PLL synthesizer
RF output power	10 mW / 1 mW
Transmitter start up time	50 ms (from power on)
Data input	Digital (L = GND H = 3.0 V to Vcc)
Deviation	+/- 2.1 kHz (PN9 4800 bps LPF 20 kHz)
Spurious emission	<-54 dBm (47M - 74M, 87.5M - 118M, 174M - 230M, 470M - 862M) <-36 dBm (Other frequencies below 1000MHz) <-30 dBm (Frequencies above 1000MHz)
Adjacent channel power	<-37 dBm (200 nW)
Supply voltage	3.0 to 12 V DC
Supply current	43 mA typ. at 3V/10 mW 33 mA typ. at 3V/1 mW
Dimensions	36 X 26 X 10 mm (excluding protrusion)
Weight	14 g (without antenna)

### CDP-RX-02E-R (Receiver)

Receiver type	Double Superheterodyne PLL synthesizer
Sensitivity	- 120 dBm typ. (at AF / 12 dB/SINAD at CCITT filter fm=1 kHz) - 120 dBm typ. (at DO / BER 1% at 4800 bps PN9) - 116 dBm typ. (at DO / BER 0 error / 2556 bits at 4800 bps PN9)
Adjacent CH selectivity	60 dB (+/- 25 kHz)
Blocking	84 dB (All)
Spurious radiation	-60 dBm (below 1 GHz) -50 dBm (above 1GHz)
Data output	Digital (L = GND H = Vcc)
Supply Voltage	3.0 to 12 V DC
Supply current	30 mA typ. at 3 V 33 mA typ. at 12 V
Dimensions	50 X 30 X 9 mm (excluding protrusion)
Weight	20 g

Specifications are subject to change without prior notice

## CIRCUIT DESIGN, INC. International Business Division

http://www.cdt21.com  
CDP-TX/RX-02E-R DS ver12 Mar. 08  
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