

# Low-cost Sub-1 GHz RF Value Line Product Family

Texas Instruments introduced a new Sub-1 GHz RF Value Line family, offering developers low-cost connectivity solutions for sub-1 GHz RF applications such as remote controls, toys, home and building automation, and security systems. The Sub-1 GHz RF Value Line family launched with the CC115L transmitter, CC113L receiver and CC110L transceiver, all available immediately. In high volume, the line offers a complete, one-way RF link for less than USD \$1. The new devices are based on TI's Sub-1 GHz CC1101 RF technology, and are pin-, register- and code-compatible, as well as backwards compatible with existing sub-1 GHz systems. For more information, see [www.ti.com/rfvalueline-pr](http://www.ti.com/rfvalueline-pr).

"TI's new Sub-1 GHz RF Value Line answers the market's increasing need for simple, low-cost connectivity for applications that require both long battery life and long range wireless connection," said Erling Simensen, product marketing manager, Low-Power RF, TI. "Designs based on the Sub-1GHz RF Value Line family not only ease connectivity integration efforts for engineers, but promise wireless connectivity for more of today's cost-sensitive consumer applications."

The CC11xLDK-868-915 and CC11xLEMK-433 development kits provide complete hardware performance testing and software development platforms for the new product family. The kits also offer new low-cost reference designs, with a compact PCB antenna for 433, 868, 915 MHz, featuring a reduced component count and complete design ready for FCC and ETSI certification. The small-size, compact PCB helix antenna represents only a quarter of the size of previous PCB antennas, and is useful for applications requiring high antenna efficiency in a compact area.

Sub-1 GHz RF Value Line family: Key features and benefits

- One-way RF link for USD \$1 in high volumes (transmitter + receiver bundle)
- Complete design with reduced component count, ready for FCC and ETSI certification
  - o Low-cost reference design with compact PCB antenna
- Low-power, long battery life time:
  - o Fast startup-time with 0.24ms from power down to RX or TX
  - o 0.2  $\mu$ A sleep current
- Flexible and backwards compatible with existing sub-1 GHz systems:
  - o Supports multiple modulation formats with 2-FSK, 4-FSK, GFSK and OOK.
  - o Programmable data rate from 0.6 to 600kbps
  - o Supports multiple frequency bands: 300-348, 387-464 and 779- 928 MHz
- Easy to switch between one-way and two-way solutions:
  - o Pin, register and code compatibility
- Long range communication: seamless integration with CC1190 range extender: gives up to + 27dBm output power and -120 dBm sensitivity, and up to +20 dBm output power without frequency hopping (FHSS) under FCC

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- Compatible with CC1190 range extender, MSP430™ Value Line microcontroller, and TPS62730 Step Down Converter with Bypass Mode for Ultra Low Power Wireless Applications

### Tools, availability, packaging and price

The Sub-1Ghz RF Value Line is available today from TI and through authorized TI distributors. The solution is packaged in a ROHS-compliant, 4 mm x 4 mm QFN-32. Pricing starts at \$0.75 in 1,000-unit quantities.

The new CC11xLDK-868-915 development kit is available today for USD \$299 on TI's e-store. An additional CC11xLEMK-433 development kit is available for USD \$99.

Find out more about TI's low-power RF and wireless connectivity solutions

- Order development kits and samples: [www.ti.com/rfvalueline-pr](http://www.ti.com/rfvalueline-pr) [1]
- TI's Wireless Connectivity solutions: [www.ti.com/wirelessconnectivity](http://www.ti.com/wirelessconnectivity) [2]
- TI's wireless connectivity selection guide: [www.ti.com/wirelessconnectivityguide](http://www.ti.com/wirelessconnectivityguide) [3]
- TI E2E low-power RF & wireless connectivity community: [www.ti.com/lprf-forum](http://www.ti.com/lprf-forum) [4]

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### Links:

- [1] <http://www.ti.com/rfvalueline-pr>
- [2] <http://www.ti.com/wirelessconnectivity>
- [3] <http://www.ti.com/wirelessconnectivityguide>
- [4] <http://www.ti.com/lprf-forum>