RF Demodulator Serves Next-Generation Communication Systems

Analog Devices, Inc. announced today the release of a new high-performance integrated RF demodulator. The ADRF6801 RF demodulator performs multiple common RF functions in a single package while delivering the performance needed to support high dynamic range receivers in next-generation communications systems. General purpose in nature, the ADRF6801 is well-suited for RFID (radio frequency identification) systems, cellular base stations, point-to-point radios, satellite communications, VHF/UHF radios, defense systems, ISM-band applications operating in the 900-MHz frequency range, industrial equipment and other applications that require wide dynamic range and low-noise performance. To download the datasheet, please visit: www.analog.com/adrf6801.

The ADRF6801 RF demodulator integrates ADI's leading fractional-N PLL (phase-locked loop) synthesizer and low-phase-noise VCO (voltage controlled oscillator) with a high dynamic range demodulator. The ADRF6801 also includes other value-added features, such as an RF balun, three LDOs (low-dropout regulators), and the necessary baseband buffer amplifiers. This unique combination provides radio designers with a highly integrated solution without any compromise in performance. Furthermore, the ADRF6801 demodulator enables radio developers to shrink circuit board area, reduce the bill of materials, reduce risk and shorten product development time, thereby lowering total system cost. The ADRF6801 expands upon the capabilities of ADI's recently announced RF ICs, including the ADRF660x mixers and ADRF670x modulators.

Operating over a frequency range from 750 MHz to 1150 MHz, the ADRF6801 demodulator features a noise figure of 14.3 dB, input IP3 (third order intercept) of 25 dBm , and a P1dB (input compression point) of 12.5 dBm. The ADRF6801 supports the SPI/I2C serial interface for PLL programming and the device provides the option of selecting between an external LO (local oscillator) source or an internally generated LO signal.

Availability, Pricing and Complementary Products

The ADRF6801 demodulator is in volume production now and is priced at $9.98 per unit in 1,000-unit quantities. The ADRF6801 works well with other ADI components, including the ADF9010 900 MHz ISM-band Analog Front End; ADRF6701 integrated RF modulator; ADRF6601 integrated RF mixers; the AD8366, AD8376 and ADL5202 VGAs (variable gain amplifiers), and ADI's industry-leading high-speed ADCs (analog-to-digital converters).

RF IC Portfolio Covers Entire RF Signal Chain

Using a unique combination of design skills, system understanding and process

technologies, Analog Devices offers the broadest portfolio of RF products covering the entire RF signal chain from industry-leading high-performance discrete RF function blocks to highly-integrated multi-functional single-chip RF solutions. These products are also supported by a wide range of free design tools, evaluation boards and other design resources to ease the development of RF systems. For more information, visit: www.analog.com/rf [1].

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