Programmable Down-Converter

Intersil announced introduced an addition to the CommLink&#153 family of software defined radio (SDR). In addition to supporting legacy protocols, the ISL5416, a quad programmable down-converter (quad-PDC), specifically targets third-generation (3G) wireless protocols. Its filter configuration allows the integration of four discrete wideband channels in a single circuit, and it includes all the necessary post processing functions to complete the entire channalization process.

The ISL5416 fully integrated quad-PDC receives incoming wideband signals from high-speed analog-to-digital converters. The device then tunes, filters and decimates the signal from an intermediate frequency to a baseband. Specifically designed to meet the demands of the 3G market, the ISL5416 has numerous post-processing functions such as automatic gain control, resampling FIR and frequency discrimination that further condition the signal before transmitting the data to the baseband processor.

The CommLink ISL5416 quad-PDC is a key component of Intersil's SDR solution. The device features adjustable input and output data formats that enable easy interface with the analog-to-digital converter and the baseband processor. The four complete wideband channels increase density and reduce required board space.

Intersil develops and markets SDR infrastructure integrated circuits &#151 including digital up- and down-converters and data conversion devices &#151 that are designed to accommodate all current and next-generation protocols, including GSM, IS-136 TDMA, EDGE, IS-95 CDMA, 3G and AMPS. Intersil's SDR technology also addresses the stringent needs of the smart antenna application within the cellular marketplace that addresses the frequency capacity limitations that are inherent in current base station cellular technology.

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