

Modem Chip Set

Intersil announced it is shipping its new CommLink[®] OC-3 Modem chip set and reference design to customers who are designing broadband wireless Internet and cellular backhaul infrastructure equipment. Intersil's new ISL87060 chip set is the first product resulting from its strategic acquisition of Scottsdale-based SiCOM, Inc. last October. It is designed to enable low-cost, rapid deployment of point-to-point digital radio systems that support wireless transmission of voice, data and video at OC-3/STM-1 speeds of 155 megabits-per-second (Mbps). Production shipments have begun to fulfill initial customer orders.

Applications for the ISL87060 chip set include digital microwave radios for interconnection of cellular base stations, high capacity Internet infrastructure, point-to-consecutive-point wireless ring networks and connection of cellular infrastructures to the public switched telephone network (PSTN). The reference design supports a wide range of standard data rates, from 4x T1/E1 through OC-3/STM-1 (155Mbps).

To help minimize its customers' engineering effort and facilitate quick time-to-market, the new chip set is supported by a full suite of design tools. Customers designing the chip set into point-to-point microwave designs can purchase the ISL83700 modem evaluation kit that allows original equipment manufacturers to configure, monitor and test the performance of Intersil's ISL8760 modem chip set in a lab environment.

Intersil's BWA OC-3 modem chipset solution is designed from the ground up to optimize wireless link capacity, thus reducing the need to incorporate expensive power amplifiers and tuners that often dominate the cost of broadband fixed wireless networks. As a result, this design approach reduces the overall Bill of Material (BOM) cost of non-modem elements in the digital radio.

The new digital modem solution includes the company's ISL87060 Application Specific Standard Product (ASSP) chip set, the ISL837030 reference design and the ISL83700 Modem Evaluation Kit. The complete system allows equipment manufacturers to build point-to-point radio designs that cost-effectively increase the data capacity of fixed broadband wireless networking equipment.

The ISL87060 chip set consists of two Integrated Circuits (ICs) — the ISL87060MIK modulator chip and the ISL87060DIK demodulator chip. The modulator chip accepts input data bytes, performs encoding, constructs the waveform, applies pulse shaping and generates digital baseband data outputs. The demodulator chip receives digital baseband data inputs, performs signal conditioning, symbol timing, carrier tracking, adaptive equalization and decoding to produce data byte and clock outputs.

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