

Direct Sequence Spread Spectrum Baseband Processor



The Intersil HFA3861 Direct Sequence Spread Spectrum (DSSS) baseband processor is part of the PRISM[®] 2.4GHz radio chipset, and contains all

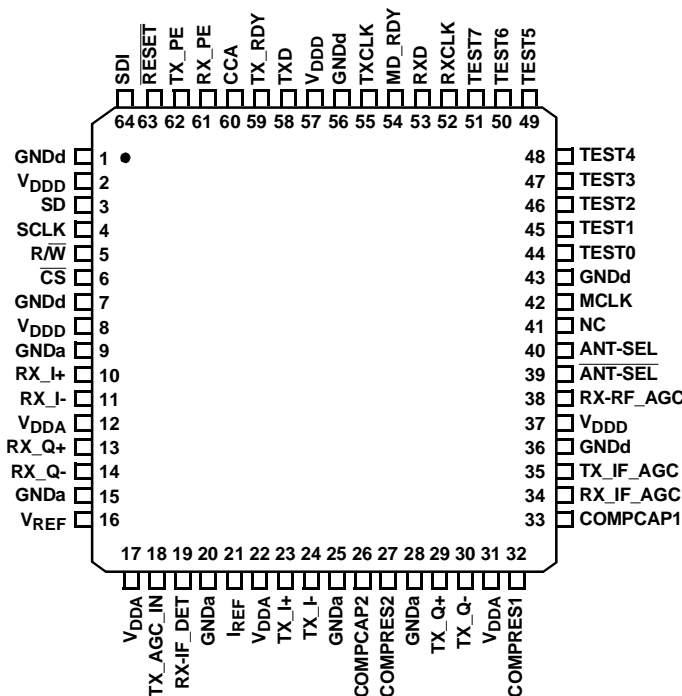
the functions necessary for a full or half duplex packet baseband transceiver.

The HFA3861 has on-board A/D's for analog I and Q inputs and outputs, for which the HFA3783 IF QMODEM is recommended. Differential phase shift keying modulation schemes DBPSK and DQPSK, with data scrambling capability, are available along with Complementary Code Keying to provide a variety of data rates. Built-in flexibility allows the HFA3861 to be configured through a general purpose control bus, for a range of applications. Both Receive and Transmit AGC functions with 7-bit AGC control obtain maximum performance in the analog portions of the transceiver. The HFA3861 is housed in a thin plastic quad flat package (TQFP) suitable for PCMCIA board applications.

Ordering Information

PART NO.	TEMP. RANGE (°C)	PKG. TYPE	PKG. NO.
HFA3861IV	-40 to 85	64 Ld TQFP	Q64.10x10
HFA3861IV96	-40 to 85	Tape and Reel	

Pinout



Features

- Complete DSSS Baseband Processor
- Processing Gain FCC Compliant
- Programmable Data Rate 1, 2, 5.5, and 11Mbps
- Ultra Small Package. 10 x 10mm
- Single Supply Operation (44MHz Max) 2.7V to 3.6V
- Modulation Methods. DBPSK, DQPSK, and CCK
- Supports Full or Half Duplex Operations
- On-Chip A/D and D/A Converters for I/Q Data (6-Bit, 22MSPS), AGC, and Adaptive Power Control (7-Bit)
- Targeted for Multipath Delay Spreads ~100ns
- Supports Short Preamble Acquisition

Applications

- Enterprise WLAN Systems
- Systems Targeting IEEE 802.11 Standard
- DSSS PCMCIA Wireless Transceiver
- Spread Spectrum WLAN RF Modems
- TDMA Packet Protocol Radios
- Part 15 Compliant Radio Links
- Portable PDA/Notebook Computer
- Wireless Digital Audio, Video, Multimedia
- PCN/Wireless PBX
- Wireless Bridges

Simplified Block Diagram

