

Direct Sequence Spread Spectrum Baseband Processor



The Harris HFA3824A Direct Sequence (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 HFA3824A has on-board ADC's for analog I and Q inputs, for which the HFA3724/6 IF QMODEM is recommended. Differential phase shift keying modulation schemes DBPSK and DQPSK, with optional data scrambling capability, are combined with a programmable PN sequence of up to 16 bits. Built-in flexibility allows the HFA3824A to be configured through a general purpose control bus, for a wide range of applications. A Receive Signal Strength Indicator (RSSI) monitoring function with on-board 6-bit 2 MSPS ADC provides Clear Channel Assessment (CCA) to avoid data collisions and optimize network throughput. The HFA3824A 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.
HFA3824AIV	-40 to 85	48 Ld TQFP	Q48.7x7
HFA3824AIV96	-40 to 85	Tape and Reel	

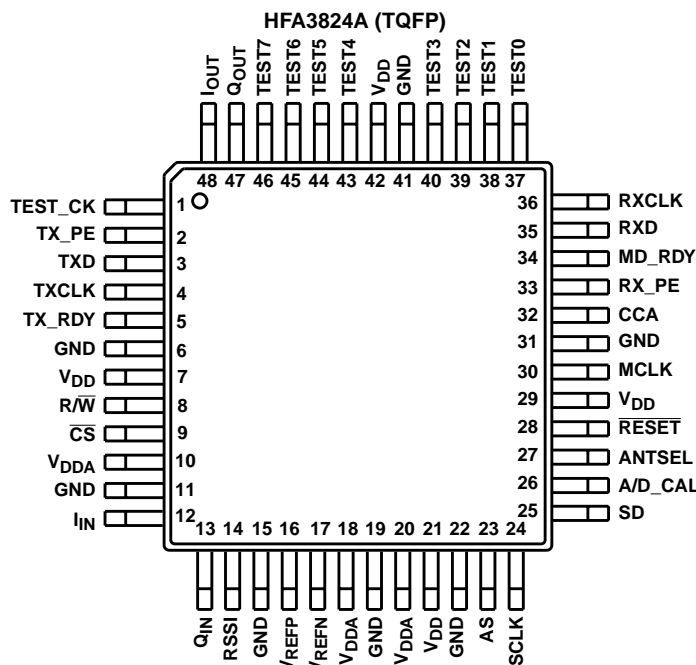
Features

- Complete DSSS Baseband Processor
- High Data Rate up to 4 MBPS
- Processing Gain up to 12dB
- Programmable PN Code up to 16 Bits
- Ultra Small Package 7 x 7 x 1mm
- Single Supply Operation (44MHz Max) 2.7V to 5.5V
- Modulation Method DBPSK or DQPSK
- Supports Full or Half Duplex Operations
- On-Chip A/D Converters for I/Q Data (3-Bit, 44 MSPS) and RSSI (6-Bit, 2 MSPS)
- Backward Compatible with HSP3824
- Programmable Rotation I, Q Sense

Applications

- Systems Targeting IEEE802.11 Standard
- DSSS PCMCIA Wireless Transceiver
- Spread Spectrum WLAN RF Modems
- TDMA Packet Protocol Radios
- Part 15 Compliant Radio Links
- Portable Bar Code Scanners/POS Terminal
- Portable PDA/Notebook Computer
- Wireless Digital Audio
- Wireless Digital Video
- PCN/Wireless PBX

Pinout



Simplified Block Diagram

