

FEATURES

- Full compliance with IEEE 802.11b standard
- 1, 2, 5.5, 11 Mbps data rates
- On-chip ADCs, DACs and AGC, RSSI
- Innovatively superior multipath fading compensation
- Antenna switch support for better transceiver performance
- Support short preamble for higher throughput
- Frequency and DC offset compensation
- Smart power management for very low power operation
- Low voltage operation: 1.8V for core, 3.3V for I/O
- Package:
 - 208 TFBGA 15 x15 mm²
 - 128 TQFP 14x14 mm²
- Flexible RF interface:
 - ✓ Direct conversion
 - ✓ Superheterodyne

INTERFACES

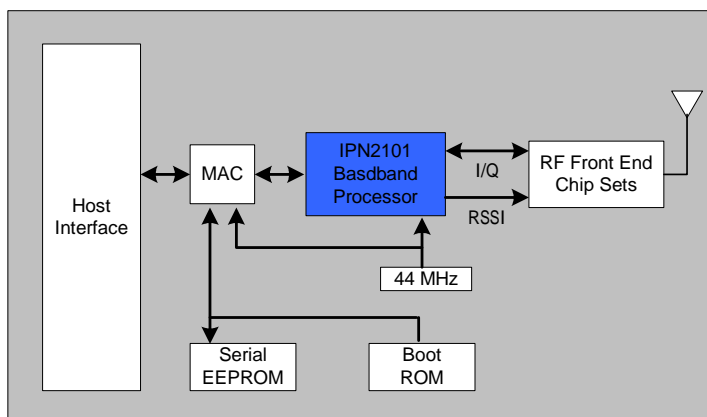
- MAC Register Access Interfaces
 - ✓ Compliant with MLME_PLME_SAP definition of IEEE 802.11b
 - ✓ Support glueless physical attachment serial interface
- MAC Packet Access Interfaces
 - ✓ Compliant with PHY_SAP definition of IEEE 802.11b
 - ✓ Support glueless physical attachment serial interface
- Radio Interface
 - ✓ Analog TX I/Q interface
 - ✓ Analog RX I/Q interface
 - ✓ AGC interface

PRODUCT OVERVIEW

IPN2101 is an IC solution for WLAN baseband processing. It provides all the needed functionalities for IEEE 802.11b baseband processing in a single chip.

The innovative baseband design of IPN2101 provides superior performance against interference caused by multipath fading in indoor surroundings. IPN2101's proprietary baseband circuitry not only covers complete transmitting and receiving functions but also outperforms the traditional approaches in severe environments. IPN2101's baseband design is robust against various RF effects and allows interface flexibility to cope with different RFIC solutions, including both direct conversion and super-heterodyne architectures, thereby meeting customers' need to use the best cost-performance solutions available.

BLOCK DIAGRAM



IPN2101 System Block Diagram

About INPROCOMM

Inprocomm, Inc. (INPROCOMM) was founded in June 2002 and is a leading wireless broadband solutions provider with its design center based in Hsinchu, Taiwan, and sales and marketing offices in Taipei, Taiwan and in Silicon Valley in the San Francisco Bay Area. Using its novel baseband architectures and algorithms, INPROCOMM designs integrated circuits (ICs) and provides innovative system solutions for IEEE 802.11 and IEEE 802.15 standards, *Bluetooth* and other broadband wireless communication systems.

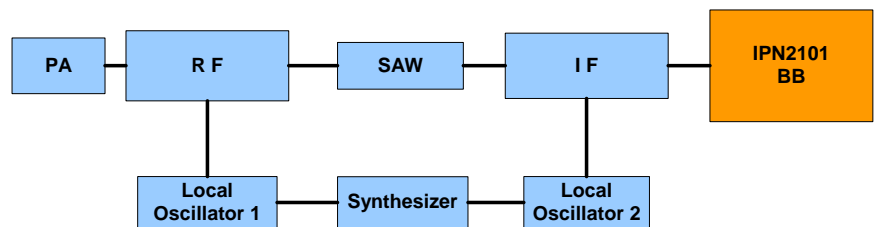
INPROCOMM has technical expertise in the areas of Digital Signal Processing, Communication Theory, Algorithm Development, Digital & Analog IC Design, Networking, System Hardware and Software, and its key founders and stakeholders have worked for numerous major international companies over the years. INPROCOMM is an aggressive participant and contributor to several industry standards-setting bodies including IEEE 802.11, IEEE 802.15, Wi-Fi Alliance and PCI SIG.

INPROCOMM's solutions have the advantages of configurability and scalability, surmounting limitations faced by competitors that are restricted by traditional approaches. INPROCOMM's unique flexible architectures enable its customers to quickly differentiate their products and dramatically reduce time-to-market.

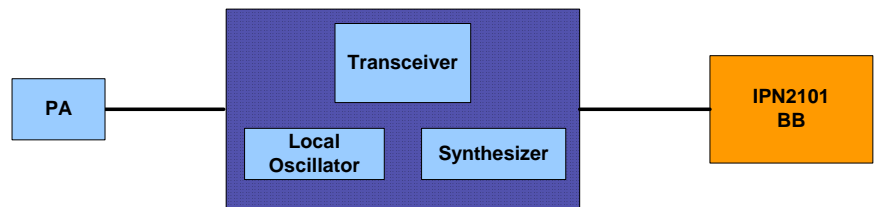
APPLICATIONS

- Enterprise WLAN systems
- PCI/MiniPCI wireless LAN adaptor
- CardBus wireless LAN adaptor
- High data rate wireless LAN systems targeting IEEE 802.11b standard
- Wireless LAN access points
- AES enabled wireless applications

RF ARCHITECTURE



Superheterodyne Architecture



Direct Conversion Architecture

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