

PCI3620

TIA/EIA-136

PCI3620 TIA/EIA-136 Integrated Baseband Processor

PCI3620 GENERAL FEATURES

Complete TIA/EIA-136 baseband solution, verified to exceed TIA/EIA-136-270 specifications

Supports TIA/EIA-136-310, 136-350, 136-320 Data Services and SMS

Low voltage operation

Fully programmable software-controlled power management

Microprocessor-DSP interface enables support for customer specific features

PCI3620 TIA/EIA-136A FEATURES

Support for PFC2 and PFC3 to improve radio standby times

Support for Enhanced MAHO/MACA and Downlink Power Control

Support for Enhanced DTX mode

PCI3620 MMI FEATURES

Voice Recognition

Voice playback and record memo feature

Full featured melody ringer support

PCI3620 MICROPROCESSOR SUBSYSTEM FEATURES

Powerful and efficient 32-Bit RISC ARM microprocessor core

Two onboard UARTs, one with hardware flow control

Keypad interface (matrix programmable)

50 general purpose I/Os

2 general purpose timers

Source-level debugging for both processors via the JTAG interface

PCI3620 PHYSICAL LAYER PROCESSING FEATURES

7.4 kbps TIA/EIA-136-410 ACELP Vocoder and TIA/EIA-136-420 VSELP Vocoders

Programmable modem acquisition, modulation/demodulation, and channel coding/decoding

Complete baseband AMPS functionality

Full featured hardware coprocessors including DMA, Viterbi and Manchester decoders

PCI3620 MIXED SIGNAL FEATURES

Five input 10 bit ADC for auxiliary measurements of analog signals

Four output Pulse Width Modulated Digital-to-Analog converters for user-defined analog control

$\pi/4$ DQPSK and 8 PSK ($3\pi/8$ rotation) modulation with pulse shaping

Two 10 Bit D/A converters for I/Q transmission

Programmable variable gain amplifiers for Tx and Rx paths

Four 10 Bit Aux. D/A converters

Two 10 Bit A/D converters for receive I and Q

10 Bit D/A and A/D converters for AMPS mode

Second speaker output and microphone input available

With the PCI3620 Integrated Baseband Processor's TIA/EIA-136A features, you can swiftly and cost-effectively introduce the handsets carriers and consumers are looking for.

The PCI3620, PrairieComm's third generation TIA/EIA-136 Integrated Baseband Processor, is the most advanced TDMA offering in the market. With the PCI3620 as an integral part of your handset, you can ensure compliance with the very latest industry specifications.

In light of its market leading performance, the PCI3620's most surprising advantage may be its cost-effectiveness. Tight integration, easily extendable features, and rigorous testing capabilities ensure rapid time to market and surprisingly low development and production costs.

Your competition has never been this tough. Fortunately, the PrairieComm TDMA processors available to you have never been this good.

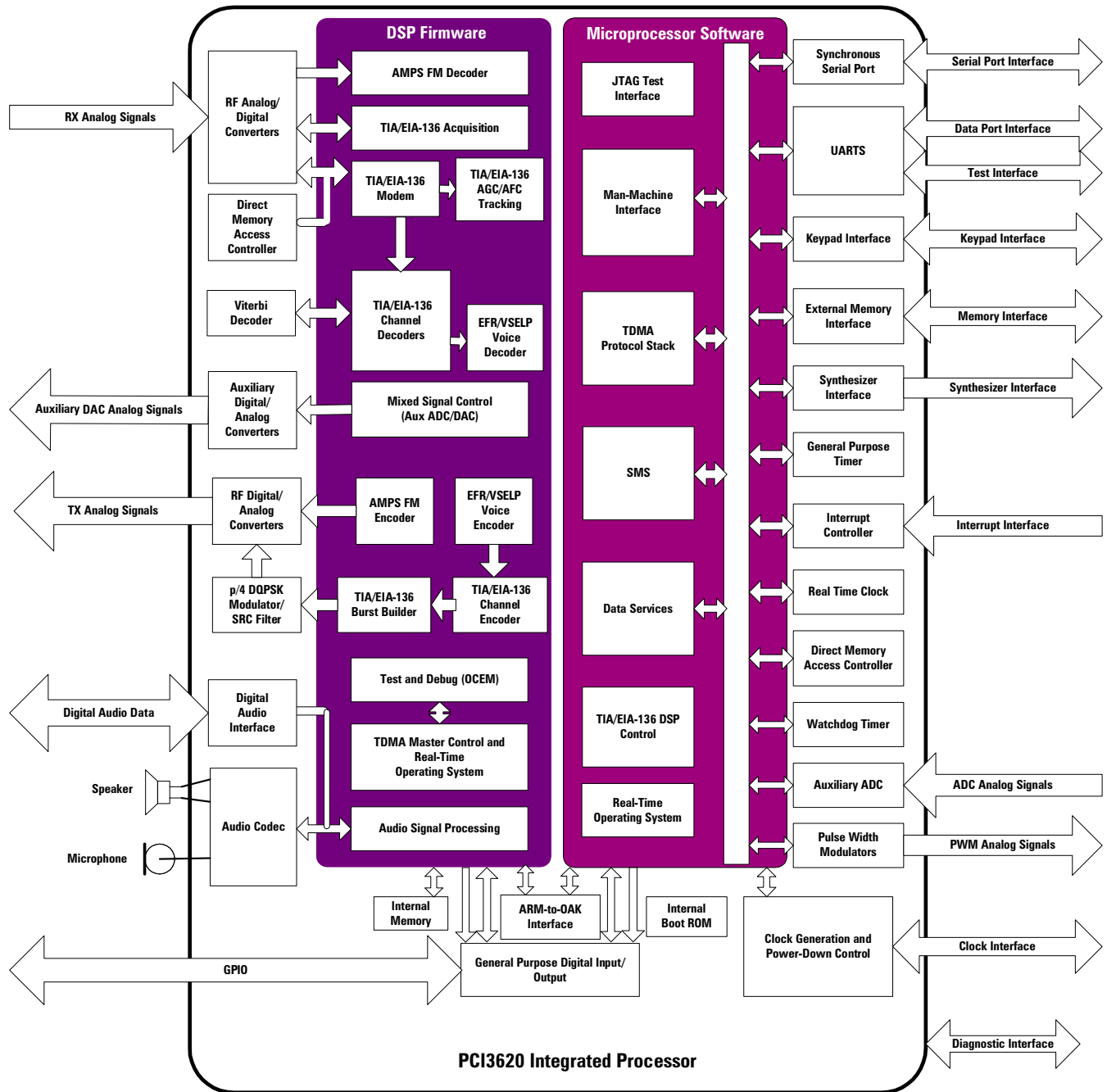


BENEFITS

By using the PCI3620, you will realize . . .

- compliance with latest industry specifications
- superior product performance
- substantially longer talk and standby times
- a significant reduction in time-to-market
- dramatically lower production costs
- minimal development costs
- a comprehensive roadmap of tiered products

PCI3620 TIA/EIA-136 Integrated Baseband Processor



ELECTRICAL SPECIFICATIONS

Low 2.5 V DC operation for Digital Core and Mixed Signal blocks
 2.7 to 3.6 V DC operation for I/O pads
 Operating Temperature Range: -40 to +85 °C
 Storage Temperature Range: -55 to +150 °C
 Clock Frequency: 19.44 MHz and 32 kHz sleep mode
 Chipset allows mobile up to 350 hours of standby time

PACKAGING

180-ball Flex PBGA package with 0.8mm pitch



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