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Solomon Wireless Solutions

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enabling the latest 802.11b wireless devices, the VIA Solomon VT6651 Media Access Controller ensures fast operation with heavy emphasis on security and feature support.



The VIA VT6651 Solomon-B WLAN is an 802.11b media access controller (MAC) with an integrated baseband processor (BBP). It is the heart of the Wi-Fi CERTIFIED Solomon-B 802.11b Mini-PCI Module. The VT6651 is built on a hardwired architecture with support for the descriptor-based DMA engine without requiring additional external SRAM. The on-chip A/D and D/A converters manage the input and output of both I and Q signals.

Highly flexible in application the VIA VT6651 has built-in support for PCI, Mini-PCI, and CardBus interfaces ensuring a wide range of design options. Also, vigorous field tests have shown that the VT6651 works seamlessly with most popular RF chips on the market today, which translates into lower cost for system builders enabling a wider choice of RF vendors to choose from. Furthermore, this thoughtfully designed WLAN controller provides two GPIO pins to make possible a system that gives the user an option of turning off the RF transceiver before the operating system loads.



Key Features

Product Features

- » Integrated MAC and BBP without RISC solution
- » Provides two GPIO pins
- » Built-in basic PCI bridge to support other PCI chips on multifunctional PCI/Mini PCI cards
- » Compliant with PCI Bus Power Management Interface Specification 1.1
- » LFBGA package: 13 mm x 13 mm, 191 balls with 0.8-millimeter ball pitch

Baseband Features

- » RAKE receiver and equalizer
- » Supports antenna diversity
- » Optimized for multipath delay spread of 250 ns at 11 Mbps
- » TX Automatic Level Control (ALC)

- » On-chip 6-bit A/D and D/A converters for I/Q data at 44 MHz
- » On-chip AGC control with internal D/A
- » Supports a data rate of 11 Mbps with automatic fallback to 1, 2, and 5.5 Mbps

MAC Features

- » Supports short preamble
- » Supports 64- and 128-bit keys in WEP engine as well as 256-bit software-implemented keys
- » Supports ad hoc/infrastructure under Distributed Coordination Function (DCF) operations
- » Supports multicast packet filtering function
- » Supports Wake on Wireless with magic packets

Security Features

- » Supports Wi-Fi Protected Access (WPA)
- » Supports TKIP and MIC generation and check in hardware implementation
- » RSSI updated per received packet
- » Supports four MIB counters



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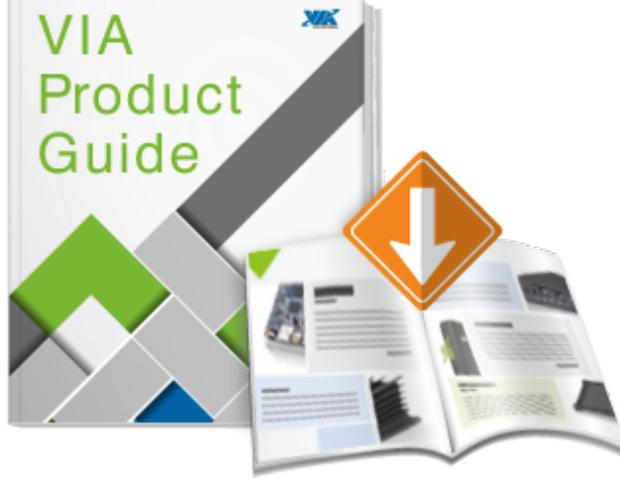
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