# SiW1750, SiW1760, and SiW1770 Baseband ICs

## Product Summary
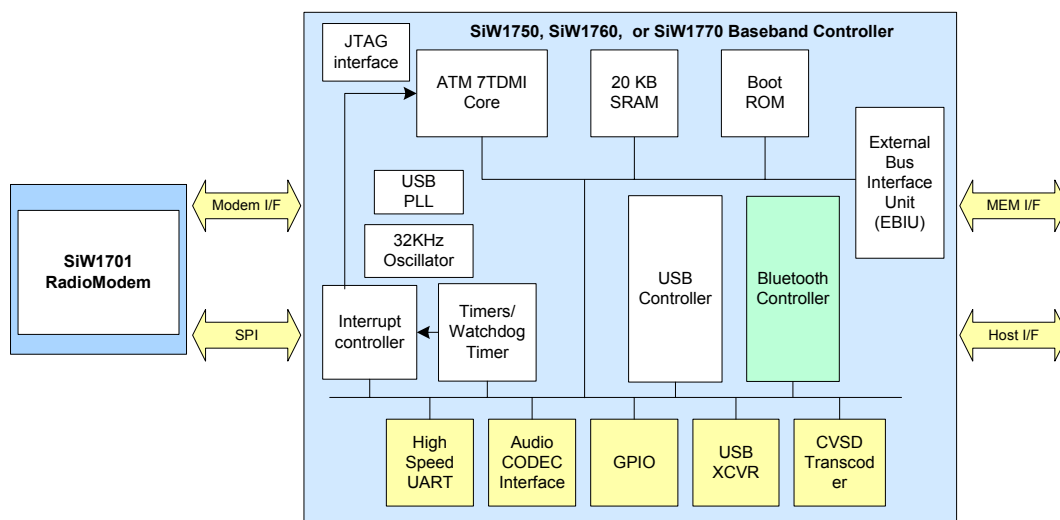### Advance Information

*Silicon Wave*

## INTRODUCTION

The SiW1750/60/70 Baseband ICs are new additions to Silicon Wave's product family for Bluetooth™ wireless communications. The SiW1750/60/70 ICs provide all Bluetooth baseband link control hardware and link management firmware in highly integrated system-on-chip packages.

The SiW1750/60/70 combined with the SiW1502 or the new SiW1701 Radio Modem IC are the lowest power, lowest cost and smallest footprint solutions for Bluetooth integration into OEM products.

The SiW1750/60/70 continue to advance the marks previously set by the SiW1602 Baseband IC by lowering system cost, reducing power consumption, and minimizing size. Higher functional integration and simplified system design with reduced external components are the major accomplishments of these new products.



*Bluetooth Subsystem Using the SiW1750, SiW1760, or SiW1770 Baseband ICs*

## FEATURES

- Integrated Bluetooth controller with 32-bit ARM7TDMI core.
- The SiW1750 uses external FLASH memory.
- The SiW1760 integrates 256 KB of internal ROM.
- The SiW1770 integrates 256 KB of internal FLASH memory.
- Internal boot ROM with support for FLASH memory download.
- Master/Slave role switch with full piconet support for 1 master and 7 slaves.
- Power saving modes (sniff, hold, and park with 3 slaves).
- Supports two standards compliant HCI transports: H:4 UART up to 1 Mbps and H:2 USB.
- CVSD hardware accelerator for voice application increases application flexibility.
- Audio CODEC interface for connecting industry standard PCM voice CODECs.
- Built-in 32-KHz oscillator circuit.
- Power management and sleep controller.
- 1.8 V core voltage with 1.8 V or 3.3 V I/O voltage.

## APPLICATIONS

The SiW1750/60/70 are suitable for all applications requiring Bluetooth wireless communications.

- **Mobile phones:** Handset integration and accessories.
- **Computing:** Notebook and desktop PCs, printers, accessories, wireless keyboards, and mice.

- **Mobile data:** PDAs, palmtops, and personal organizer communications.
- **Consumer electronics:** MP3 players, digital cameras, game consoles and controls.
- **Automotive and industrial:** Hands-free car phone kits, barcode scanners, POS terminals.

## SYSTEM SPECIFICATIONS

| Parameter | Min | Max | Units |
|---|---|---|---|
| Core voltage | 1.62 | 1.98 | V |
| I/O voltage (high range) | 2.70 | 3.60 | V |
| I/O voltage (low range) | 1.62 | 1.98 | V |

## MEMORY

| Baseband IC | Memory |
|---|---|
| SiW1750 | External FLASH memory |
| SiW1760 | 256 KB internal ROM |
| SiW1770 | 256 KB internal FLASH memory |

Information disclosed in this document is preliminary in nature and subject to change.
Silicon Wave, Inc. reserves the right to make changes to its products without notice, and advises customers to verify that the information being relied on is current.

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