



531 | 502

Wisair Ultra Wideband Chipset



Key Features

- Full production availability
- Integrated into reference designs and consumer products
- Data rates: 53.3 to 480 Mbps
- Data/host interfaces: RMII, MII, DCI, MPEG TS SPI, WiMedia MAC-PHY interface
- Frequency range: 3.1 to 4.8GHz
- Antenna diversity
- Coexistence with 802.11 and Bluetooth
- Packaging:
531: TFBGA 225 balls, 13x13 mm
502: QFN 48 pins leadless, 7x7 mm

Overview

Wisair's UWB chipset provides a complete solution for high-speed wireless connectivity and cable replacement applications. The chipset, consisting of the 531 MAC/BB chip and the 502 RF chip, is a mature, fully commercial chipset which is integrated into Wisair's development kit (DVK) and multiple reference designs.

The Wisair chipset provides a high bit rate, low power consumption and low cost solution for Wireless Personal Area (WPAN) applications. With a robust RF performance, it supports short range home/office wireless connectivity, multi streaming of high quality video, fast download/upload of content and broadband wireless multi-media sharing.

The chipset provides multiple data interfaces to enable high speed wireless connectivity for various applications. Data interfaces include: MAC-PHY Interface, Ethernet 100Mbps, RMII, MII, Direct CPU interface (DCI) and MPEG Transport Stream Synchronous Parallel Interface (SPI).

Wisair's chipset is suitable for a range of applications such as:

- PCs, laptops and peripherals
- Wireless Video
- External hard drives
- PDAs and handheld computers
- Digital cameras and camcorders
- Portable media players
- TVs, DVD/PRV players, set-top boxes, and gaming consoles

502 RF Chip

Implemented in SiGe-BiCMOS, the Wisair 502 RF chip delivers outstanding performance for high-speed applications. The 502 is based on the WiMedia common radio platform, and supports both FFI and TFI schemes with data rates ranging from 53.3Mbps to 480Mbps.

The 502 RF chip incorporates an on-chip RF band pass filter (BPF), a broadband receiver with a wide dynamic range, an ultra-fast hopping broadband synthesizer with on-chip VCO, and a programmable power amplifier to ensure maximum authorized output power under all conditions.

The Wisair 502 provides co-existence with Bluetooth and 802.11—both in close proximity and when embedded in the same product, module or PCB. The chip supports two antennas for antenna diversity and enhanced coverage.

531 MAC/BB Chip

The 531 MAC/Baseband chip is a 2nd generation CMOS-based chip, with a WiMedia-based PHY and a Wisair pre-standard MAC.

The 531 provides a range of interfaces, including:

- RMII, MII
- DCI (Direct CPU Interface)
- MPEG TS SPI (Synchronous Parallel Interface)
- Host interface for control and configuration
- WiMedia MAC-PHY interface



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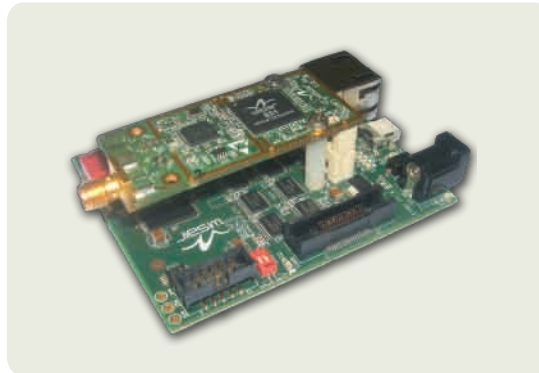
Wisair Ultra Wideband Chipset

About Wisair

Wisair is a leading provider of WiMedia Ultra-Wideband (UWB) and Wireless USB chipset solutions for consumer electronics, PC peripherals, and mobile devices.

Leveraging the management teams' decades of wireless communications product development expertise, Wisair is the first company to deliver fully-functional WiMedia-based UWB chipsets and small form-factor reference designs. Today, the fabless semiconductor company continues to focus on delivering low-cost, low-power, and high bit-rate wireless connectivity solutions.

A privately-held company, and part of the RAD group, Wisair is headquartered in Israel with offices in the USA, Japan, Korea and Taiwan.



DV9110 Development kit



UWB Hub Reference Design

Development Kit

The DV9110 Development kit is a complete solution for developing WiMedia Ultra Wideband applications using a wide selection of high-speed data and host interfaces.

The highly-integrated DVK incorporates the 531/502 chipset in a small footprint and is based on the WiMedia radio platform. In addition to the chipset, the DVK includes Wisair's UWB antenna, and the WisMan configuration and control host utility.

The DVK provides a complete environment to assist application developers in all implementation phases, including:

- Technology evaluation
- Solution development
- Demonstrations
- Add-on cards
- In-circuit debugging and control

Reference Designs

The 531/502 chipset is embedded in several reference designs, which enable the implementation of a broad range of Ultra Wideband applications such as projectors, printers, portable media players, and wireless video.

The Wisair chipset is optimized to minimize the bill of materials (BOM), size and power consumption. Reference designs include the chipset, as well as different antenna types, such as omni directional and PCB-based antennas.

The reference design package includes complete documentation, software API and the WisMan application for control and management.

- Wireless Ethernet
- Wireless hub
- PHY module
- Wireless video