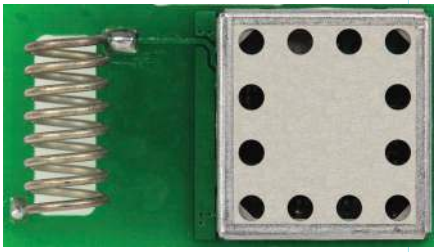
ZM5304

Z-Wave® Serial Interface Module with Antenna



The ZM5304 serial interface module with antenna takes the RF design effort out of Z-Wave. Designed for easy integration and fast time-to-market, it is ideal in applications such as TVs, set-top boxes, and gateways.

The ZM5304 is a fully self-contained module that includes a Z-Wave modem and built-in antenna. The module comes with full FCC modular approval and is pre-scanned for CE approval, making hardware intergration and approval very simple. The ZM5304 provides hardware-assisted frequency agility, enabling the module to switch away from a noisy channel without communication or software overhead.

The ZM5304 module exposes the well-documented and proven Z-Wave Serial API via USB or UART. As new Serial API features become available, the ZM5304 firmware can be upgraded using the UART or USB ports, eliminating the need to replace hardware. Existing products that use the Z-Wave Serial API can be upgraded to the ZM5304 module without having to re-write their interface software.

The ZM5304 continues to build on the Z-Wave ten-year track record of backward-compatibility, enabling all generations of Z-Wave to communicate seamlessly in a Z-Wave network.

KEY BENEFITS

- Easy integration
- Complete design from interface to antenna
- An off-the-shelf solution

TARGET APPLICATIONS

- Gateways
- TVs
- Set-top boxes

KEY FEATURES

- Provides connection via Z-Wave serial API interface
- UART, USB full-speed device connection
- Firmware upgrade using UART or USB
- Helical antenna on-board
- Hardware AES 128 security engine
- 2µA sleep mode
- 9.6/40/100 kbit/s data rates
- Regional modules for 868/908/921 MHz
- Hardware-assisted frequency agility with up to 3 channels
- Battery monitor and built-in supply regulators
- Power supply: 2.3-3.6V
- PCB module 27mm x 15.2mm x 5.5mm

ACTUAL SIZE
27mm x 15.2mm

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SIGMA DESIGNS

ZM5304

Z-Wave® Serial Interface Module with Antenna

MODULE COMPARISON TABLE

Feature	ZM3102	ZM5202	ZM5101	ZM5304
Application	General Purpose	General Purpose	Serial Interface	Modem Only
Type	PCB Module	PCB Module w/ SAW Filter	SiP w/o SAW Filter	PCB Module w/ Ant. & SAW Filter
Based on	SD3301	SD3502	Die	SD3503
Package	PCB Module 13x14mm	PCB Module 13x14mm	QFN56 8x8mm	PCB Module 13x30mm
Frequency (MHz)	868/908/921	868/908/921	868/908/921	868/908/921
Bit-rate (kkbit/s)	9.6/40	9.6/40/100	9.6/40/100	9.6/40/100
FLASH Memory (kB)	32	128	128	N/A
SRAM (kB)	2	16	16	N/A
I/O	10	10	30	N/A
Key-Scan (# Keys)	None	None	128	N/A
IR Support	None	None	Transmit/Learn	N/A
UART/SPI	1/1	1/1	2/2	1/-
USB 2.0 Device	None	None	1	1
Security 128-bit AES	Yes SW Only	Yes HW	Yes HW	Yes HW
Tx RF Power (dBm)	-22 to -2	-26 to +4	-24 to +6	-26 to +4
Rx Sensitivity (dBm)	-102 @ 9.6kbit/s	-103 @ 9.6kbit/s	-105 @ 9.6kbit/s	-103 @ 9.6kbit/s
Tx/Rx Current (mA)	36(@ -2dBm) /23	41(@ 0dBm) /32	32(@ 0dBm) /32	36(@ 0dBm) /33
Sleep Current (µA)	2.5	1	1	2
Battery to Battery (µA)	80	50	50	N/A

ABOUT SIGMA DESIGNS

Sigma Designs is a leading provider of system-on-chip (SoC) solutions used to deliver entertainment and control throughout the home:

Media Processing, Smart TV, Video Encoding, Home AV Networking, Video Processing, Home Control

These SoCs are supported with board-level reference designs, sophisticated system software, and technical documentation to form a complete solution for a variety of set-top boxes, smart TVs, consumer electronics, AV network devices, and home control systems.

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Rev. 07.16.14 PMB12441

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