

JA3515 – Transceiver

Wireless Controller IC



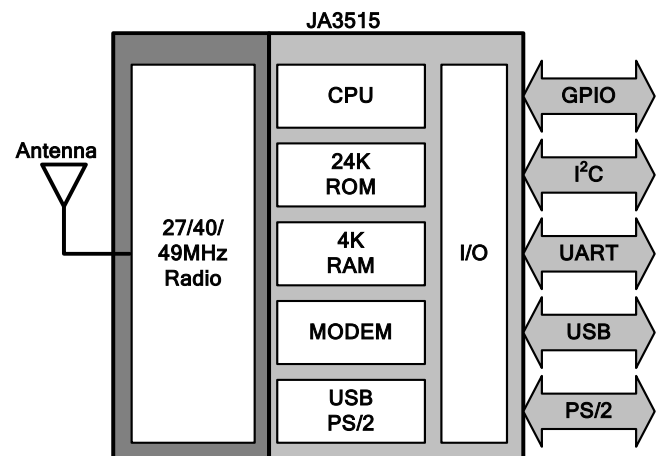
Overview

The JA3515 is a low-cost, highly integrated, tri-band, system-on-chip targeted for wireless keyboard and mouse applications. The JA3515 can be used as a complete, high performance PC transceiver interface for a wireless keyboard and mouse, using minimum external components. All necessary functions, the RF transceiver, baseband, modem, control logic and I/O interfaces;

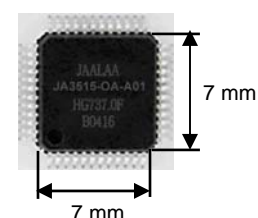
both USB and PS2 are on-chip. The protocol stack and application software are integrated in the built-in mask ROM. The wireless data link runs with very low latency at data rates up to 64 kbps. The system incorporates a proprietary media access control protocol (MAC) that provides highly reliable wireless data transfers even in an environment with other wireless users.

Features

- Tri-band, 27 MHz, 40 MHz and 49 MHz single-chip radio
- World-wide unlicensed RF bands
- Reliable, bi-directional data link
- GFSK modulation
- 64 kbps max data rate
- Robust Interference Avoidance
- Viterbi decoder
- High tolerant frequency compensation
- 8051 micro-controller
- JTAG interface
- 4-kByte SRAM
- Application integrated in 24-kByte ROM
- 16 programmable GPIO's
- Internal regulators
- I²C, UART serial Interface
- USB & PS/2 interface



JA3515 System Diagram



Technical Specifications:

	Min	Typ.	Max	unit
Operating Temperature	-20	+25	+85	°C
Operating Voltage	2.0	-	3.2	V
Frequency (Band 1)	26.995	-	27.255	MHz
(Band 2)		40.680		MHz
(Band 3)	49.840		49.880	MHz
Output Power (Peak)	13.0	15.0	17.0	dBm
Output Power Control		3		steps
Receive Sensitivity @ 1% PER		-105		dBm
Modulation/Demodulation		GFSK		
Power Consumption				
<i>Continuous Transmit Mode</i>		20		mA
<i>Continuous Receive Mode</i>		25		mA
<i>Sleep Mode</i>		12		uA
Multi-channels			15	
Data Rate			64	kbps

Applications:

