

# JA3515 – Transceiver

Wireless Controller IC



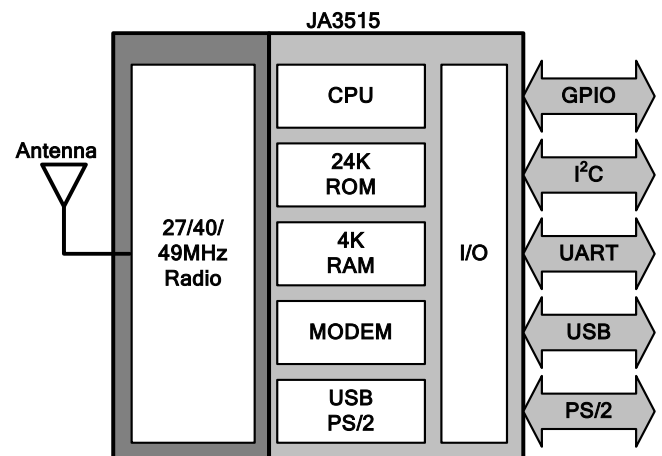
## Overview

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;

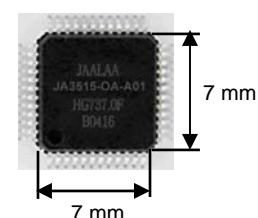
both USB and PS2 are on-chip. The protocol stack and application software are integrated in the built-in mask ROM. The wireless data link runs with very low latency at data rates up to 64 kbps. The system incorporates a proprietary media access control protocol (MAC) that provides highly reliable wireless 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
- I<sup>2</sup>C, UART serial Interface
- USB & PS/2 interface



JA3515 System Diagram



### Technical Specifications:

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

### Applications:

