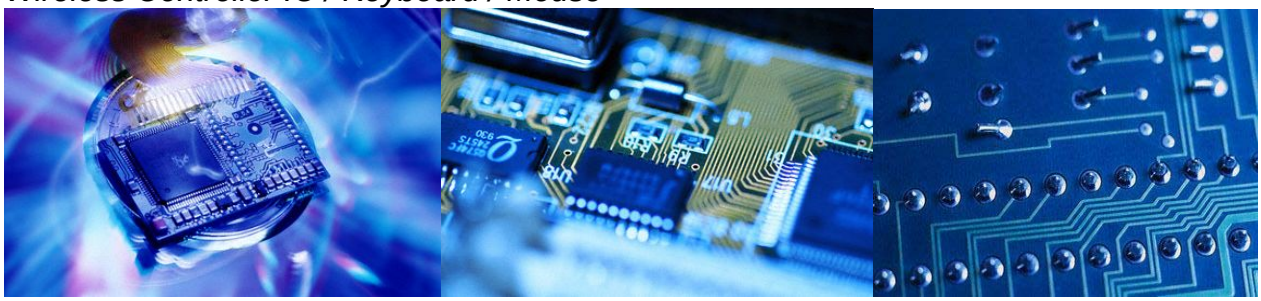
Dec, 2004

JA3514 –Keyboard & Mouse

Wireless Controller IC / Keyboard / Mouse

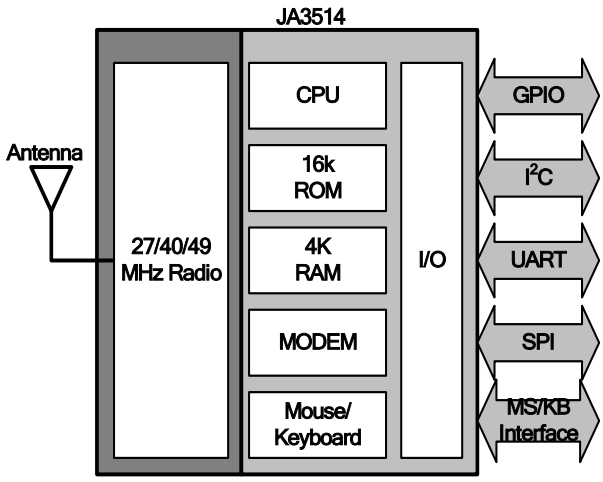


Overview

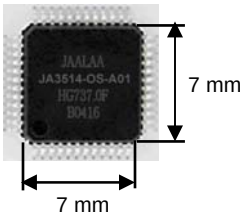
The JA3514 is a low-cost, highly integrated, tri-band system-on-chip targeted for wireless keyboard and mouse applications. The JA3514 can be used as a complete and high performance wireless mouse, using minimum external components. JA3514 can be used as a wireless keyboard together with Keyscan chip JA3518A. All necessary functions, the RF transceiver, baseband, modem, control logic and I/O interfaces are on-chip. The protocol stack and application software are stored 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 (MAC) protocol that provides highly reliable wireless data transfers even in an environment with several wireless users.

Features

- Tri-band, 27 MHz, 40 MHz and 49 MHz single-chip radio
- World-wide unlicensed RF band
- 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
- Mouse and keyboard applications integrated in 16-kByte ROM
- 18 programmable GPIO's
- Internal regulators & DC/DC converter
- I^2C, UART & SPI Serial Interfaces
- Mouse interface (Quadrature signals, SDIO



JA3514 System Diagram



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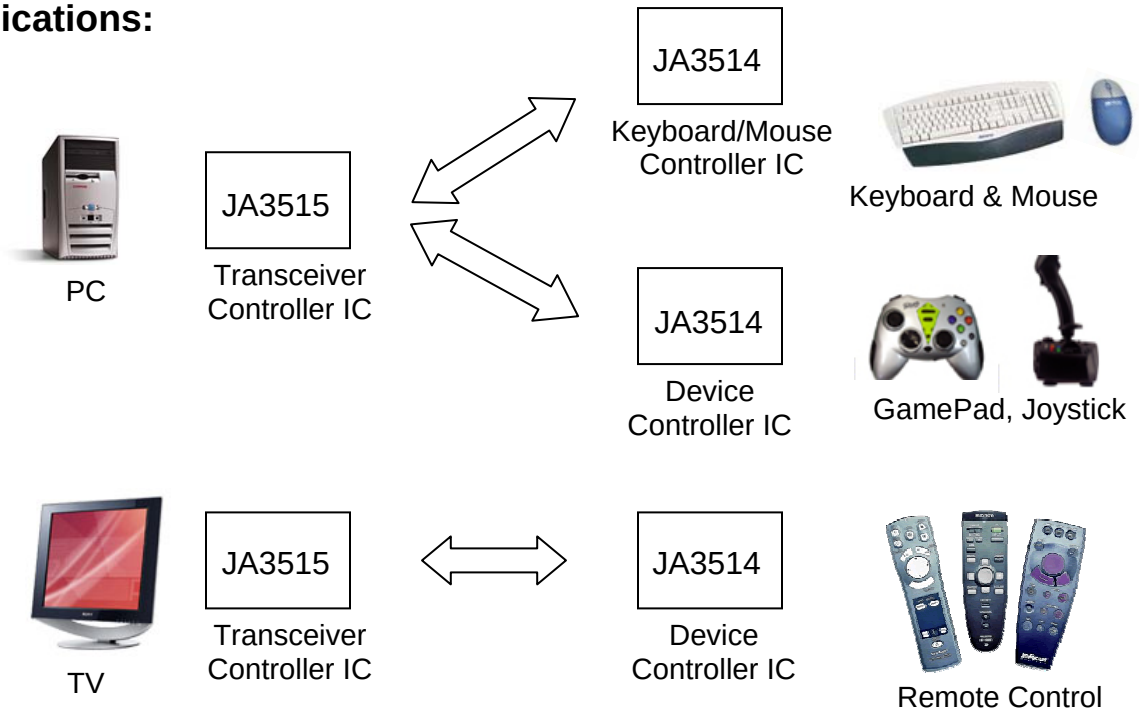
Technical Specifications:

	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				
Continuous Transmit Mode		20		mA
Continuous Receive Mode		25		mA
Sleep Mode		12		uA
Multi-channels			15	
Data Rate			64	kbps

Applications:



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