



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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FEATURES

- Very low power, high performance, low IF transceiver
- Fully integrated io-homecontrol compliant protocol covering
 - Layer 1, Layer 2, and time critical elements of Layer 3
 - Media access
 - Master, slave, and beacon modes supported
 - Automatic io-homecontrol channel scan
 - Automatic CRC, preamble, start byte insertion/check
 - UART data encoding as per io-homecontrol
 - Smart preamble detect/packet sniffing
 - Automatic address filtering
 - Low power modes
- Autonomous packet handling without intervention of host microprocessor thus significantly increasing battery life
- 1-way and 2-way communication supported
- Automatic wake-up timer
- 32-bit hardware timer, 16-bit firmware timer (48 bits total)
- Uses either
 - External 32 kHz crystal
 - Internal 32 kHz RC oscillator
- Patented fast settling automatic frequency control (AFC)
- Fully integrated image rejection calibration (patent pending)
- Digital RSSI
- Operating frequencies
 - Channel 1: 868.25 MHz
 - Channel 2: 868.95 MHz
 - Channel 3: 869.85 MHz

Very low power consumption

- 12.8 mA in receive mode with AGC active
- 11.9 mA in receive mode with manual AGC, ADC off
- 24.1 mA in transmit mode (10 dBm output)
- 0.75 μ A in RCO wake mode
- 1.25 μ A in XTO wake mode (32 kHz oscillator active)
- 38.4 μ A average current in low power mode

Receiver sensitivity (10⁻³ BER)

- 108.5 dBm at 38.4 kbps FSK, 20 kHz deviation

Output power programmable up to 13.5 dBm

- Automatic PA ramping
- Dual PAs offer Tx antenna diversity

Very few external components

- Integrated PLL loop filter
- Integrated Rx/Tx switch
- Integrated battery monitor
- On-chip 8-bit ADC and temperature sensor

Efficient and flexible SPI control interface

- 4 lines available for low cost microcontroller interface
- Flexible Tx and Rx data buffers
- Efficient burst mode register access

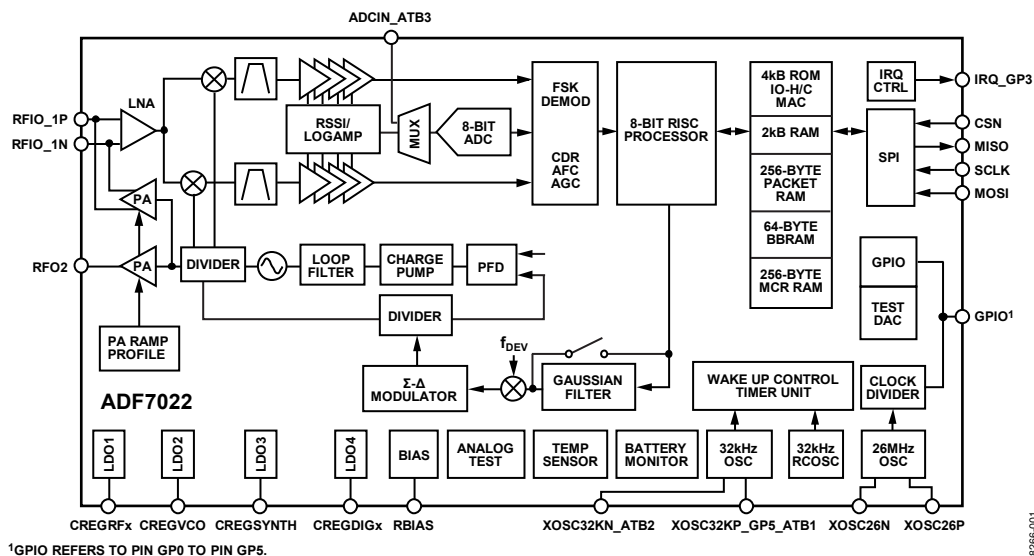
1.8 V to 3.6 V power supply

5 mm x 5 mm, 32-lead LFCSP package

APPLICATIONS

- Home automation
- Process and building control

FUNCTIONAL BLOCK DIAGRAM



¹GPIO REFERS TO PIN GP0 TO PIN GP5.

Figure 1.

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For more information on the ADF7022, contact a local sales office at Analog Devices, Inc.

Rev. SpA

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ADF7022

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