



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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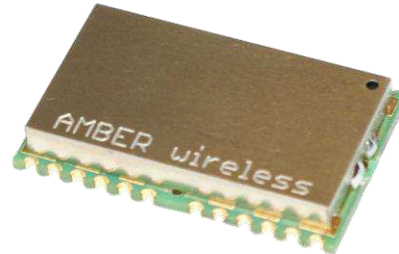


Compact Radio Module – Low Cost

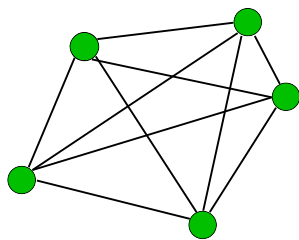
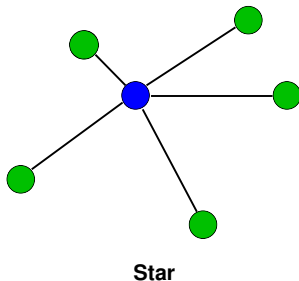
434 MHz SRD/ISM Band

Key Features

- Low-cost OEM radio module for the 434 MHz SRD band
- Compact dimensions: 17 x 27 x 4 mm
- Supports low-power applications
- Integrated AMBER RF stack with extensive functions
- Flexible addressing with up to 255 nodes in 255 networks
- Conforms with EU RED 2014/53/EU
- Available on Tape & Reel for SMD assembly
- Also available as wireless USB adapter (AMB4465)
- Pin compatible to AMB8426 (868 MHz)



Network Topologies



Description

The AMB4426 is a compact and low-cost radio data transmission module for wireless half-duplex communication. The integrated microprocessor controls data communication, and handles packet and checksum generation, addressing, monitoring of channel access and re-transmission of lost packets. The host system does not have to perform any radio specific tasks.

The module can be configured in many ways and supports data transfer with fast channel and address switching. The possibility to assess the quality of the radio link is also provided by using the measured field strength (RSSI value).

The AMB4426 is a surface mount device and with its edge-tinned pads it is suitable both for automatic as well as for manual mounting. It is available on Tape & Reel.

Interfaces

The AMB4426 is connected to a host system via the UART interface with bit rates up to 115.2 kBaud. Other pins are used for data flow control and to switch between operating modes.

An SPI interface can be implemented upon request (separate firmware).

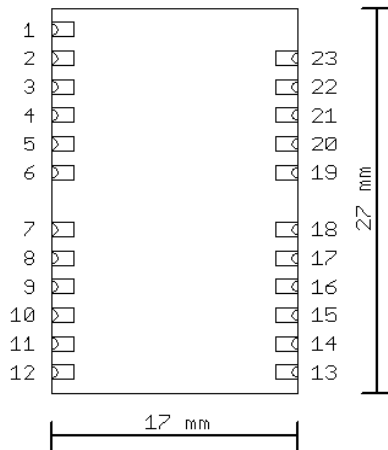
Using appropriate firmware, the module is also suitable for autonomously recording digital or analog signals.

Range of Application

Data collection, monitoring, remote control and sensor networks.

Its compact dimensions and low power consumption make the radio module ideal for battery-powered devices.

Dimensions



Pin-Assignment

| Nr. | Pad Name | I/O | Funktion |
|---------------------|----------------|-----|------------------------------|
| 1 | ANTENNA | - | Antenna connection |
| 2,23 | GND | - | Ground |
| 3 | VCC | - | Positive supply voltage |
| 4 | UTXD | O | UART transmit |
| 5 | URXD | I | UART receive |
| 6 | /RTS | O | Flow control |
| 7 | /CTS | I | Flow control |
| 8 | /DATA_INDICATE | O | Signals incoming data |
| 11 | /DATA_REQUEST | I | Triggers packet transmission |
| 13 | SLEEP | I | Selection of low-power mode |
| 14 | TRX_DISABLE | I | Selection of low-power mode |
| 15 | /CONFIG | I | Switches to command mode |
| 19 | /RESET | I | Reset |
| 20 | RX_INDICATE | O | Signals radio reception |
| 21 | TX_INDICATE | O | Signals radio transmission |
| 9,10,12,16,17,18,22 | RSVD | - | Reserved (do not connect) |

Specifications

TA = 25°C, VCC = 3.3 V if nothing else stated

| | | |
|---------------|-----------------------|--|
| Performance | Range* | Up to 1000 m |
| | RF data rate | Up to 100 kbps |
| | UART data rate | Up to 115,2 kBaud |
| | Output power | Up to 10 dBm (50 Ω) |
| | RF sensitivity | Down to -107 dBm (@ 1.2 kbps, 50 Ω) |
| General | Power supply | 2.2 – 3.6 V |
| | Power consumption | TX: typ. 34 mA RX: typ. 24 mA Low Power: typ. 3 µA |
| | Dimensions | 17 x 27 x 4 mm |
| | Operating temperature | -30 bis +85 °C |
| | Weight | Approx. 3 g |
| | Antenna | External antenna port (50 Ω) |
| RF technology | Adressing | Up to 255 nodes on 255 networks |
| | Frequency range | 433.75 – 434.75 MHz |
| | Channel spacing | 50 kHz |
| | Modulation | 2-(G)FSK, |
| | Supported topologies | Star, Peer-to-Peer |
| Conformity | Europe | EN 300 220, EN 301 489, EN 60950, EN 62479 |

* Range stated assumes line-of-sight. Actual range may vary depending on settings, antenna choice, board integration and environment.

Related Products

- AMB8426

Ordering information

| Item no. | Description |
|------------|-----------------------------------|
| AMB4426 | Radio Module 434 MHz |
| AMB4426-TR | Radio Module 434 MHz, Tape & Reel |



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