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 – High Performance

915 MHz Band

- OEM radio module for 915 MHz frequencies
- Compact dimensions: 17 x 27 x 4 mm
- Integrated AMBER RF stack with extensive functions
- Flexible addressing with up to 255 nodes in 255 networks
- FHSS conforming to FCC 15.247
- Available on Tape & Reel for SMT assembly
- Also available as wireless USB adapter (AMB9665)
- 15dBm output power
- Supports Star and Peer-to-peer topologies

Integrated MCU

16-bit Processor with 64kb flash + 6kb RAM

Range of Application

- Data collection
- Monitoring
- Remote control
- Sensor networks

The AMB9626 is a compact, low-cost and low power radio data transmission module for wireless half-duplex communication. The integrated microprocessor controls data communication, handling 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 address switching. It also implements asynchronous frequency hopping techniques in order to comply with FCC 15.247. An opportunity to assess the quality of the radio link is also provided by using the measured field strength (RSSI value).

The graphical user interface of the freely available Windows application “AMBER-ACC” makes it easy to set operating parameters. A USB stick version is available to easily connect the AMB9626 to a PC system.

The AMB9626 is an SMT device and is suitable for automatic component assembly. It can also be delivered in tape and reel packaging.

The AMB9626 is connected to a host system via the UART interface with data rates of up to 19200 kBaud. Other pins are used for data flow control and to switch between operating modes.

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

The receiving module is scanning all available channels for active transmitters while the transmitter is randomly selecting a transmission channel for each frame.

With the channel scanning a latency is introduced which has to be taken into account regarding the duty-cycle of the system.

The main focus of the AMB9626 is spontaneous data transmission with limited amount of data and a duty-cycle of 10% or less.

The AMB9626 implements a low power operating mode where µC and UART are disabled to have a current below 3 µA.

Specifications

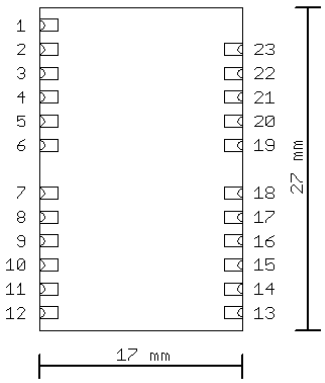
TA = 25°C, VCC = 3 V if nothing else stated.

Performance	RF data rate	38.4 kbps
	UART data rate	Typ. 9600 Baud, max. 19200 Baud
	Output power	Up to +15 dBm
	RF sensitivity	Typ. -99 dBm**
	Range*	Up to 700m
General	Power supply	2.0 - 3.6 V
	Power consumption	Tx: typ. 53 mA @ 15dB / Rx: 30 mA
		Low Power: typ. 3 µA (RTC on, RAM retention),
	Dimensions	17 x 27 x 4 mm
	Operating temperature	-40 to +85 °C
	Weight	Approx. 3 g
	Antenna	External antenna port (50 Ohm)
RF	Channel Spacing	500 kHz
	Frequency range	902.000 to 928.00 MHz
	Modulation	2-GFSK with frequency hopping
Compliance		FCC 15.247

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

**@ 38.4 kbps, 6 dB reduced due to receiving threshold for frequency hopping mechanism.

Dimensions and Pin Assignment



No.	Pad Name	I/O	Description
1	ANTENNA	-	
2,23	GND	-	
3	VCC	-	
4	UTXD	O	UART transmit
5	URXD	I	UART receive
6	/RTS	0	UART Flow control
7	/CTS	I	UART Flow control
8	/DATA_INDICATE	O	Signals incoming data
11	/DATA_REQUEST	I	Triggers packet transmission
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
All other	RSVD	-	Reserved

Ordering Information

Item No.	Description
AMB9626-TR	Radio module 915 MHz, Tape and Reel
AMB9665	Radio module 915 MHz
AMB8626	Radio module 868 MHz

ABOUT AMBER WIRELESS

AMBER wireless GmbH, established in 1997, is a German electronics company. AMBER specializes in the design and manufacturing of wireless connectivity solutions including compact short range RF modules for rapid implementation of cable-free data links. We have become one of the leading suppliers for low power ISM/SRD products in Europe. AMBER provides high-quality and cost-effective wireless modules and devices as well as custom design services.

SERVICES AVAILABLE

- Technical Support
- Custom Design Services
- Software / App Development
- Hardware Support

For more information on any of our products or services please visit our website:
www.amber-wireless.com

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