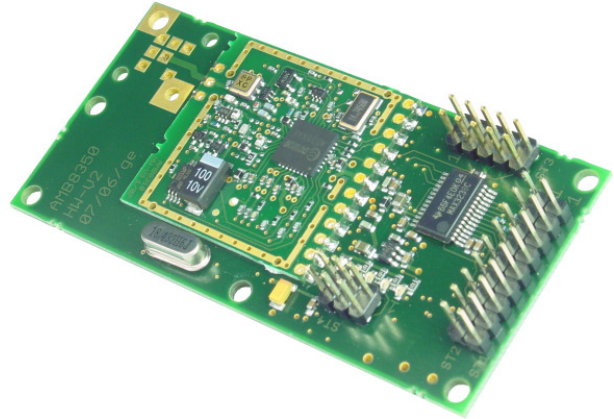


Medium-Range Data Modem

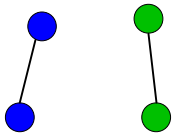
868 MHz Band

Key Features

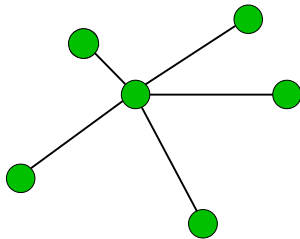
- Multi-channel, narrowband RF data modem
- Transmit power 20 mW
- Range up to 2km (line of sight)
- RF data rates up to 57.6 kbps
- Integrated microcontroller (300 byte data buffer)
- Flexible software stack to suit a wide range of applications
- Complies with R&TTE directive 1999/5/EC
- Licence-free within Europe



Network Topologies



Point-to-Point



Point-to-Multipoint

Description

The AMB8350 is a powerful OEM radio data modem enabling cable-free and reliable transmission of data over medium distances. The embedded microprocessor controls the complete wireless data communication, thus handling packet and checksum formation, addressing, monitoring of channel access and resending of unacknowledged data packets. A buffer memory is provided to enable transmission and reception of data independently of the connected host controller. The radio modem can be used as a transparent cable replacement.

The AMB8350 features a command set of various transmission modes to meet the requirements of the respective application. It provides a broadcast operation mode and it enables the user to address up to 254 devices per channel.

The GUI for the freely available Windows application AMBER-ACC makes it easy to set the operating parameters. The configuration of the parameters can alternatively be realised by means of AT-commands.

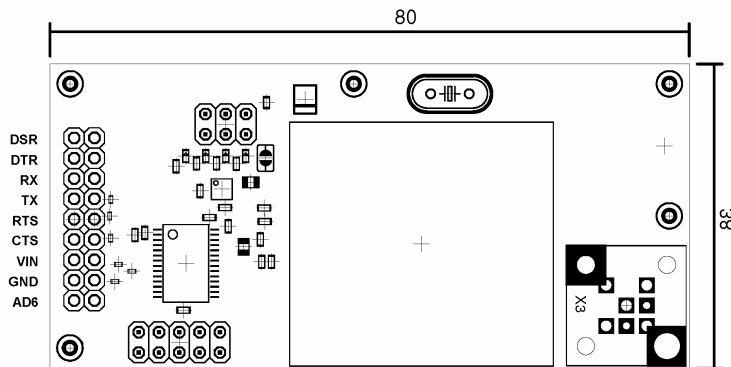
Interface

The AMB8350 is connected to a host system via RS-232 interface with data rates of up to 115.2 kbaud. Alternative host interface options: RS-485 or USB.

Scope of Application

Telemetry, wide-ranging data collection systems, monitoring, surveying, remote control and wireless sensor networks.

Dimensions



Pin Assignment Main Connector

| Pin | Description |
|-----|-------------------------|
| DSR | Data Set Ready |
| DTR | Data Terminal Ready |
| RX | Receive Data |
| TX | Transmit Data |
| RTS | Request to Send |
| CTS | Clear to Send |
| VIN | Positive supply voltage |
| GND | Negative supply voltage |
| AD6 | Reserved |

Specifications

| | | |
|----------------|------------------------------|-------------------------------------|
| Performance | Range* | Up to 2 km (line of sight) |
| | RF data rate | 10 or 57.6 kbaud |
| | Interface data rate | Up to 115.2 kbaud (UART) |
| | Output power | Max. 13 dBm (@ 50 Ω, adjustable) |
| | RF sensitivity | -108 dBm (@ 50 Ω) |
| General | Power supply | 4 to 10 VDC |
| | Current consumption | TX: 105 mA RX: 55 mA |
| | Dimensions | 80 x 38 x 12.5 mm ³ |
| | Operating temperature | -10 to +55 °C |
| | Weight | 23 g (without antenna connector) |
| | Antenna connector | SMA or BNC possible assembly |
| | Status indication | 4 LEDs (Power, Status, RX, TX) |
| | Microprocessor | ATMEL AT91SAM7Sxx |
| RF transceiver | 20 mW transceiver AMB8310 | |
| RF technology | Addressing | Up to 254 nodes |
| | Frequency range | 868.059 to 869.621 MHz |
| | Channel spacing | 39 kHz |
| | Number of channels | Max. 31 channels |
| | Modulation | 2-(G)FSK |
| | Supported network topologies | Point-to-Point, Point-to-Multipoint |

* Range stated is calculated assuming line-of-sight. Actual range will vary based upon specific board integration, antenna selection, and environment.

Related Products (868 MHz)

- **AMB8420** Low-Cost RF Module
- **AMB8355** Long-Range RF Data Modem
- **AMB8400** Low-Cost RF Transceiver
- **AMB8310** Medium-Range RF Transceiver
- **AMB8315** Long-Range RF Transceiver

Ordering Information

| Item no. | Description |
|----------|---------------------------------|
| AMB8350 | Medium Range Data Modem 868 MHz |

Contact

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