

The fastest way to wireless.

Compact, low-cost 868MHz transceivers can replace miles of cable in harsh industrial environments. Using field-proven technology which needs no additional ETSI (Europe) licensing, OEMs with little or no previous RF experience can easily make existing systems wireless.

AC4486s feature a number of on-the-fly control commands, providing OEMs with a very versatile interface for any application. The modules can be used as direct wire replacements, requiring no special host software for communication. All synchronization and RF system data transmission/reception is performed by the transceiver.

AC4486s operate in a point-to-point or point-to-multipoint, client/server or peer-to-peer architecture. They are (socket-compatible network-wide) with 2.4GHz and 900MHz models, preserving OEMs' hardware/software investments while providing solutions that meet different market, regulatory and environmental needs.



AC4486 Highlights

- Approved for **European use**.
- **Seamless** cable-to-transceiver replacement.
- High 868MHz data rate: **76.8 Kbps**.
- Small form factor: **1.65 x 1.9 inches**.
- Operates in **-40°C to +80°C** temperatures.
- **Socket-compatible** with 2.4GHz models.

Applications



Recreation Areas

- Irrigation systems
- Golf cart tracking
- Score keeping
- Order entry
- Grounds maintenance



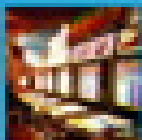
Pool & Spa Control

- Temperature monitoring
- Pump activation
- Illumination
- Environmental controls
- Access & activity alerts



Point of Sale

- Inventory tracking
- Order processing
- Credit/debit verification
- Merchandise vending
- Portable registers



Gaming Devices

- Lottery machines
- Portable bingo
- Bar trivia
- Casino slots
- Game kiosks



Utilities Management

- Automatic meter reading
- Load profiling, forecasting
- Data management
- Tampering alerts
- Real-time support

Specifications

PARAMETER

AC4486-5

Interface	20-pin mini connector
Frequency	869.7-869.65MHz
Modulation	FSK
Serial interface options	3V TTL
Serial interface data rate	Up to 115.2 Kbps
Output power (w/ 2dBi antenna)	5mW variable
Power consumption (transmit/receive)	40mA/30mA
Security	One-byte system ID
Sensitivity (w/ 2dBi antenna)	-100 dB typical @ 76.8 Kbps RF Data Rate
Voltage	3.3V nominal +/-2%, +/-30mV
Range	Up to 1000 meters line of sight
Temperature	-40° to +80°C
Humidity (non-condensing)	10% to 90%
Dimensions	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)
Weight	< 0.75 oz (< 21 g)
Antenna	External MMCX connector

* The 868MHz frequency band is approved in Europe as an unlicensed spectrum subject to approval by device.

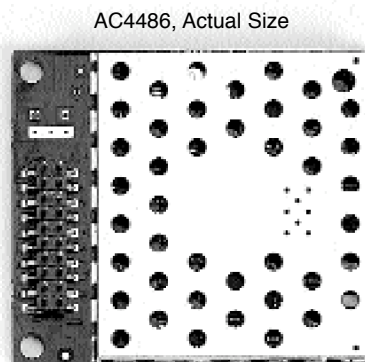
** Although AC4868 radios will not talk to AC4490 radios, socket-compatibility allows for interchanging the modules network-wide.



Flexible RF Protocol

AeroComm's embedded transparent protocol simplifies the OEM's integration process by allowing for drop-in installation. As each transceiver receives raw data, it manages over-the-air protocol to assure successful communication. Headers, data packet length, and CRCs are not needed.

RF232 supports simple cable-replacement to complex peer-to-peer configurations. Broadcast communication to all transceivers or address packets to a specific destination using unique MAC addresses embedded in each transceiver.



Protocol Features

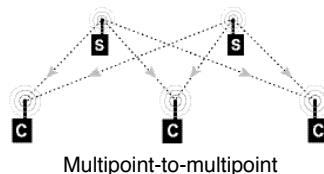
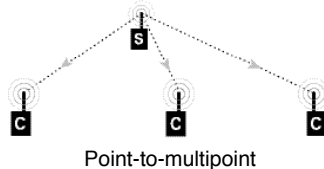
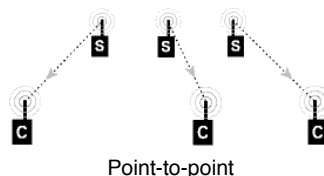
RF PROTOCOL MODES

- a) **Communication**
 - Unicast (one-to-one addressing)
 - Broadcast (one-to-many addressing)
- b) **Acknowledgement mode (ACK)**
 - API with hardware/software ACK indication

INTERFACE PROTOCOL

- a) **On-the-fly transceiver configuration**
 - Destination address
 - RF transmit power
 - Broadcast/addressed
- b) **9-bit serial interface mode**
- c) **A/D, D/A generic I/Os**
- d) **Variable baud rate**
- e) **RF packet size, timeout control**
- f) **Onboard temperature sensor**
- g) **Handshaking**
 - CTS/RTS
- h) **In-range indicator**
- i) **Error detection**
 - Onboard CRC
 - Duplicate packet filtering
- j) **Data encryption standard (DES)**

RF Architectures



Placing Orders

Select features from the list below to identify the appropriate part number. More product lines are available for industrial & commercial applications. Contact AeroComm Sales for details: toll-free 1-800-492-2320, email sales@aerocomm.com.

PART NUMBERS

AC4486-5M

868MHz transceiver, TTL serial RS232, 0-250mW, -40° to +80° C, MMCX antenna

AC4486-5M-485

868MHz transceiver, TTL serial RS485, 0-250mW, -40° to +80° C, MMCX antenna

AC4486-5A

868MHz transceiver, TTL serial RS232, 0-250mW, -40° to +80° C, integral antenna

AC4486-5A-485

868MHz transceiver, TTL serial RS485, 0-250mW, -40° to +80° C, integral antenna