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 **–40ºC to +80ºC** 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	-40º to +80ºC
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

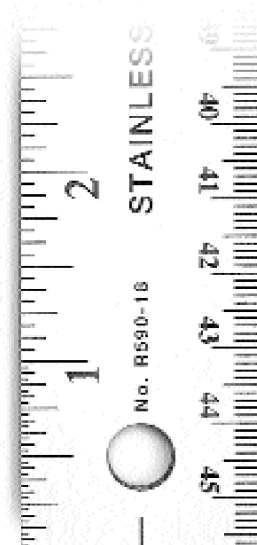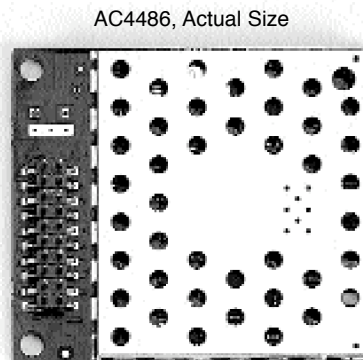* The 868MHz frequency band is approved in Europe as an unlicensed spectrum subject to approval by device.

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

AEROCOMM

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.
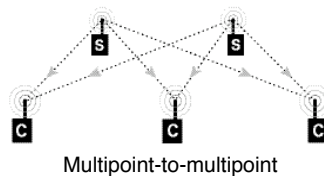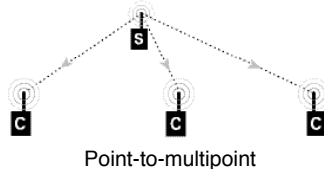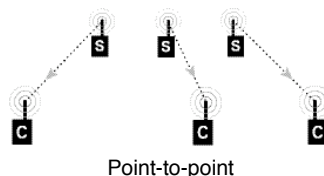
AC4486, Actual Size

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

Point-to-point

Point-to-multipoint

Multipoint-to-multipoint

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, -40º to +80º C, MMCX antenna

AC4486-5M-485
   868MHz transceiver, TTL serial RS485, 0–250mW, -40º to +80º C, MMCX antenna

AC4486-5A
   868MHz transceiver, TTL serial RS232, 0–250mW, -40º to +80º C, integral antenna

AC4486-5A-485
   868MHz transceiver, TTL serial RS485, 0–250mW, -40º to +80º C, integral antenna

AEROCOMM