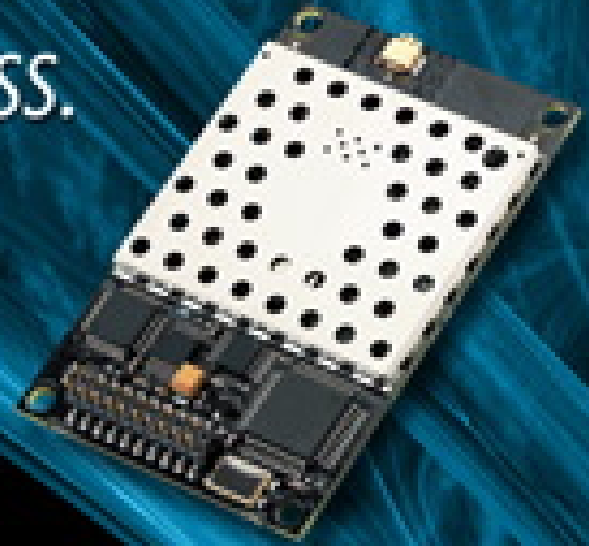


# The fastest way to wireless.

AC4424 is a 2.4GHz FHSS digital transceiver that represents a breakthrough in industrial RF communication. Comprised of a complete, agency-certified radio and sophisticated RF232® protocol, AC4424 simplifies the OEM's design effort and assures successful field operation.

RF232 makes AC4424 a drop-in module for seamless integration, easy operation and fast time-to-market. As each transceiver receives raw data, it manages protocol over-the-air to assure successful transmissions. Headers, data packet length and CRCs are not needed. The process is transparent to the OEM.

AC4424 modules are socket-compatible with AeroComm's 900MHz AC4490 transceivers, enabling OEMs to design once and subsequently interchange radios to accommodate new markets, regulations and environments.\* Developer tools and support back every transceiver line. Let AeroComm help you find the best fit for your application.



## AC4424 Highlights

- FCC, IC and ETSI/CE certified.
- **Flexible protocol** allows various configurations.
- **Small form factor: 2.65 x 1.65 inches.**
- Operates in **-40°C to +80°C** temperatures.
- **Low-power sleep mode** with continuous sync.

## Applications



### Industrial Control

- Lighting
- HVAC
- Sensor monitoring
- Automation
- Data loggers



### Fleet Telemetry

- Vehicle tracking
- Cargo data
- Weigh scales
- Maintenance logs
- Mapping



### Automotive

- Wheel alignment
- Handheld diagnostics
- Onboard diagnostics
- Engine analyzers
- Vibration



### Field Surveillance

- SCADA
- Oil & gas
- Water & wastewater
- Tank monitoring
- Security



### Home Automation

- Pool & spa control
- Lighting & atmosphere
- Security systems
- Audio & video

## Specifications

PARAMETER	AC4424-10	AC4424-100	AC4424-200
<b>Interface</b>	20-pin mini connector	20-pin mini connector	20-pin mini connector
<b>Frequency</b>	2.402 - 2.478 GHz	2.402 - 2.478 GHz	2.402 - 2.478 GHz
<b>Modulation</b>	FHSS FSK	FHSS FSK	FHSS FSK
<b>Serial interface options</b>	3V or 5V TTL	3V or 5V TTL	3V or 5V TTL
<b>Serial interface data rate</b>	Up to 192 Kbps	Up to 192 Kbps	Up to 192 Kbps
<b>Output power</b>	10mW	100mW	200mW
<b>Power consumption**</b>	115/85 mA	160/85 mA	235/85 mA
<b>Channels</b>	88 channels U.S./Canada; 40 channels Europe	88 channels U.S./Canada; 40 channels Europe	88 channels U.S./Canada; 40 channels Europe
<b>Security</b>	One-byte system ID	One-byte system ID	One-byte system ID
<b>Voltage</b>	5 V nominal +/- 2% +/- 50 mV ripple	5 V nominal +/- 2% +/- 50 mV ripple	5 V nominal +/- 2% +/- 50 mV ripple
<b>Sensitivity</b>	-90 dB @ full RF data rate	-90 dB @ full RF data rate	-90 dB @ full RF data rate
<b>Range</b>	Up to 0.5 mile (1 km)	Up to 1 mile (2 km)	Up to 2 miles (3 km)
<b>Temperature</b>	-40° to +80°C	-40° to +80°C	-40° to +80°C
<b>Humidity (non-condensing)</b>	10% to 90%	10% to 90%	10% to 90%
<b>Dimensions</b>	1.65 x 2.65 x 0.20 inches (6.7 x 4.2 x 0.5 cm)	1.90 x 2.65 x 0.20 inches (6.7 x 4.2 x 0.5 cm)	1.90 x 2.65 x 0.20 inches (6.7 x 4.2 x 0.5 cm)
<b>Weight</b>	< 0.7 oz (< 20 g)	< 0.7 oz (< 20 g)	< 0.7 oz (< 20 g)
<b>Antenna</b>	MMCX receptacle or Integral	MMCX receptacle	MMCX receptacle

\* Although AC4424s will not talk to AC4490s, socket-compatibility allows for seamlessly interchanging the modules network-wide.

\*\* Power consumption assumes 50% transmitter-on time.

# AEROCOMM

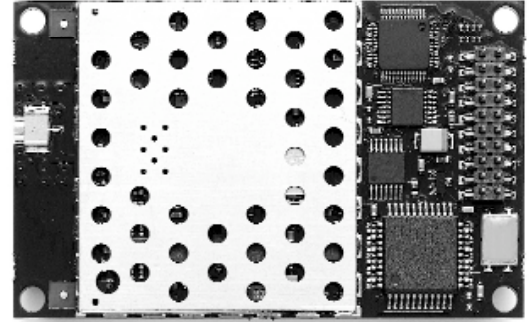
10001 Archer Drive • Temecula, CA 92591 • Phone 951-451-2337 • Fax 951-451-1247 • Web www.aerocomm.com

# 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.

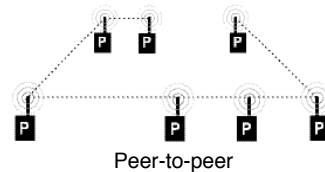
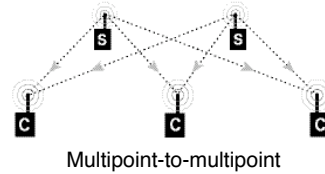
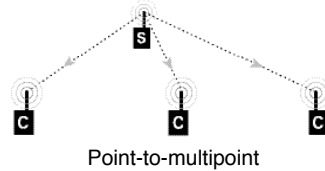
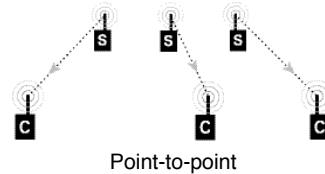
AC4424, Actual Size



## Protocol Features

- **Communication**
  - Unicast (one-to-one addressing)
  - Broadcast (one-to-many addressing)
- **Transceiver configuration**
  - Destination address
  - Co-located servers
  - RF Channel
  - Broadcast/addressed
- **Variable baud rate**
- **RF packet size, timeout control**
- **Handshaking**
  - CTS/RTS
- **In-range indicator**
- **Auto-channel**
- **Error detection**
  - Onboard CRC
  - Duplicate packet filtering
- **Random back-off**

## 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](mailto:sales@aerocomm.com).

### PART NUMBERS

#### AC4424-200

2.4GHz 200mW transceiver, 5V, TTL serial, -40° to +80° C, MMCX antenna

#### AC4424-200A

2.4GHz 200mW transceiver, 5V, TTL serial, -40° to +80° C, integral antenna

#### AC4424-100

2.4GHz 100mW transceiver, 5V, TTL serial, -40° to +80° C, MMCX antenna

#### AC4424-100A

2.4GHz 100mW transceiver, 5V, TTL serial, -40° to +80° C, integral antenna

#### AC4424-10

2.4GHz 10mW transceiver, 5V, TTL serial, -40° to +80° C, MMCX antenna

#### AC4424-10A

2.4GHz 10mW transceiver, 5V, TTL serial, -40° to +80° C, integral antenna