

# AEROCOMM Embedded Wireless Modules



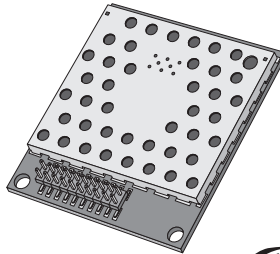
## 900 MHZ AC4490 SERIES - SERVER/CLIENT PROTOCOL

Compact AC4490 900MHz transceivers can replace miles of cable in harsh industrial environments. Using field-proven FHSS technology that needs no additional site licensing, AC4490s reject interference, enable co-located system operation, increase output power and maintain data integrity.

AC4490s feature drop-in installation and a number of on-the-fly control commands, providing OEMs with a versatile interface for any application. They can be used as direct wire replacements, requiring no special host software for communication. All frequency hopping, synchronization and RF system data transmission/reception is performed by the transceiver.

### Features:

- High 900MHz data rate: 115.2 Kbps
- Small form factor: 1.65 x 1.9 inches
- Operates in -40°C to +80°C temperatures
- Variable output power: 5mW to 1000mW
- One full watt enables 20-mile possible range
- Lowest cost one-watt module available



Products may be RoHS compliant.  
Check mouser.com for RoHS status.

Parameter	AC4490-200	AC4490-1000
Interface	20-pin mini connector	20-pin mini connector
Frequency**	902-928 MHz (U.S.)**	902-928 MHz (U.S.)**
Modulation	FHSS FSK	FHSS FSK
Serial Interface Options	3V or 5V TTL	3V TTL
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output Power (w/ 3dBi antenna)	5mW-200mW variable	5mW-1000mW variable
Power Consumption†	68 mA typical @ 200mW	765 mA typical @ 1000mW
Channels	Up to 48 (U.S.)**	Up to 32 (U.S.)**
Security	One-byte system ID, DES	One-byte system ID, DES
Voltage	3.3V-5.5V	pin 10: 3.3V-5.5V pin 11: 3.3V +/-3%
Sensitivity	-99 dB @ full RF data rate	-99 dB @ full RF data rate
Range	Up to 4 miles (6.5 km)	Up to 20 miles (32 km)
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)
Weight	< 0.75 oz (< 21 g)	< 0.75 oz (< 21 g)
Antenna	Integrated and external dipole	External dipole

\* The 900MHz frequency band is approved in the Americas and Australia as an unlicensed spectrum subject to approval by device.  
\*\* For products and specifications suited to non-U.S. countries, please contact AeroComm directly.  
† Power consumption assumes 50% transmitter on-time.

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each	
			1	50
<b>5mW-200mW Variable Modules</b>				
<a href="#">814-AC4490-200M</a>	AC4490-200M	900 MHz FHSS module w/ MMCX ant. connector, RS232	<b>62.50</b>	<b>58.50</b>
<a href="#">814-AC4490-200A</a>	AC4490-200A	900 MHz FHSS module w/ integral ant., RS232	<b>63.85</b>	<b>59.50</b>
<a href="#">814-AC4490200M5485</a>	AC4490-200M-485	900 MHz FHSS module w/ MMCX ant. connector, RS485	<b>63.50</b>	<b>59.20</b>
<b>5mW-1000mW Variable Modules</b>				
<a href="#">814-AC4490-1000M</a>	AC4490-1000M	900 MHz FHSS module w/ MMCX ant. connector	<b>77.50</b>	<b>73.50</b>
<a href="#">814-AC44901000M485</a>	AC4490-1000M-485	900 MHz FHSS module w/ MMCX ant. connector, RS485	<b>78.50</b>	<b>74.50</b>

## 900 MHZ AC4790 SERIES - PEER/PEER PROTOCOL

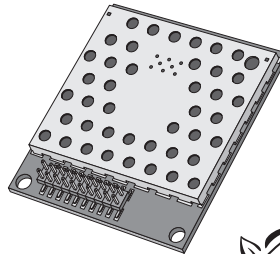
High-performance AC4790 transceivers utilize AeroComm's "masterless" protocol, allowing each transceiver to communicate with any other in-range transceiver for true peer-to-peer operation.

Using field-proven 900MHz FHSS technology that needs no additional site licensing, AC4790s reject interference, enable co-located system operation, increase output power and maintain data integrity.

AC4790's protocol features a dynamic addressing scheme, which simplifies the most efficient transmission path, so OEMs can design routing sequences that optimize the RF network. This makes AC4790 ideal for a wide variety of RF network. This makes AC4790 ideal for a wide variety of industrial applications that must rely on smooth, constant data flow.

### Features:

- True peer-to-peer protocol
- Small form factor: 1.65 x 1.9 inches
- 2 USB commands to control packet routing
- Software-controlled sensitivity
- Remote radio discover
- Variable output power: 5mW to 1000mW



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Modulation	FHSS FSK	FHSS FSK
Serial Interface Options	3V or 5V TTL	3V TTL
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output Power (w/ 3dBi antenna)	5mW-200mW variable	5mW-1000mW variable
Power Consumption†	68 mA typical @ 200mW	765 mA typical @ 1000mW
Channels	Up to 48 (U.S.)**	Up to 32 (U.S.)**
Security	One-byte system ID, DES	One-byte system ID, DES
Voltage	3.3V-5.5V	3.3V
Sensitivity (adjustable)	-99 dB @ full data rate	-99 dB @ full data rate
Range (line-of-sight)	Up to 4 miles (up to 6.5 km) with external antenna	Up to 20 miles (up to 32 km) with high-gain antenna
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)
Weight	< 0.75 oz (< 21 g)	< 0.75 oz (< 21 g)
Antenna	Integrated or external dipole††	External dipole††

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† Power consumption assumes 50% transmitter on-time.  
†† Higher-gain antennas optional.

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<a href="#">814-AC4790-200M</a>	AC4790-200M	900 MHz FHSS module w/ MMCX ant. connector, RS232	<b>62.50</b>	<b>58.50</b>
<a href="#">814-AC4790-200A</a>	AC4790-200A	900 MHz FHSS module w/ integral ant., RS232	<b>63.85</b>	<b>59.50</b>
<b>5mW-1000mW Variable Modules</b>				
<a href="#">814-AC4790-1000M</a>	AC4790-1000M	900 MHz FHSS module w/ MMCX ant. connector, RS232	<b>77.50</b>	<b>73.50</b>
<a href="#">814-AC47901000M485</a>	AC4790-1000M-485	900 MHz FHSS module w/ MMCX ant. connector, RS485	<b>78.50</b>	<b>74.50</b>

## 900 MHZ WIRELESS TRANSCEIVER MODULE DEVELOPMENT KITS AND ANTENNAS

AeroComm provides a complete development environment to help you integrate and test RF communication in a matter of minutes.

### Development Kits Include:

- 2 Transceivers
- 2 DB9 serial cables
- 2 Adapter Boards
- 2 USB cables
- Software Utilities
- 2 Dipole Antennas
- 2 AC Power Adapters
- Documentation

### System Requirements:

- Win@ 95, 98, ME, NT, XP, or 2K
- Two PCs each with one serial port, or one PC with two serial ports

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
<b>AC4490 Series - Server/Client Protocol</b>			
<a href="#">814-SDKAC4490200M</a>	SDK-AC4490-200M	AC4490-200M-3 Developer Kit	<b>199.95</b>
<a href="#">814-SDKAC4490200A</a>	SDK-AC4490-200A	AC4490-200A-3 Developer Kit	<b>199.95</b>
<a href="#">814-SDKAC44901000M</a>	SDK-AC4490-1000M	AC4490-1000M-3 Developer Kit	<b>199.95</b>
<b>AC4790 Series - Peer/Peer Protocol</b>			
<a href="#">814-SDK-AC4790-200M</a>	SDK-AC4790-200M	AC4790-200M Developer Kit	<b>199.95</b>
<a href="#">814-SDK-AC4790-200A</a>	SDK-AC4790-200A	AC4790-200A Developer Kit	<b>199.95</b>
<a href="#">814-SDK-AC47901000M</a>	SDK-AC4790-1000M	AC4790-1000M Developer Kit	<b>199.95</b>

## 900 MHZ ANTENNAS AND ACCESSORIES

<a href="#">814-0600-00019</a>	0600-00019	1/2 wave, 7" Swivel, 2dBi, RA, MMCX plug	<b>16.00</b>
<a href="#">814-0600-00025</a>	0600-00025	1/2 wave, 7", 2dBi, MMCX plug	<b>16.00</b>
<a href="#">814-0600-00024</a>	0600-00024	1/2 wave, 7", 2dBi, RA, RPSMA	<b>16.00</b>
<a href="#">814-0600-00027</a>	0600-00027	1/2 wave, 7", 2dBi, RPSMA	<b>16.00</b>
<a href="#">814-0700-00012</a>	0700-00012	SAMTEC 20 pin mating connector	<b>4.00</b>
<a href="#">814-0650-00005</a>	0650-00005	Power Supply, 7.5 VDC, 1.5A, 100-240 VAC	<b>20.00</b>
<a href="#">814-1300-00023</a>	1300-00023	5" RG178 cable, RA MMCX plug to RP SMA bulkhead	<b>14.00</b>

