

# Blue Streak

## Spread-Spectrum RF Modem

902-928 MHz

The ARS Blue Streak is a reliable, high speed digital communications modem capable of linking various electronic devices. By using wireless RF spread spectrum technology, the need for FCC site license is eliminated. Simply plug in the unit and immediately establish a reliable data link.

The unit can be configured in point-to-point, point-to-multipoint, and broadcast group operation. In broadcast mode, messages from one unit within the group are received by all units within the group. Repeaters can be configured for broadcast groups as well.

By using the Fast Setup operation, initialization of a modem group is a snap. With Fast Setup just press a button on the modem to initiate handshake operation with other modems. Data transferred between modems including compatible communication parameters and address information. After Fast Setup the modems can be placed in service and do not require any additional setup operation. When power is applied they begin operating in the selected mode. These configurations are ideal for replacing cabling or dedicated modem lines. Configurations can also be assigned through the DTE communication port.

Received data is verified by data coding restrictions and CRC. User parameters allow transmission of each broadcast message a fixed number of times. Slave units ignore erroneous and duplicate packets.

Another feature is Data Flow Control which prevents data from coming into the modem faster than it can be delivered, and prevents received data from being sent to the DTE faster than it can be used.

It is fully EIA-232 and EIA-485 compatible.

To increase the versatility of the Bluestreak, it is available in three versions. A heavy duty aluminum enclosure, a DIN rail rack mount, and a slim OEM model.



*Heavy duty enclosure*

*Rear View "N" connector*



### Standard Features Include:

- Unlicensed operation-No FCC site license required
- Frequency hopping Spread Spectrum technology provides secure and reliable communications
- 50 user selectable sequences
- Repeater Capable for extended range
- Multi-tasking Operation
- Programmable and manual Fast Setup configurations
- Point-to-point, point-to-multipoint and broadcast transmission modes
- Adjustable data rate from 1200 to 115, 200 baud operations
- Three power modes
- Data Flow Control
- Signal strength setup utility
- Compact size with a versatile range of applications
- Made in USA



*OEM Version*



*DIN-Rail rack mount model*



# Blue Streak Specifications

## Spread-Spectrum RF Modem

### General

Frequency Range:	902 - 928 MHz
Spread Spectrum Mode:	Frequency Hopping (FHSS)
Modulation Method:	GFSK
Number of Hopping Channels:	50
Available Hopping Sequences:	30
FCC identification #	N6RFHSS-900
Industry Canada #	991021311A
Serial Data Rate:	300 bps to 115.2 kbps
Data Format:	8/9 bits, 1 stop bit
Operating Mode:	Point to Point, Point to Multipoint, Broadcast Group
Channel Bit Rate:	166.6 kbps
Latchup Protection:	Watchdog Timer
Operating Voltage:	12VDC
Operating Current:	
Transmit-900mW:	<500 mA
Transmit-50mW:	<270 mA
Receive:	<100 mA
Powerdown:	<15 mA
Peak Surge:	<800 mA

### Dimensions

OEM enclosure:	4.3" (L) x 3.5" (W) x 1.6" (H)
Heavy duty enclosure:	5.6" (L) x 5.1" (W) x 2.7" (H)
Din-rail enclosure:	4.3" (L) x 4.0" (W) x 3.0" (H)

LED indicators: Transmit, Receiver, Power

### Transmitter

Output Power	
Power Level 1:	>900 mW
Power Level 2:	50 mW nom
Transmitter Frequency Stability:	+/- 15 kHz
Output Harmonics and Spurious:	Per FCC Part 15.247

### Receiver

Receiver Type:	Dual Conversion Superhet
Receiver Sensitivity:	
High Sensitivity:	-102 dBm
Low Sensitivity:	-70 dBm
LO Frequency Stability:	+/- 15 kHz

### Environmental

Operating Temperature:	-30 to +70 deg C.
Humidity:	0 - 90% (non condensing)
Weight	
OEM and Rack Mount enclosure:	<10 oz
Aluminum enclosure:	19 oz

### Interface

Antenna Interface Connector	
OEM and DIN Rail Rack Mount:	SMA-Reverse Polarity
Heavy Duty Utility enclosure:	"N" connector, female
Input Data Levels:	EIA-232; EIA-485
Data / Power Interface:	DB25/Terminal strip

*Specifications subject to change without notice.*

#### AN IMPORTANT NOTE ABOUT RF COMMUNICATION

All Blue Streak modems are based on optimum line of site conditions. Obstructions such as buildings, hills, mountains or dense foliage will affect communications reliability. It is the end users responsibility to assure proper line of site condition are established.



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