

# Stevens SatComm

NOAA/NESDIS GOES CS2/v2.0 Certified Transmitter



Stevens SatComm Transmitter with Data Logger (front panel) - Stevens Part #93876-001



Stevens SatComm Transmitter (front panel) Stevens Part #93876



The Stevens SatComm GOES transmitter sends data via the NOAA/NESDIS GOES Data Collection System (DCS) for authorized users of data loggers and sensors used in environmental data acquisition applications. The new NOAA/NESDIS CS2/v2.0 specification includes enhanced GOES transmission features and the new Stevens SatComm transmits at both 300 and 1200 BAUD data rates.

The Stevens SatComm has two certified versions - one with an internal data logger and one without an internal data logger, which can operate with any logger capable of exporting data packets through a serial port in any format designated by the logger and permitted by NOAA/NESDIS. The Stevens' SatComm is easy to program using the Windows-based SatCommSet program or by menu-driven commands with any terminal program.

Auto phase calibration ensures the accuracy of each transmission. Built-in self test and failsafe functions provides communication of common anomalies that may occur (example: an improperly mounted antenna would cause poor VSWR and lower transmit efficiency).

Other features include VSWR measurements, auto transmit power levels, and GPSDO (GPS disciplined oscillator) time and frequency synchronization. A VCTCXO based frequency reference allows the Stevens SatComm to take less time to prepare for transmissions, thereby reducing the average current consumption.

Stevens designs, manufactures and supports the Stevens SatComm GOES transmitter in Portland, Oregon. Stevens also provides easy access to data transmitted via GOES online, using [www.goeslink.com](http://www.goeslink.com). As an option, Stevens offers [www.goeslink.com](http://www.goeslink.com) as a primary or back-up data management service for receiving and archiving your environmental data, providing DCP diagnostics, and incorporates user customized features; all Internet accessible for analysis and download.

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[www.stevenswater.com](http://www.stevenswater.com)

1.800.452.5272

## Features

- NESDIS CS2/v2.0 certified
- Compatible with most 3rd party data loggers
- Two data logger input modes:
  - Continuous listen to data logger mode
  - Trigger mode using CTS "clear to send", with advance turn-on time programmable
- Easy to program using Windows-based "SatCommSet" program or any standard PC terminal program
- LED indicators for quick operational confirmation
- DCP Command ready interface
- Optional external touch-screen for programming internal data logger and transmitter
- Optional internal data logger with the following features:
  - SDI-12
  - Pulse input (rain gauge)
  - 4 Analog channel inputs, (0-5 VDC and 4-20 mA)
  - 0-5 VDC alarm output
  - 5, 12, 24/switched VDC output

## Applications

- Stream gauging
- Reservoir monitoring
- Precipitation Stations
- Hydro-met stations
- Tsunami detection and warning systems
- Tidal and port systems
- Environmental and climate monitoring systems
- Weather stations
- Surface and ground water monitoring
- Homeland security stations

**Stevens**  
Water Monitoring Systems, Inc.



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# Technical Specifications

## STEVENS SATCOMM TRANSMITTER SPECIFICATIONS

Power Requirements		Timekeeping	
<b>Input Voltage Range</b>	10.5 to 16 VDC	<b>Clock Accuracy</b>	< ±0.25 s per 24 hours with initial GPS fix
<b>Quiescent</b>	< 2.0 mA (in CTS trigger mode)	<b>GPS Time Accuracy</b>	Within 0.01 seconds (10 ms) UTC
<b>During GPS Acquisition</b>	350 mA	Certified Antennas	
<b>300 BPS Transmission</b>	2.4 A (3 Watts max. with V2TH antenna)	<b>Stevens V2TH</b>	+5.5 dBic gain, RHCP
<b>1200 BPS Transmission</b>	3.5 A (10 Watts max. with V2TH antenna)	<b>Stevens V4TH</b>	+10 dBic gain, RHCP
<b>Maximum Output Power</b>		<b>Stevens Yagi</b>	+11 dBic gain, RHCP
<b>300 Baud Transmission</b>	34.77 dBm (3 Watts max.)	Data Transmission	
<b>1200 Baud Transmission</b>	40.0 dBm (10 Watts max.)	<b>Reporting</b>	Self-timed or random reporting
<b>External Interfaces</b>		<b>Format</b>	ASCII or Pseudo Binary
<b>Computer Interface</b>	USB type-B	Physical Parameters	
<b>External Logger</b>	DB9-m Connector interface	<b>Temperature</b>	-40° to +149° F (-40° to +65° C)
<b>External Touch Screen</b>	DB9-f Connector interface	<b>Humidity</b>	0 - 95% relative humidity non-condensing
<b>DCP Command</b>	DB9-f Connector interface	<b>Dimensions (W x L x H) (with mounting plate)</b>	4.625" x 8.81" x 2.096" inches 11.75 x 22.38 x 5.32 cm (7.169" inch length face-to-face)
<b>LED Indicators</b>	Transmit, Receive, Failsafe, Power, GPS lock status, Built In Self Test		

## STEVENS SATCOMM INTERNAL LOGGER SPECIFICATIONS

<b>Serial Inputs</b>	SDI-12 (3 wire: 12 VDC, DATA, GND)	<b>Logging Interval</b>	1 minute to 24 hours
<b>Pulse Inputs</b>	1, up to 60 pulses per minute	<b>Sensor Power</b>	24 (switched), 12, 5 VDC
<b>Analog Inputs</b>	4 inputs channels, 0-5 VDC and 4-20 mA	<b>Alarm Output</b>	0-5 VDC
<b>Input Accuracy</b>	0.01%	<b>Memory Type</b>	2 GB non-volatile flash memory
<b>Input Resolution</b>	0.002%	<b>Data Backup</b>	2+ GB capacity Removable SD card
<b>A to D Resolution</b>	21-bit		

## ORDERING INFORMATION

Part #	Description
93876	Stevens SatComm Transmitter
93876-001	Stevens SatComm Transmitter with internal logger
70018	Stevens GOES V2TH (+5.5 dB gain) Antenna
70208	Stevens GOES V4TH (+10 dB gain) Antenna
70020	V2TH or V4TH Antenna Elevation Mount
93799	Stevens GOES Yagi (+11 dB) Antenna
92845-015	Antenna Cable, N-Male to N-Male, 15 ft (4.6 meters)
92845-030	Antenna Cable, N-Male to N-Male, 30 ft (9.1 meters)
92923	Standard Serial Communication Cable
51108	GPS Antenna with 16.4 ft (5 m) Cable
93933	Sensor Interface Box for Internal Logger Option

### Stevens®

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