Stevens SatComm
GOES CS2/v2.0 Transmitter

The Stevens SatComm GOES transmitter sends data via the GOES Data Collection System (DCS) at both 300 and 1200 baud data rates. It can operate with any data logger capable of exporting data packets through a serial port in any format designated by the logger and permitted by NOAA/NESDIS.

For even simpler and more cost-effective remote GOES-based monitoring stations, Stevens SatComm is also available with an optional internal data logger, adding the ability for sensors to be directly connected for data collection, storage and transmission with a single low-power device.

- 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 programmable advance turn-on time
- Two-way communication port
- Available with integrated data logger (4 analog, 1 pulse and 12 SDI-12 sensor inputs, 1 control output)
- VSWR measurement ensures proper antenna connection after installation, and alerts you of potential problems proactively

STEVENS
MEASUREMENTS TO MIND

RELIABILITY
for your most critical data

Stevens SatComm uses a TCXO (temperature compensated crystal oscillator) to provide exceptional **power efficiency, minimal frequency aging and unsurpassed longevity.**

Unlike OCXOs (oven-controlled crystal oscillator) typically used, a TCXO:

- reduces the overall power consumption by eliminating a high current oven, eliminating the time and need for warm-up
- is not vulnerable to breaking due to power cycling
- maintains frequency over time without drift
- minimizes the risk of station failure due to constant power-cycling, and ensures that transmissions always occurs within assigned timeslot.

User-selectable station **health status** information can be prepended to each transmission (battery voltage, message number, lat/long, VSWR, internal temperature, etc.), allowing remote alerting of potential problem conditions.
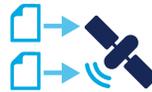
Data redundancy allows previous data set to accompany the current data set, increasing the chance of data retrieval even if a transmission is lost.

Two secondary COM ports (Touchscreen port and DCP Command port) allow **dual telemetry** (cellular, Inmarsat, Orbcomm, Iridium, etc.) for redundancy and 2-way remote station configuration and diagnosis.

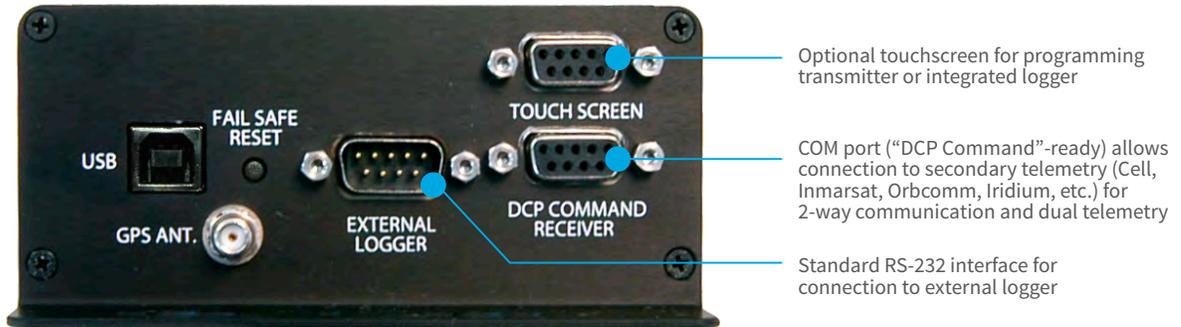## VERIFY ANTENNA SIGNAL QUALITY, **BEFORE** YOU LEAVE THE SITE

VSWR measurement ensures good connection and signal path from the SatComm's RF output to the antenna before the technician leaves the remote station. VSWR is continuously monitored as well, to protect expensive equipment in the event of damage to the RF connections, cabling, or antenna.
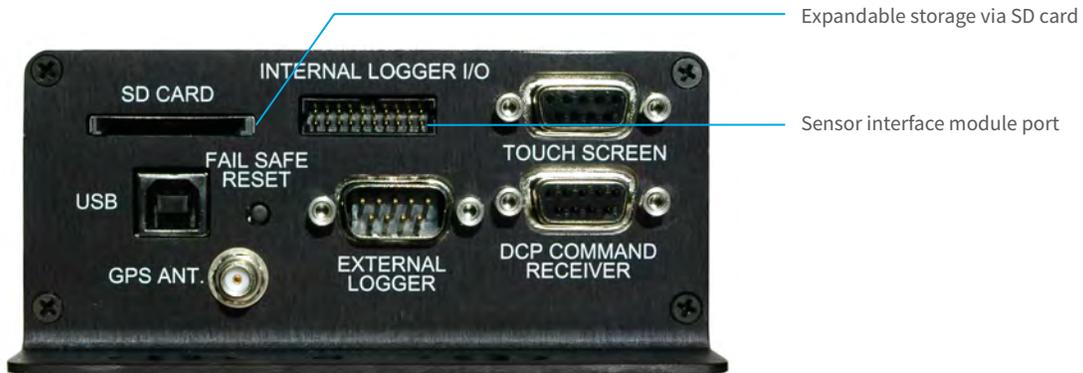
SatCommSet is a free, Windows-based utility that provides easy configuration, management and data logging programming of Stevens SatComm.

Stevens SatComm is fully compatible with most 3rd-party data loggers (connection via standard RS-232 port) or can be configured with an optional integrated datalogger, allowing for basic data collection tasks and data transmission to be preformed within one compact unit:
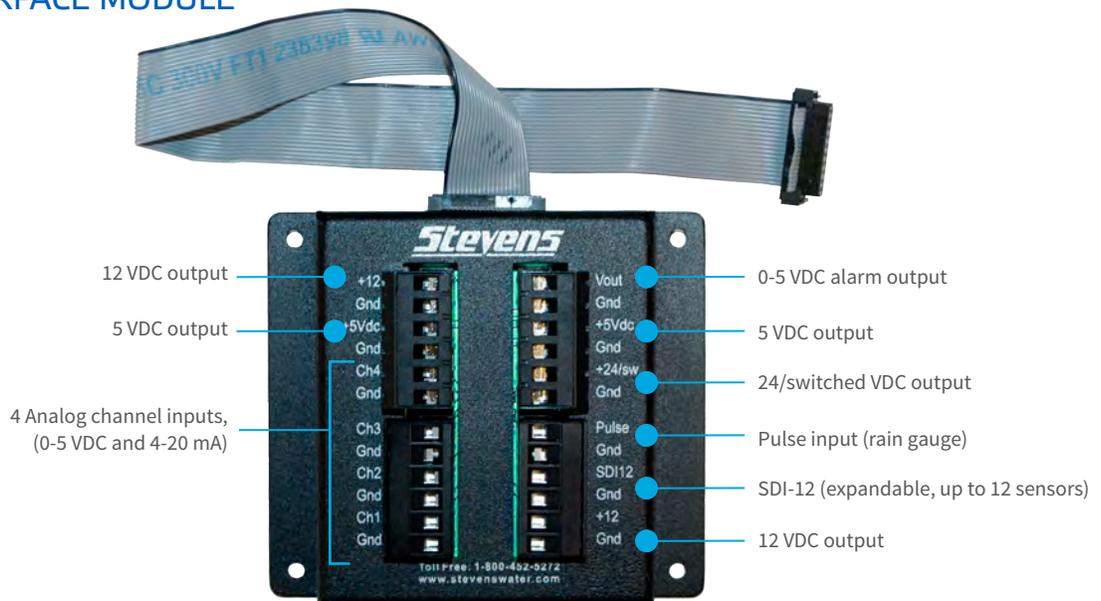
STEVENS SATCOMM

Optional touchscreen for programming transmitter or integrated logger

COM port ("DCP Command"-ready) allows connection to secondary telemetry (Cell, Inmarsat, Orbcomm, Iridium, etc.) for 2-way communication and dual telemetry

Standard RS-232 interface for connection to external logger

STEVENS SATCOMM WITH OPTIONAL INTEGRATED DATA LOGGER

Expandable storage via SD card

Sensor interface module port

SENSOR INTERFACE MODULE

12 VDC output

5 VDC output

4 Analog channel inputs, (0-5 VDC and 4-20 mA)

0-5 VDC alarm output

5 VDC output

24/switched VDC output

Pulse input (rain gauge)

SDI-12 (expandable, up to 12 sensors)

12 VDC output

Stevens SatComm | TECHNICAL SPECIFICATIONS

POWER REQUIERMENTS

Input voltage range	10.5 to 16 VDC
Quiescent	< 2.0 mA (in CTS trigger mode)
During GPS acquisition	350 mA
300 BPS transmission	2.4 A (3 W max. with V2TH antenna)
1200 BPS transmission	3.5 A (10 W max. with V2TH antenna)

MAXIMUM OUTPUT POWER

300 baud transmission	34.77 dBm (3 W max.)
1200 baud transmission	40.0 dBm (10 W max.)

EXTERNAL INTERFACES

Computer interface	USB type-B
External logger	DB9-m connector interface
External touch Screen	DB9-f connector interface
DCP command	DB9-f connector interface
LED indicators	Transmit, receive, failsafe, power, GPS lock status, built in self test (BIST)

TIMEKEEPING

Transmission timing accuracy	Meets NESDIS specifications
GPS time accuracy	Within 0.01 s (10 ms) UTC

CERTIFIED ANTENNAS

Stevens V2TH	+5.5 dBic gain, RHCP
Stevens V4TH	+10 dBic gain, RHCP
Stevens Yagi	+11 dBic gain, RHCP

DATA TRANSMISSION

Reporting	Self-timed or random reporting
Format	ASCII or pseudo binary

PHYSICAL PARAMETERS

Temperature	-40º to +149º F (-40º to +65º C)
Humidity	0 - 95% relative humidity non-condensing
Dimensions (W x L x H)	4.625" x 8.81" x 2.096" (11.75 x 22.38 x 5.32 cm)
Including mounting plate	7.169" long face-to-face

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