



## Argos- Certified Satellite Transmitter

### Overview

Campbell Scientific's ST-21 is a Service Argos-certified Platform Transmitter Terminal (PTT) that transfers data from the datalogger site to the Argos Data Collection and Location System via NOAA polar orbiting satellites. This

transmitter is well suited for remote meteorological and environmental data collection applications, including mobile and high-latitude installations. The ST-21 is compatible with our newer dataloggers.

### Benefits and Features

- ▶ Well-suited for remote meteorological and environmental data-collection applications, including mobile and high-latitude installations
- ▶ Provides uplink capability for up to eight unique ID codes, frequencies, and repetition periods
- ▶ Supports up to seven independent Argos data buffers that can be populated in real-time
- ▶ Transmits variable-length Argos messages with either 20- or 28-bit ID codes
- ▶ Allows researchers to forgo a rigorous certification process
- ▶ Includes an autorepeat feature that allows the ST-21 to repeat data without host intervention
- ▶ Provides a fail-safe feature that alerts users upon communication link or host failure
- ▶ Allows the ID and repetition rates to be set in real-time or by Campbell Scientific

### Technical Description

While Campbell Scientific's ST-21 Argos PTT is based on Telonics' ST-21, they are not equivalent; our ST-21 includes a case, voltage regulator, and our SDC communication interface.

Please note that when ordering the transmitter, the customer needs to provide Campbell Scientific with the number of buffers, repetition rate, decimal ID, Dex ID, frequency, and fail safe information.

To use the Argos system, you must receive formal permission from Service Argos and pay a fee. The data must be used for environmental purposes. Examples include

meteorological/hydrological stations, ship tracking, volcano monitoring, and seismic data.

#### Platform Transmitting Terminal (PTT) Equipment

- ▶ ST-21 Argos transmitter (includes an SC12 cable)
- ▶ CR800, CR850, CR1000, or CR3000 Datalogger
- ▶ 12022 antenna (includes antenna cable and mounting bracket)
- ▶ Environmental enclosure

- › Power supply consisting of our BP12 12-Ahr or BP24 24-Ahr battery pack, CH100 or CH200 regulator, and SP10 10-W or SP20 20-W solar panel

- › Internet
- › Telnet
- › Email

## Retrieving Data from the Ground Receiving Station

Choose one of the following methods:

- › Phone modem with MNP level 4 error correction (most Hayes-compatible modems contain this error-checking protocol; check the operator's manual for your modem) and user-supplied communication software (e.g., Procomm Plus, Crosstalk).

## Specifications

Operating Temperature Range	-30° to +70°C
Supply Voltage	12 V (nominal)
Output Impedance	50 Ω
High Power Level	800 mW typical (27 to 31 dbm)
Argos Transmission Frequency	401.618 to 401.680 MHz
Modulation (BPSK)	-1.1 to +1.1 ±0.1 radians
Spurious Emissions	-45 dB

Transmission Distance or Area	Worldwide
Current Drain	› 1.12 mA (at 12 Vdc, quiescent) › 375 mA (a 12 Vdc, transmitting)
Service Requirements	Must receive formal permission from Service Argos and pay a fee. Must use data for environmental purposes.
Dimensions	19.05 x 3.18 x 5.72 cm (7.5 x 1.25 x 2.25 in.)
Weight	224 g (7.9 oz)

For comprehensive details, visit: [www.campbellsci.eu/st-21](http://www.campbellsci.eu/st-21) 



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