



Mesotech's Satellite Transmitter provides a satellite link for data telemetry from remote field stations. The transmitter is certified for use with GOES, GMS, and Meteosat geostationary satellites. The transmitter is a frequency-synthesized design, allowing for programmable selection of any satellite channel. The **Temperature-Compensated Crystal Oscillator (TXCO)** provides the long-term frequency stability necessary to stay on the assigned channel and transmit at the allocated time. The output power of the transmitter is adjustable from 0 to 20 watts.

The transmitter module accepts serial data from the MicroDCP or other acquisition host. It transmits that data at programmed self-timed intervals or randomly on command (emergency transmissions). The transmitter handles the precise time keeping required for self-timed messages. The transmitter issues the appropriate communication sequences and automatically formats the data for transmission at the proper time. After transmission,

the transmitter falls back into a low power sleep mode, waking for the next transmission or on command from the host.

The small size of the transmitter's matching antenna allows for mounting versatility. The antenna may be suspended inside a non-metallic protective structure or mounted outside on a building, post, or tower. With the antenna pointed directly at the satellite, an input power range of 6 to 25 watts will result in the permitted EIRP of +47 dBm, +3 dB. The 1 dB beamwidth of 60 degrees also allows for simultaneous and equal illumination of two satellites. The antenna is shipped assembled, along with the optional mounting hardware and coax cable assembly.

Ordering Options

Transmitter for GOES, GMS, and METEOSAT geostationary satellites.

NEMA4X weatherproof stainless steel enclosure

Antenna for VX10004/2 transmitter

Elevation mount for V2TH antenna

Antenna coax cable assembly

Coax transient protection device

Technical Specifications

Certification:	NOAA/NESDIS certified for GOES transmissions. Certified by JMA for GMS transmissions.
Frequency:	All GOES, GMS, and Meteosat channels
Stability:	±0.5 PPM over temperature range; ±1 PPM long-term
Setting:	To 1 Hz under software control
RF impedance:	50 ohms
RF power:	0 to 20 watts (43 dBm maximum)
Timekeeping:	Better than 1 PPM over temperature range
Functions:	Self-timed and random transmissions, built-in error checking and testing, programmable configuration, and configuration reporting
Interface:	RS-232 for user setup and data transfer
Connectors:	BNC jack for RF output, sub D 25-pin for data and power. Mini-jack for battery backup
Power supply:	10.5 to 14.5 VDC, 4.5 A maximum during transmission at 20 watts, 50 mA while serial port is active, 7 mA idle mode. 9 VDC backup power for timekeeping
Operating temp:	-40°C to +55°C
Dimensions:	7.25" x 5.75" x 2.7" (18 cm x 14 cm x 7 cm)
Weight:	3 lbs. (1.4 kg)

V2TH Antenna

VSWR	1.5:1 maximum
Range:	402± 10 MHz
Polarization:	Right-hand circular
Gain:	5.5 dBic nominal
Beam width:	1 dB at 60 degrees
Dimensions:	16" dia x 10" (41 cm dia. X 26 cm)
Weight:	5 lbs. (2.3 kg)

