

# VX1004

## GOES, GMS, Meteosat Transmitter

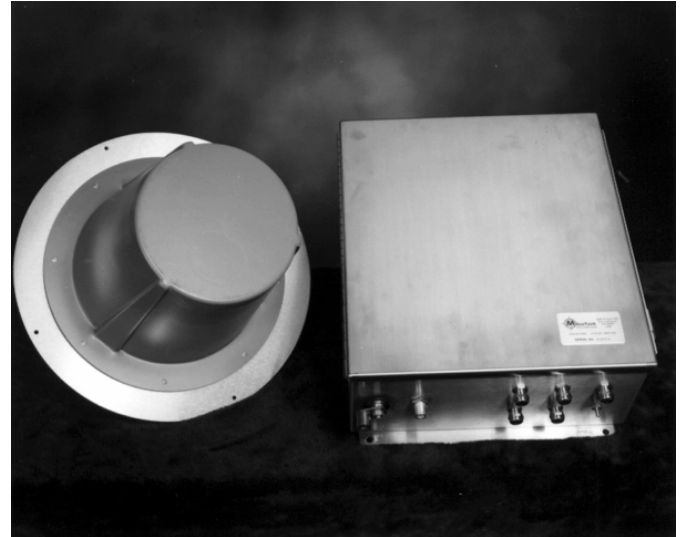
The VX1004 Transmitter provides a satellite link for data telemetry from remote field stations. The transmitter is certified for use with GOES, GMS, and Meteosat geostationary satellites. The VX1004 is a frequency-synthesized design, allowing the programmable selection of any satellite channel. The TXCO provides the long-term frequency stability necessary to stay on the assigned channel and transmit at the allocated time. The output power of the VX1004 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 VX1004 issues the appropriate communication sequences and automatically formats the data for transmission at the proper time. After transmission, the VX1004 falls back into a low power sleep mode, waking when it's time for transmitting or on command from the host.

The V2TH is a matching antenna for the VX1004 transmitter. Its small size allows for versatility in mounting. 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,  $\pm 3$  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 Information

VX1004/2	Transmitter for GOES, GMS, and METEOSAT geostationary satellites.
VXSE	NEMA4X weatherproof stainless steel enclosure
V2TH	Antenna for VX10004/2 transmitter
VDEM	Elevation mount for V2TH antenna
V2CX	Antenna coax cable assembly
V2LTX	Coax transient protection device



VX1004 transmitter in stainless steel weatherproof enclosure and V2TH antenna

### Technical Specifications

Certification:	NOAA/NESDIS certified for GOES transmissions. Certified by JMA for GMS transmissions.
Frequency:	All GOES, GMS, and Meteosat channels
Stability:	$\pm 0.5$ PPM over temperature range $\pm 1$ 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 to +55°C
Dimensions:	7.25 x 5.75 x 2.7 in. (18 x 14 x 7 cm)
Weight:	3 lbs. (1.4 kg)
V2TH Antenna	
VSWR	1.5:1 maximum
Range:	402 $\pm$ 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)