

# MODEL 280-1 MONTAGE TRANSPONDER

## DATA SHEET & TECHNICAL SPECIFICATIONS



### Features

- ▶ Field Proven Hardware
- ▶ Modular Design
- ▶ 16 Available Frequency Channels in the range of 435 MHz to 450 MHz
- ▶ GPS Receiver
- ▶ GMSK Modulation
- ▶ 4 Watt RF Output Power
- ▶ Ruggedized Aluminum Chassis Qualified to MIL-STD-461D (EMI), MIL-STD-810 (Env)

The Model 280-1 MONTAGE Transponder is a command receiver, digital command decoder, digital telemetry encoder, telemetry transmitter, and target interface enclosed in a single lightweight package.

The transponder receives commands transmitted by the controlling station or the target drone set. Implementation of commands occurs only after verification of the address, parity, and message integrity checks. After verifying the address in the command uplink message, the transponder initiates the transmission of a telemetry reply. The self contained GPS receiver provides excellent position accuracy during all vehicle maneuvers.

The Model 280-1 allows multiple targets to be flown on the same frequency and can be used as a target relay. This transponder is currently used on the U.S. Navy's family of target vehicles including the BQM-34 and BQM-74 aerial targets, MST-35 and HSMST sea surface targets, and international vehicles like the Chukar III.

### Applications

- ▶ Autopilot Interface
- ▶ Command and Telemetry
- ▶ Vehicle Payload Interface

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### Environmental

- ▶ Temperature: Operating: -40° C to +71° C
- ▶ Cooling: Passive Conductive (no moving parts)
- ▶ Vibration: Random, 15 to 2000 Hz, 9.3 G 30 minutes per orthogonal axis
- ▶ Altitude: 50,000 ft
- ▶ Shock: Sawtooth, 20 G for 11ms, 18 shocks total
- ▶ Humidity: Up to 95% @ 40° C (all boards are conformal coated)
- ▶ EMI/RFI: Certified to MIL-STD-461D, Class A1

### Power Requirements

- ▶ DC Power: 22 VDC to 32 VDC (28 VDC Nominal)
- ▶ Reverse Polarity: Series diode protection
- ▶ Power Consumption: 55 Watts maximum (1.8 amps @ 28 VDC)

### Physical

- ▶ Size: 10.0" W x 4.25" T x 8.50" D
- ▶ Weight: 7.8 pounds
- ▶ Connectors: MIL-C38999
- ▶ Finish: Black Paint
- ▶ Installation: Flange Mount Base Plate

-  35 Hill Ave.  
Fort Walton Beach, FL 32548
-  [Send Us a Message](#)
-  [www.kratos-msi.com](http://www.kratos-msi.com)
-  (850) 244-2332