This new digital telemetry transmitter supports PCM/FM, SOQPSK-TG and multi-h CPM modulations and provides 10W output power in S band.

Many parameters (Modulation type, Carrier frequency, RF output, power data rate and others) are configurable by software to meet most system requirements and to offer a complete solution to your data link needs.

Small size, light weight and robustness make it ideal for integration in very limited space.

ITAR free / CE

Main applications
- Telemetry system for fixed wings aircraft, rotary wings aircraft and launch vehicles.

Main features
- 1 RF output
- S band frequency
- Output power from 10 W (+40 dBm) to 10mW (+10dBm)
- Programmable modulations (IRIG 106): Tier 0 (PCM/FM), Tier I (SOQPSK-TG) and Tier II (Multi-h CPM)
- Bit rate up to 36Mbps (Tier I and Tier II) and 18Mbps (Tier 0)
- Embedded Viterbi encoder (1/2, 7)
- Input: Data/Clock (RS422)
- Remote RF output power control
- Small size 3.2” x 4” x 1.3”(82 x 102 x 33mm)
- C band, COFDM modulation, LDPC encoding... (contact us)

Model reference
DTRDM-X-Y-ZZ-Option
- X = 1 (1 RF output)
- Y = S (S band)
- ZZ = 10 (10 Watts)
- Option = Contact us
## Technical Specifications

### Output characteristics

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range</td>
<td>2180 - 2485MHz</td>
</tr>
<tr>
<td>Tuning step</td>
<td>500kHz</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 20ppm in ageing, ± 10ppm in temperature</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>10W minimum</td>
</tr>
<tr>
<td>Minimum power</td>
<td>10mW(+10dBm)</td>
</tr>
<tr>
<td>Output power programmable</td>
<td>(0.5dB step)</td>
</tr>
<tr>
<td>Fast switching between 2 preset</td>
<td>values</td>
</tr>
<tr>
<td>RF ON/OFF command</td>
<td></td>
</tr>
<tr>
<td>Thermal protection</td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>50Ω</td>
</tr>
<tr>
<td>VSWR antenna</td>
<td>up to 2</td>
</tr>
<tr>
<td>Protection</td>
<td>No damage into infinite VSWR at all phases</td>
</tr>
</tbody>
</table>

### Interface

- **Connector – Baseband/Primary**: MDM15
- **Connector – RF**: SMA Female
- **Connector - Power Supply**: MDM-9

### Environmental conditions

- **Standards**: MIL-STD-810F
- **Operating temperature range**
  - -40°C to +80°C (case)
- **Storage temperature range**
  - -54°C to +95°C
- **Relative humidity**
  - 25°C to +65°C, 95% (method 507.4)
- **Altitude**
  - Min 60000ft (50mbar)
- **Random vibration**
  - 30g RMS, 20 to 2000Hz 3 axes
- **Shock**
  - 100g peak, 11ms, ½ sine, 3 axes
  - 400g peak, 3ms, ½ sine, 3 axes
- **Acceleration**
  - 100g, 3 axes
- **EMI**
  - MIL-STD-461F
  - Conducted susceptibility: CS 101, 114, 115 & 116
  - Radiated susceptibility: RS 101 & 103
  - Conducted emissions: CE 101 & 102
  - Radiated emissions: RE 101 & 102

### Primary power requirement

- **Standards**: MIL-STD-704F
- **Supply voltage**: 20 to 32V DC
- **Supply current @ 28 VDC**: 10W, typ. 1.4A
- **Grounding**: Antenna, Power and modulation returns common to chassis
- **Reverse polarity**: Protection up to -50V

### Mechanical characteristics

- **Dimensions**: 3.2”x 4”x 1.3” (82 x 102 x 33 mm)
- **Weight**: 500g ±5%

### Ordering information

- **SM01051451**: DTRDM-1-S-10
- **SP01054270**: Combined M&C and modulating input cable
- **SP01054271**: Power supply input cable