

Transmitter Generic Features:

- Fixed Centre Frequency or Tuneable Centre Frequency options
- 200 MHz band up to S-Band transmitting frequency variants available
- Up to 3 Watts Power Output
- RS-232 / RS422 Serial Data Input as standard. Other options available
- Application specific data rates from 1KBPS to 10 MBPS
- Deviation Bandwidth digitally shaped and optimised for the data rate
- 12 V DC Operation as standard. Other power supply options available

The Apollotek T-567 Data Link Transmitter series are miniature lightweight transmitters with a user defined RF Output Power from 100 mW up to 3 Watts. The T567 transmitter is designed to work with a companion Apollotek R-567 receiver to provide a robust serial digital data link solution for UAV's and other covert and overt applications.

The transmitter centre frequency can be specified at a fixed frequency or tuneable over an appropriate frequency range.

Set-up software is supplied with the Transmitter.

The T-567 incorporates a crystal-controlled NCO for direct frequency synthesis and it utilises sophisticated digital modulation techniques implemented in FPGA devices.

The modulation format and carrier deviation is optimised for the data rate specified by the Customer.



The transmitter operates from a nominal 12 V DC Supply. It will operate at voltages up to 15 V and down to 7.0 Volts with nominal standard output power.

The standard T-567-2 configuration provides a 1 Watt Transmitter operating at a user programmed centre frequency with a deviation bandwidth of 19.2 KHz when optimised for RS232C serial data modulation at 9600 baud.

The centre frequency of the transmitter is tuneable over a user specified 20 MHz range within the 290 MHz to 450 MHz band. The standard transmitter tuning steps are 200 KHz across the 20 MHz range. Programming is performed from a host PC running Set-Up software supplied with the Transmitter.

The standard RF Output signal is provided through a coaxial flying lead terminated with an SMA Male connector. The Modulation input and the Power Supply input connections are provided on colour coded flying leads. Other interconnection options can be provided.

Alternative application specific options and configurations can be provided.

SPECIFICATIONS

General:

Frequency Bands of operation	200 MHz to 2.5 GHz variants available (Note that one transmitter does not cover this complete frequency range)
Tuning	Fixed Frequency or Tuneable in defined steps through host PC running Apollotek supplied set-up software. Settings retained in non-volatile memory in transmitter
Nominal Frequency Stability	± 4 PPM
Nominal RF Output Power	Variants are available with output power ranging from 100 mW up to 3 Watts as standard. Higher power variants available in different packaging

Modulation:

Modulation Type	Digitally controlled Frequency Modulation as standard. Other modulations schemes available. Can be used in conjunction with compressed video and data multiplexer module
Input Signal Coupling	Optimised for the user specified data source
Data Rate	Options available at data rates between 1 KBPS and 10 MBPS
Modulation Bandwidth	Deviations matched to customer data type and data rate
Spurious Emissions	Typically better than -60 dBc depending on frequency and modulation scheme. Testing of transmitter configurations to specific performance requirements can be performed

Power Requirements:

Supply Voltage	12V +3V Volts DC down to +7 Volts DC for full power output
Current consumption example	Nominal 350 mA for 1Watt output with 12 V supply
Grounding	Power and Modulation return are common to case ground

Mechanical:

Dimensions	Standard package: 55 mm wide 80 mm long and 25 mm excluding connectors
Power and Modulation Interconnections	Microminiature D-Type as standard. Alternative connector options available
RF Output Connection	50 Ohm SMA Male as standard. SMB, SMC, flying lead and other interconnection options available
Weight:	Approximately 130 grams for standard unit. Lower weight application specific packaging options are available for quantity requirements

Environmental:

Normal Operating Temperature	-20 ^o Centigrade to +70 ^o Centigrade baseplate temperature
Vibration	10g sine, 0.1 g ² random, 20Hz to 2000Hz, in any axis
Shock	10g for 1 ms in three mutually perpendicular axes
Acceleration	10g in three mutually perpendicular axes

Specifications are subject to change without notice