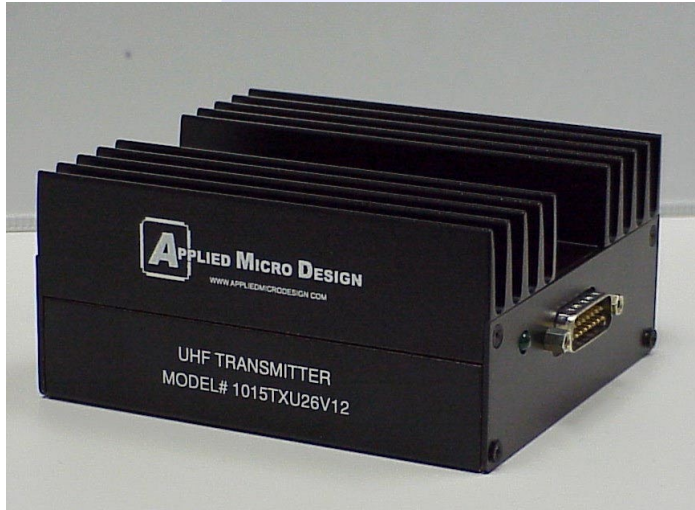




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## **UHF TRANSMITTER MODEL 01015TX**



**Frequency Synthesized  
Rugged  
Compact  
High Efficiency  
9600 Baud Rate  
100% Continuous Duty Cycle  
15-Channel Programmable**

The Model 1015TX/Model 1015RX Transmitter and Receiver pair provide a narrow band link with a data rate of 9600 bits/sec. These radios were designed to provide a command uplink or telemetry downlink, between a Ground Control Station and an air vehicle, for Unmanned Aerial Vehicle (UAV) applications. They can be used in any terrestrial or airborne application with the link budget requiring this type of system.

The transmitter is frequency synthesized and phase-locked to a TCXO with a frequency stability of  $\pm 2.5$  ppm. A microcontroller interfaces to an RS-232 serial port and to the synthesizer, to control the transmitter frequency, and also to monitor the output power. Modules are programmable for 2 Watt, 5 Watt and 7 Watt power output.

The receiver is frequency synthesized; a microcontroller interfaces to an RS-232 serial port and the synthesizer. It is a dual-conversion design with excellent filtering and sensitivity.

**Radios can be configured to operate over various UHF bands from 350 MHz to 900 MHz  
Modules can be pre-programmed with up to 15 switch-selectable user-defined frequencies**

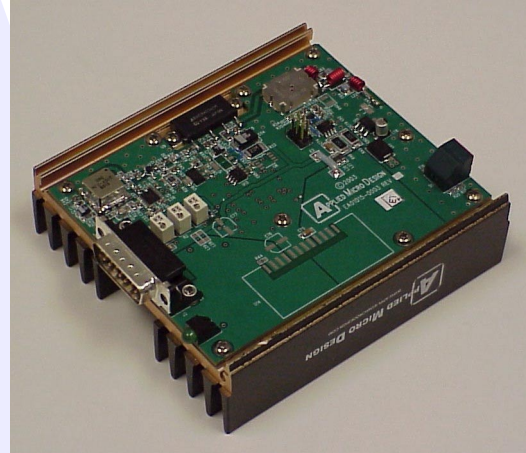




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### **Transmitter Specifications**

Frequency Range: 339-372MHz  
Channel Spacing: 50 kHz  
Power Output: programmable: 2W, 5W and 7W  
Output Impedance: 50Ω  
2<sup>nd</sup> Harmonic: -52 dBc or better  
Frequency Control: Phase-locked to TCXO  
Frequency Stability: ±0.00025% (±2.5 ppm)  
Modulation Type: FSK  
Data Input Level: TTL  
Data Port Input Z: 10k Ω  
Data Rate: 9600 bps  
Transmit Bandwidth: ±7kHz  
DC Voltage: to 13.6V DC  
Transmit Current: 1.5A nominal  
Reverse DC Prot'n: Yes  
Efficiency: 40% nominal  
Load Mismatch: Infinite no damage



### **Environmental**

Operating Temp.: -30° C to +60° C

### **Mechanical**

Data Input Conn.: D15 Female  
RF Output Conn.: SMA-Female  
DC Power Conn.: D15 Female  
Size (housing): 4.125" x 4.625" x 2.187  
Weight: 1.25 lbs.

Applied Micro Design is an engineering company providing product and services to both government and private industry. Our staff has expertise in the hardware and firmware design of microprocessor-based systems, RF circuit design, analog and digital design, and computer applications programming. All work is done in house, at our ISO 9001:2000 registered facility.

We design, develop, and manufacture high performance, cost effective autopilots for small Unmanned Aerial Vehicles. We also provide a wide range of products, services and systems, including harnesses, radios for command and telemetry applications, low-noise amplifiers, and Ground Control Stations.

