



COFDM Series Digital Microwave Video and Audio Transmitter

Pacific Microwave Research, Inc.

www.pmicrowave.com



COFDM Series Digital Video Transmitter

- ❑ High Performance Digital Microwave Video/Audio Transmitter
- ❑ COFDM Modulation for superior multipath performance
- ❑ MPEG-2 Video Compression
- ❑ High/Low Power Selection
- ❑ Two audio and one data channel
- ❑ P, L, S, and C – Band Models
- ❑ Multi-Channel Selection
- ❑ User Programmable via LAN interface
- ❑ Ferrite Isolator Output
- ❑ Rugged Packaging
- ❑ Compact Size
- ❑ Front panel diagnostics
- ❑ Automatic Thermal Management

COFDM Series Digital Microwave Video and Audio Transmitter

The COFDM Series brings a new level of digital performance and reliability to video and audio transmission. Available in P, L, S, and C-Bands, the COFDM Series provides a minimum of 200 mW to deliver highly reliable link performance. Utilizing COFDM modulation coding, the COFDM Series provides superior multipath performance compared to traditional analog video transmission.

As a result of COFDM, stable imagery is obtainable over a wide range of operational conditions. Image quality is excellent due to high-quality low-latency MPEG-2 video compression and advanced forward error correction algorithms. The COFDM Series is designed for long range non-line-of-sight video collection activities. An optional security feature safeguards against unauthorized interception.

Packaged in rugged aluminum housing, the COFDM Series is engineered for applications where severe environmental conditions are the norm. Frequency selection and COFDM mode are controlled through a multifunction front panel user interface. A comprehensive front panel 25-pin connector provides quick and easy integration into any system without expensive specialized connectors. Transmission parameters may be programmed into the unit through the built-in LAN interface.

The COFDM Series transmitter is well suited for applications in surveillance, law enforcement, military UAV, UGV, RPV and MOUT, as well as airborne data/telemetry.

COFDM Series Digital Microwave Video and Audio Transmitter

Technical Specifications

Electrical:

- Model Number - Frequency Range
 - DT-100P – 300 to 400 MHz
 - DT-100L – 1.7 to 1.9 GHz
 - DT-100S – 2.2 to 2.5 GHz
 - DT-100C1 – 3.1 to 3.5 GHz
 - DT-100C2 – 4.4 to 5.0 GHz
- Ferrite Isolator Output Protection
- VSWR – Infinite (open or short)
- Modulation – COFDM 2K
- Frequency Stability – $\pm 0.0002\%$ (2 ppm)
- Spurious/Harmonic Output – > -65 dBc
- Occupied Bandwidth – 8 MHz
- Compression – MPEG-2 4:2:0
- Video Input Format – NTSC or PAL
- Video Input Impedance – 75Ω unbalanced
- Audio – Two Digital Channels
 - Linear Sampling
 - 20 Hz to 15 kHz ± 1.5 dB
 - 600 Ω Balanced Input
 - Microphone or Line Level
- Power Output
 - High Power – 250 mW nominal
 - Low Power – 25 mW nominal

Environmental:

- Operating temperature: -10 to $+60$ °C
- Relative Humidity: 0 to 95%, non-condensing

Mechanical:

- 25-pin full function I/O connector
- Dimensions – 2.65 H x 3.5 W x 4.8 L inches
- Video Input Connector – BNC female
- Housing – milled aluminum
- Weight – 1.7 lbs.
- RF Output Connector – SMA female

Power:

- Operating voltage: $+10$ to $+36$ Vdc
- Current: 1.5 A @ 12 Vdc

Options:

RF Power PMR LPA-xx Series power amplifier provides 5W or 10W output power.
Amplifier

Accessories:

Antennas: A complete line of antennas for a variety of applications is available.