

DM101 ATSC/DTV Terrestrial Demodulator



DM101 8VSB off-air DTV Demodulator

Off-air ATSC/DTV Demodulator for high quality TV Translator and Cable Head-end reception

Receives 8VSB Terrestrial DTV signals including Channels 2 – 69

Outputs fully compliant SMPTE 310M Transport Stream

Outputs fully compliant ASI Transport Stream

Rugged construction for 24/7 unattended operation

Designed to auto recover from power transients and interrupts

Front Panel or Serial Port Control

Overview:

The DM101 Terrestrial Demodulator is configured in one-unit high rack mount format. It is designed to receive a standard ATSC/8VSB terrestrial digital television signal. The instrument acquires the user selected incoming off-air channel 2 – 69 DTV signal, performs normal AGC functions, down-converts and digitizes the signal into industry-standard transport streams. The module acquires sync & equalizer lock, performs adaptive equalization, trellis decoding and Reed-Solomon error correction. It reports the status of sync and equalizer lock, along with a threshold of visibility (TOV) flag all on front panel LED's and through the RS-232 port. Fully compliant SMPTE

310M and ASI formatted transport streams are provided on the rear panel.

The basic functions of the DM101 can be controlled from the front panel. Using the two up/down buttons, the operator can select the channel to be demodulated. An alternate method for channel selection is through use of the standard RS-232 serial port located on the rear panel.

In addition to indicating the received channel, the front panel includes three (3) go/no-go LEDs for a visual indication of successful reception and decoding of the DTV signal. The LEDs indicate successful achievement of

1. Sync Lock
2. Equalizer Lock
3. TOV Flag

When all three LEDs are lit, the demodulator is properly locked to a valid incoming DTV signal and the transport stream data should be valid.

Technical Details:

Rear Panel Inputs:

- 1) RF Input; -20 to -70dBm Channel 2-69; Connector is 75 ohm Female-F
- 2) RS-232: Connector is standard DB-9 Female (baud rate 9600, no handshake)

Outputs:

- 1) SMPTE 310M Serial Transport Stream; Connector 75 ohm BNC bulkhead on rear panel.
- 2) ASI Serial Transport Stream; Connector 75 ohm BNC bulkhead on rear panel.

Front Panel Displays and Controls:

- 1) LED indications for:
 - a. Sync Lock
 - b. Eq. Lock
 - c. TOV
- 2) Two Seven-Segment Displays for Channel Number Readout.
- 3) Up-Down Buttons control Channel Select and allow activation of front panel "Lock-out."

RS-232 Details:

The DM101 can be controlled through the RS-232 using a Z Technology proprietary ZLink serial command set. Controls and Responses that are enabled through this port include:

CHANNEL: Set & retrieve channel number for USA System-M channel plan

LOCKS: Retrieves the flags for SYNC, EQ, TOV and RF Input Level.

NOTIFY: Continuously reports status of channel & lock information.

VERSION: Retrieves firmware version number

SN: Retrieved the instrument's serial number

Power Interrupt Immunity:

The DM101 is designed to survive power interrupts and will remain on-channel after recovery from a power down, supply transients and full power failures. A selected channel number is saved in EEPROM. The design considers extreme operating conditions that may be present in an unmanned industrial environment.

Mechanical Configuration:

One-Unit high by 12.5 inch deep Rack-mount instrument

Dimensions:

1.75 x 12.5 x 19 in (H x D x W)

Weight:

5.5 lbs

Operating Temperature:

0 ° C to +45 ° C

AC Power Requirement:

90 – 130 VAC, 10 VA

Ordering Information

DM101 ATSC/DTV Demodulator
Included with instrument:

- AC Power Cord
- Type F female to Type BNC male adapter
- Operator's Manual



This product is manufactured in the USA by Z Technology, Inc., and carries a 1-year warranty. For additional information please contact the factory.

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