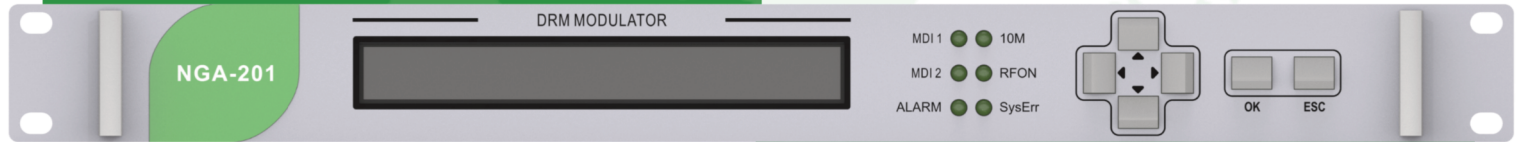


NGA-201F

DRM FM Modulator



Product Overview

The Newglee NGA-201F DRM FM Modulator supports the DRM standard ETSI ES 201 980 and is designed to convert data streams from a media encoder into RF signals. It features modules for DRM baseband processing, digital signal synthesis, frequency conversion, DAC, RF output, audio signal input/output, monitoring system, and control panel.

Highlights

- **Digital Pre-Distortion:** Optimizes signal quality through compensation.
- **DRM Modulation Support:** Uses Mode E modulation to generate standard RF signals from MDI/DCP streams.
- **High Performance Processing:** Digital signal processing algorithms and Digital Pre-Distortion (DPD) to optimize system performance.
- **Frequency Synthesis:** Direct digital frequency synthesis maximizes RF domain proximity, supporting the 87-108 MHz band.
- **Network Management:** Supports remote control via Web, RS232/RS485, and firmware can be upgraded over the network.
- **Reliable Operation:** GPS synchronization supports SFN/MFN operation, ensuring seamless long-term operation.
- **Spectrum Optimization:** Advanced windowing and filtering algorithms ensure signal purity.

Features

- **Dual MDI Input:** MDI/DCP streams.
- **Modulation Parameters:** Bandwidth 100kHz, Interleaving depth 0.6s.
- **Mode:** Mode E.
- **Mapping:** 4QAM, 16QAM.
- **Coding Rates:** 1/4 to 8/9.
- **Clock Sources:** 10MHz internal/external, 1PPS sync.
- **Networking:** Single/multi-frequency sync.
- **Reconfiguration:** Dynamic.
- **Spectrum:** ITU-R compliant.
- **PAPR Reduction:** Built-in.
- **Outputs:** RF, I/Q.

Technical Specifications

DRM Features

- Bandwidth: 100 kHz
- Modulation: 4QAM, 16QAM
- Protection: EEP/UEP with all coding rates and protection ratios
- Interleaving: 600ms
- SFN: Supported
- DRM DCP: FEC and PFT supported
- RF output accuracy: MER >50 dB, ACPR < -60 dBc

Signal Pre-Correction

- AM/AM, AM/PM distortion correction
- PAPR reduction
- Phase / envelope equalization
- Phase / envelope delay compensation

Interfaces (Input & Output)

- RF IN: 1x BNC for pre-corrected signal input, +5 to +10 dBm
- 10 MHz in: 1x BNC for reference input
- 10 MHz out: 1x BNC for reference output
- 1PPS in: 1x BNC for reference input
- 1PPS out: 1x BNC for reference output
- Ethernet: 1x 10/100 Base-T RJ45 for management
- MDI: 2* 10/100 Base-T RJ45 for IP DCP/MDI input
- RS232: 1x UART for Tx configuration
- RS485: 1 x RS485 for Tx configuration
- RF OUT: 1x BNC for direct RF output

Management

- Web: Integrated web console
- LCD: 2 x 40 front panel LCD for status monitoring
- SNMP

Physical & Environment

- Mounting: 1RU 19" rackmount chassis
- Dimensions (W x H x D): 438mm x 44mm x 330mm
- Weight : 3.5kg

Power

- Input: AC 176V-264V @ 50/60Hz
- Typical Power Consumption: 20 watts