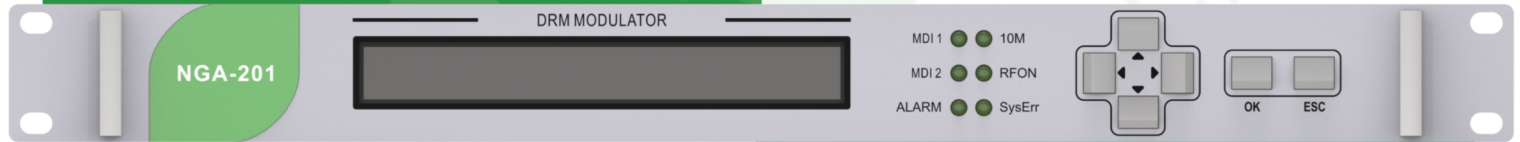


NGA-201A

DRM AM Modulator



Product Overview

The Newglee NGA-201A DRM-AM 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

- **Channel Coding and OFDM Modulation:** Generates ETSI ES 201 980-compliant I/Q signals from MDI/DCP streams.
- **Peak-to-Average Power Ratio Reduction:** Lowers OFDM PAPR, boosting transmitter efficiency.
- **Digital Pre-Distortion:** Optimizes signal quality through compensation.
- **Multiple Output Modes:** Supports I/Q, envelope/phase-modulated, and direct RF outputs for versatile transmitter compatibility.

Features

- **Dual MDI Input:** MDI/DCP streams.
- **Modes:** A, B, C, D compatible.
- **Mapping:** Standard QAM, symmetrical, mixed hierarchical.
- **Interleaving:** 2s long, 0.4s short.
- **Bandwidths:** 4.5, 5, 9, 10, 18, 20 kHz.
- **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:** Digital I/Q, amplitude/phase, RF.

Technical Specifications

DRM Features

- Robustness Mode: DRM30 A, B, C, D
- Bandwidth: 4.5, 5, 9, 10, 18, 20 kHz
- Modulation: MSC 16/64 QAM, HMMix/HMSym; SDC 4/16 QAM
- Protection: EEP/UEP with all coding rates and protection ratios
- Interleaver: 0.4s short, 2s long
- SFN: Supported
- DRM DCP: FEC and PFT supported

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 RF feedback
- 10 MHz in: 1x BNC for reference input
- 1PPS in: 1x BNC for reference input
- MDI: 1* 10/100 Base-T RJ45 for IP DCP/MDI input
- RS232: 1x UART for Tx configuration
- RS485: 1 x RS485 for Tx configuration
- Digital I/Q Output: 1x AES/EBU XLR for digital I/Q output (48 kHz)
- 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

Power

- Input: AC 110V - 240V @ 50/60Hz
- Typical Power Consumption: 20 watts