TONER cable equipment, inc.

ModulCast ATSC ATSC 3.0 Modulation Board

ENENSYS

ModulCast ATSC fits any types of ATSC3.0 Digital TV Transmitter design and allows to reach unprecedented performances thanks to optimization functions

ModulCast ATSC is an optimized and unique modulation board supporting ATSC 3.0 standard to design Terrestrial TV Transmitters. It meets manufacturers' demands for a quick & straight-forward integration and made High Quality TV Transmitters to answer broadcasters' quality requirements.

ATSC 3.0 Standard

Based on Vortex II exciter experience, largely use across USA for powering ATSC market transition from version 1.0 to version 3.0 of the standard, ModulCast ATSC is a cost effective and optimized solution for ATSC 3.0 commercial roll out.

Up to 8 PLPs & 2 Subframes

To cover any commercial use case deployment, ModulCast ATSC manages up to 8 PLPs / 2 Subframes as well as MFN (Multi Frequency Network) and SFN (Single Frequency Network) system architecture.

Precorrection Process

ModulCast ATSC integrates two Non-Linear precorrection algorithms for a better adjustment of your Power Amplifier and broadcast a very high quality signal.

Automatic Gain Control

Based on its real-time power measurement probes, ModulCast ATSC can control and adjust your Transmitter output power: it simplifies your Power Amplifier Design without compromising on the RF output quality.

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Technical specifications

INPUTS

Data
2 Ethernet ports 1 GigE - RJ45
- RTP, UDP, IP, IGMP (V2 & V3)
- STL (ATSC 3.0)

Control
2 Ethernets ports 1 GigE - RJ45
- HTML5 GUI
- SNMP / MIB
- Traps

RF inputs
2 RF inputs for AGC Control - SMA 50 Ω
- Foward Powel Level
- Reflected Power Level

Synchronization
1 GPS Input Antenna - SMA 50 Ω
1 PPS input - BNC 50 kΩ

OUTPUT

RF output
UHF / VHF Band I & III - SMA 50 Ω,
0 dBm max.

FEATURING

Standards
ATSC 3.0: A/322:2017, A/324:2018 (STL)

Precorrections
Static Linear Precorrections with specific Sharp Filter profiles
Static Non-linear Precorrections with DAP or GAP® Algorithms
Crest Factor Reduction (PAPR) and Protection clipping

Automatic Gain Control (AGC)
Based on VDC (external sensor) or RF input - user selectable
User-configurable AGC high limit
Reflected Power protection mechanism

Stream Process and Modulation
Input Stream redundancy management
Transmission modes: MFN, SFN
Test modes: Sinus, Null Symbol

Monitoring
Forward Power
Reflected Power

Control & Monitoring
HTML5 Web GUI,
SNMP & Traps
Log file

PHYSICAL

Height x Width x Depth
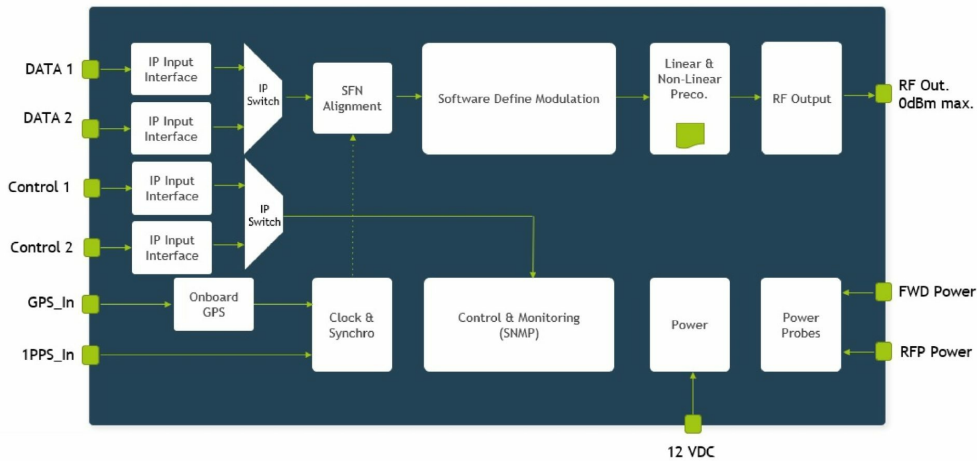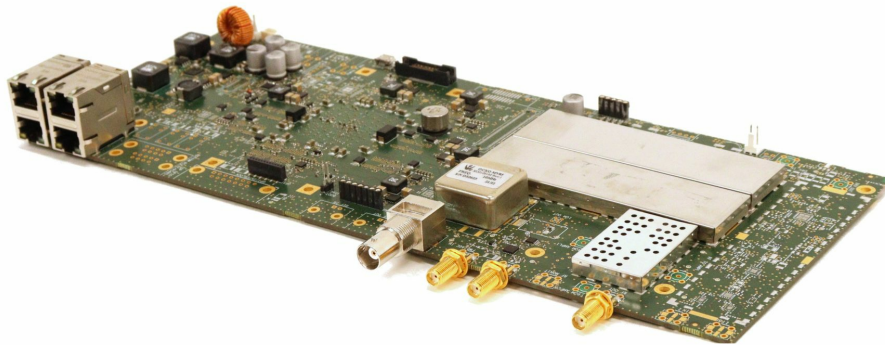1.38" x 12" x 4.92"
(35 mm x 305 mm x 125 mm)

Power supply
12 VDC

Operating temperature range
0°C to 50°C

Power Consumption 25 Watts

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Front

Ordering codes

XTTB-NC10-3002

ATSC 3.0 Exciter/Modulation Board

IP In (x2), GPS In, VHF/UHF 0 dBm, AGC based on RF Measurement

Probes

IP Ctrl (x2) - Static Linear & Non-Linear Precorrections