

ModulCast ATSC

ATSC 3.0 Modulation Board



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.

Applications

- ATSC 3.0 Transmitter Design

Other benefits

- Input Seamless switching based on STL FEC
- Onboard GPS

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Technical specifications

INPUTS

Data

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

RF inputs

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

Control

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

Synchronization

- 1 GPS Input Antenna - SMA 50 Ω
- 1 PPS input - BNC 50 k Ω

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)

Automatic Gain Control (AGC)

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

Monitoring

- Forward Power
- Reflected Power

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

Stream Process and Modulation

- Input Stream redundancy management
- Transmission modes: MFN, SFN
- Test modes: Sinus, Null Symbol

Control & Monitoring

- HTML5 Web GUI,
- SNMP & Traps
- Log file

PHYSICAL

Height x Width x Depth

- 35 mm x 305 mm x 125 mm

Power Consumption

- 25 Watts

Power supply

- 12 VDC

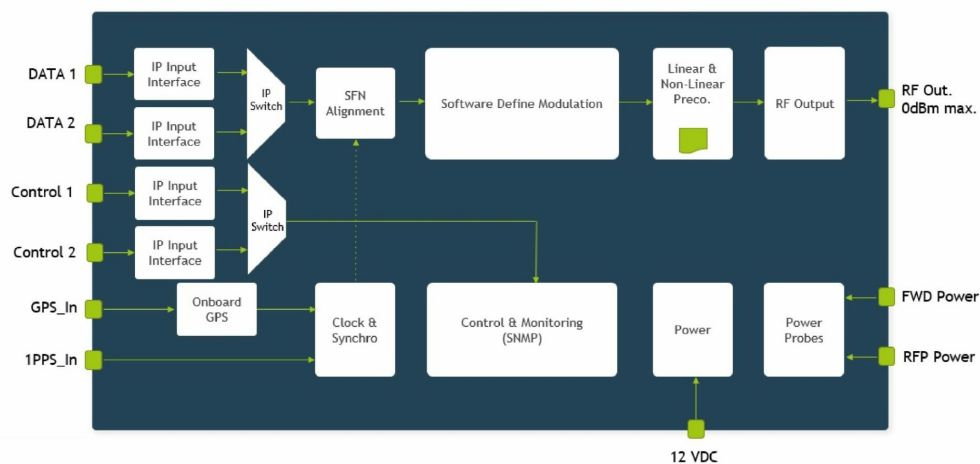
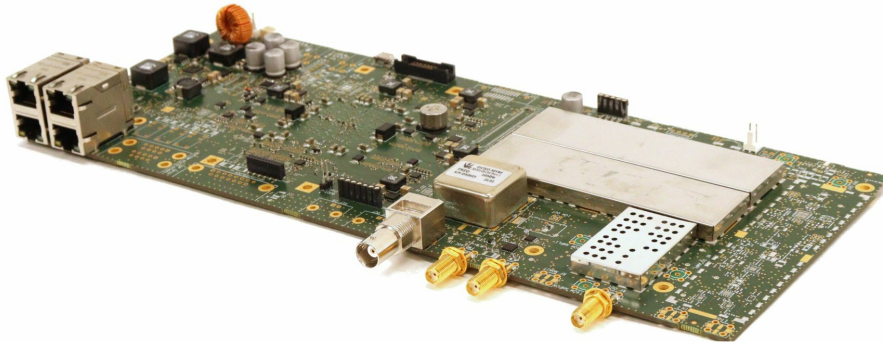
Operating temperature range

- 0°C to 50°C

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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