

# ATSC 3.0 EXCITER



## Introduction

The new Anywave ATSC 3.0 Exciter delivers a compact and versatile ATSC 3.0 / ATSC 1.0 dual configuration Exciter / Translator with support for multiple PLPs and sub-frames, TDM/FDM/LDM modes, and MFN/SFN operation. Combined with Anywave's new ATSC 3.0 Gateway / Signaling Server and an ATSC 3.0 Encoder, this flexible platform provides a complete ATSC 3.0 solution to meet all of the Broadcaster's NextgenTV needs. With Anywave's powerful ADPC™ (Adaptive Digital Pre-Correction) algorithm and patented multi-dimensional pre-correction technology, this new platform delivers exceptional RF performance.

## Key Features

- ✓ Multi-standard capability: ATSC 3.0 / ATSC 1.0, DVB-T/H, DVB-T2, and ISDB-T/Tb
- ✓ All-Band operation (VHF I, VHF III, and UHF)
- ✓ Supports ATSC 3.0 / ATSC 1.0 standards, with dual mode operation to change between standards with a reboot of the equipment
- ✓ Flexible architecture allows Broadcasters to implement studio / transmitter integrated or split configurations
- ✓ Supports Multiple PLPs / sub-frames, TDM/FDM/LDM modes, and MFN/SFN operation
- ✓ DDRF™ (Direct Digital RF) – achieves near perfect RF performance with innovative automatic broadband balancing technology: MER: 40 dB (typical), Shoulder Levels < -60 dB, out of band spurious < -60 dB
- ✓ Continuous measurement and real-time display of transmitted signal SNR and Shoulders
- ✓ Control and monitoring with easy to use web interfaces and SNMP

# Specifications

## Signal Input

- 4 x 1GigE RJ-45 ports (2 for STL IP inputs)
- ATSC 3.0 features: TDM/FDM/LDM, multiple PLPs and sub-frames, SFN/MFN
- 2 x ASI Inputs: auto switching, BNC 75  $\Omega$
- ASI loop out: BNC 75  $\Omega$
- GPS Inputs: 1 Antenna N-Type 50  $\Omega$ , 1 x 1PPS BNC 50  $\Omega$ , 1 x 10MHz BNC 50  $\Omega$  (optional internal GPS RCVR)
- Dual Feedback Correction Samples: BNC 50  $\Omega$ , feedback Level: -35 dBm ~ 0 dBm
- GPIO / RS232-485: DB9 connector

## Signal Output

- RF Out: N-Type 50  $\Omega$
- Frequency: VHF/UHF in steps of 1 Hz, spectrum shifting up to  $\pm 50$  KHz
- Level: -25 dBm ~ +5 dBm in steps of 0.05 dB
- Level Stability:  $< \pm 0.1$  dB
- Frequency Stability:  $< 0.5 \times 10^{-7}$  (with onboard 10MHz REF),  $< 0.1 \times 10^{-7}$  (with Int. GPS), or in accordance with the Ext. GPS accuracy

## Signal Output (continued)

- MER: 40dB (typical)
- Amplitude Flatness:  $< \pm 0.5$  dB
- IMD Shoulder Lvl:  $< -60$  dB
- Out of Band Spurious:  $< -60$  dB
- Return Loss:  $> 15$  dB
- Phase Noise (@20 kHz):  $< -115$  dBc/Hz

## Linear and Non-linear ADPC™

- Dual Feedback Samples: BNC female 50  $\Omega$
- Feedback level: -35 dBm ~ 0 dBm
- Adaptive and Automatic Correction: No additional instruments or manual operations required
- Continuous measurement and display of SNR and IMD

## High Precision:

- 64-bit signal processing
- Over 20,000 independent points of amplitude and phase correction

## High Performance:

- In-band flatness:  $< \pm 0.5$  dB
- Process up to 7<sup>th</sup> intermodulation product

**Cost Effective 100%**

**Reliable 100%**

**Scalable 100%**

**Dependable 100%**

**We have your broadcast transmission needs covered**  
**[www.anywavecom.net](http://www.anywavecom.net)**

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