



## X-Series Exciter PRODUCT SPECIFICATIONS

# DIGITAL AND ANALOG EXCITERS

## Introduction

The Anywave 5X+ and 9X digital excitors offer the most advanced and highest performing correction technology in the world. The excitors powerful ADPC™ (Adaptive Digital Pre-Correction) algorithm and patented multi-dimensional pre-correction technology delivers RF performance metrics (SNR/MER and Shoulders) never before realized. The Exciter operates as a standard transmitter or as an RF translator across all modulation standards including ATSC3.0, ATSC1.0, DVB-T, DVB-T2, DVB-H, ISDB-T, ISDB-Tb, as well as NTSC and PAL.

## Key Features

- ✓ Multi-standard capability: Analog, DVB-T/H, DVB-T2, ATSC3.0, ATSC1.0 and ISDB-T/Tb
- ✓ All-Band operation (VHF I, VHF III, and UHF)
- ✓ DDRF™ (Direct Digital RF) – achieves near perfect RF performance with innovative automatic broadband balancing technology: MER > 45 dB, shoulder levels < -60 dB, out of band spurious < -60 dB
- ✓ Continuous measurement and real-time display of transmitted signal SNR and Shoulders, receive signal SNR and Strength
- ✓ Control and monitoring with easy to use man machine interface via web, RS232, GPIO, and front panel
- ✓ Options include:
  - ✓ TSoIP input with ASI loop out,
  - ✓ Performance & Quality Monitoring
  - ✓ PSIP/TSID Editing
  - ✓ EAS Switching via IP
  - ✓ GPS receiver
  - ✓ RF-to-ASI
  - ✓ Static Picture Feature (SPF) in the event of loss of input compliant signal still transmitted

# Specifications

## Signal Inputs

- DTV TS Inputs: up to 4 Transport Stream inputs with loop out, DVB-ASI and 1 SMPTE310M auto switching Connector: BNC female 75  $\Omega$
- RF Input: Frequency: VHF and UHF
- Connector: BNC female 50  $\Omega$  Level: -85 dBm ~ -15 dBm
- Analog TV Inputs: Composite Video and Stereo Audio inputs

## RF Output

- Connector (RF Out): N-Type female 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
- MER:  $> 40$ dB
- Amplitude Flatness:  $< \pm 0.5$  dB
- IMD Shoulder Lvl ( $\pm 500$ KHz):  $< -60$  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  $\Omega$
- RF IN B: Feedback Signal Before BPF
- RF IN A: Feedback Signal After BPF
- Feedback level: -35 dBm ~ 0 dBm (suggested value: -15 dBm ~ -5 dBm)
- Adaptive and Automatic Correction: No additional instruments or manual operations required
- Continuous measurement and display of SNR and IMD

High Efficiency: Less than 10 minutes

High Precision:

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

High Performance:

- Correction of amplitude, phase and group delay
- Up to 10 dB of MER improvement
- Up to 15 dB of shoulder improvement
- 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

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