ANYWAVE

7X Exciter
PRODUCT SPECIFICATION

7X ATSC 1.0 DIGITAL EXCITER

Introduction

The Anywave 7X digital exciter offers the most advanced and highest performing correction technology in the world. The exciters 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 for the ATSC 1.0 digital TV standard.

Key Features

- ✓ All-Band operation (VHF I, VHF III, and UHF)
- ✓ Supports ATSC 1.0 standard, with both digital exciter and RF translator modes
- ✓ DDRF™ (Direct Digital RF) - achieves superior RF performance: MER > 40 dB, shoulder levels < -60 dB, out-of-band spurious < -60 dB
- ✓ ADPC™ (Adaptive Digital Pre-Correction) algorithm and patented multi-dimensional pre-correction technology delivers RF performance metrics (SNR/MER and Shoulders) never before realized
- ✓ Industry best Phase Noise performance (@20 kHz): < -124 dBc/Hz
- ✓ TSoIP, ASI, RF, and SMPTE-310M inputs supported
- ✓ PSIP Editing option to modify signaling information including TSID, service name, major/minor channel number, etc.
- ✓ Remote/Local monitoring and control via web browser, RS485, and front panel interfaces
- ✓ Options include:
  - ✓ TSoIP input
  - ✓ PSIP/TSID Editing
  - ✓ GPS receiver
  - ✓ RF-to-ASI loop out
  - ✓ Static Picture Feature (SPF) in the event of loss of input compliant signal still transmitted

Specifications

Signal Input
- 1 x TSoIP IP Input RJ-45 port
- 1 x RF Tuner Input (VHF/UHF) - Translator mode, level: -85 dBm ~ -15 dBm, BNC 50 Ω
- 2 x ASI Inputs: auto switching, BNC 75 Ω
- 1 x SMPTE-310M Input BNC 75 Ω
- 1 x ASI Loop Out: BNC 75 Ω
- GPS Inputs: 1 x Antenna SMA 50 Ω, 1 x 1PPS BNC 50 Ω, 1 x 10MHz BNC 50 Ω
- Dual Feedback Correction Samples: BNC 50 Ω, feedback level: -35 dBm ~ 0 dBm
- RS485: DB9 connector

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

Signal Output (continued)
- MER: 40dB (typical)
- Amplitude Flatness: < ±0.5 dB
- IMD Shoulder Level: < -60 dB
- Out of Band Spurious: < -60 dB
- Return Loss: > 15 dB
- Phase Noise (@20 kHz, typical): < -124 dBc/Hz

Linear and Non-linear ADPC™
- Dual Feedback Samples: BNC female 50 Ω
- Feedback Level: -35 dBm ~ 0 dBm
- Adaptive and Automatic Correction: No additional instruments or manual operations required

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

High Performance:
- In-band Flatness: < ±0.5 dB
- Process up to 7th intermodulation product

Anywave Broadcast Inc

Email: sales@anywaveus.com
Phone: +1 (847) 415 2258
Fax: +1 (847) 415 2112
Address: 100 N Fairway Drive, Suite 130
Vernon Hills, IL 60061
Website: www.anywavecom.net