

ARTISAN®
TECHNOLOGY GROUP

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Full-service, independent repair center
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We buy your excess, underutilized, and idle equipment
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so your equipment works exactly as you specify.

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Find the *Harris Apex ATSC* at our website: ***Click HERE***

HARRIS
assuredcommunications®

TELEVISION TRANSMISSION SYSTEMS

Apex™ ATSC Television Exciter

The Most Trusted Exciter for ATSC DTV



When it comes to one of the most critical components of your air chain, why gamble? Harris ATSC exciters have already logged tens of thousands of hours in "real time" broadcast use. Hour after hour, day after day, the Apex™ exciter will provide an 8-VSB digital signal of flawless integrity with complete FCC and ATSC compliance for Harris IOT and solid-state transmitters.

The Real-time Adaptive Correction (RTAC™) system incorporated in the Apex™ exciter samples the output of your transmitter's mask filter and continuously monitors the system, while making adjustments automatically to keep your transmitted signal-to-noise well within ATSC recommendations for the coverage you require.

The latest advancements in the RTAC™ system also sample the output of your transmitter prior to the mask filter, and continuously and automatically adapt for the transmitter system non-linearities. RTAC™ assures FCC mask compliance in the critical 500 kHz out-of-band regions not protected by a standard mask filter.

Cutting-edge DTV technology and easy-to-operate, field-proven reliability add up to an unbeatable combination for your *next digital exciter.*

Features/Benefits

- All-digital linear equalization
- All-digital non-linear precorrection
- Optimized correction for IOT and solid-state transmitters
- Easy-to-use, menu-driven pre-equalization for common waveguide types
- Frequency agile; US channels 2-69
- No user adjustments such as variable capacitors and resistors
- Space-saving design in a compact three-rack-unit (3RU) height
- User-friendly interface with 320x240 color touch screen
- Built-in 8-VSB compliance monitoring (limited suite)

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Specifications

Specifications and designs are subject to change without notice.

Specifications (General):

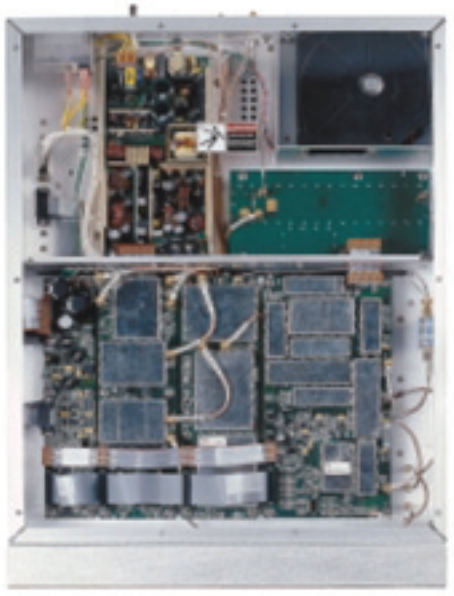
RF output connector:	50 Ω, SMA
RF sample (high power filter input):	50 Ω, SMA; dynamic range: -30 to -5 dBm
RF sample (power amplifier input):	50 Ω, SMA; dynamic range: -30 to -5 dBm
RF sample (IPA input):	50 Ω, SMA; dynamic range: -30 to -5 dBm
Frequency range:	VHF and UHF channels 2-69
Transport stream input:	75 Ω (BNC isolated), ATSC/MPEG-2, compliant to SMPTE -310M, 19.39 Mb/s
10 MHz reference input:	50 Ω (BNC), sinusoidal, -10 to +10 dBm, return loss ≥ 20 dB

Service Conditions:

Ambient temperature:	0° to 50° C (32° to 122° F)
Ambient humidity:	0 to 90% relative, non-condensing
Altitude:	Sea level to 10,000 feet
Physical dimensions:	19" W x 5.25" H x 24" D
Weight:	36 lbs.
Electrical requirements:	110/220 VAC (auto ranging), ±10%, single phase, 50 to 60 Hz
Power consumption:	140 Watts typical

Performance Specifications:

Maximum power output:	250 mW average
Regulation of output power:	1% or less
Pilot frequency stability:	±200 Hz per month without precise frequency control (PFC) < 0.5 Hz per 1% supply variation < 50 Hz over 0° to 50° C ambient temperature range < 100 Hz at 5 minutes during warm up
Pilot frequency offsets[1]	Per FCC requirements, 2 milliHertz resolution
Co-channel DTV to DTV	N x 6.4676909629 kHz, where N is odd (19.4030728887 per ATSC)
Co-channel NTSC to DTV	911944 Hz NTSC visual to DTV pilot (Per FCC and ATSC)
Upper adjacent DTV to NTSC	5.082138 MHz, NTSC visual to DTV pilot (FCC 73.622)
Response variation[2]	0.2 dB, typical
Group delay[2]	2 nS, typical
Phase noise	≥ –104 dBc/Hz at 20 kHz offset (ATSC A/64)
Spurious output[3]	
In band	-68 dB (-45 dB as measured in 30 kHz RBW)
Adjacent channels	-68 dB (-45 dB as measured in 30 kHz RBW)
All others	-40 dB
Signal to noise ratio[2, 4]	35 dB, typical



Top view of Apex ATSC Exciter interior



Rear-panel connectors make it easy to integrate Apex™ into your new or existing Harris transmitter.

Notes:

[1] High-stability external 10 MHz reference required for precise frequency control.
[2] Exciter self-corrected.
[3] Signals referenced to center channel, at rated output, measured with 30 kHz RBW.
[4] Demodulated SNR measured with HP89440A/89441A vector signal analyzer

For more information please visit www.broadcast.harris.com.

ATSC Member

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HARRIS assuredcommunications®

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Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

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