

### FXi 250 - Technical Specifications : Technical Specifications

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#### GENERAL

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**RF Power Output:**

25-250W

**Output Impedance:**

50 ohms nominal

**VSWR:**

Rated power into 1.5:1 VSWR. Open and short circuit protected at all phase angles

**Frequency Range:**

87.5MHz to 108MHz; 100kHz increments, 10kHz when specified

**Frequency Stability:**

Internal TCXO: +/-100Hz, -10 degrees C to +50 degrees C External Output: +/- accuracy of reference source

**Audio Inputs:**

AES (wire & optical), L&R analog, composite, SCA/RBDS/RDS external generator input, SCA audio inputs (2); two internal SCA generators, internal RBDS/RDS generator

**Modulation Type:**

Direct-to-channel digitally generated FM (no analog up-conversion); FM only, HD Radio only, or HD Radio + FM

**Modulation Capability:**

Up to 300kHz

**Asynchronous AM S/N Ratio:**

80dB below rated power reference carrier with 100% AM modulation at 400Hz, 75 lsec-de-emphasis with no FM modulation present

**Synchronous AM S/N Ratio:**

60dB below rated power reference carrier with 100% AM modulation at 400Hz, 75 lsec-de-emphasis with FM modulation +/- 75kHz at 400Hz

**Spurious and Harmonic:**

85dB or better; low pass filter standard

**AC Input:**

90 to 264VAC; 47-63Hz

**Power Factor:**

0.98 or better

**Surge Protection:**

Tested with IEEE C62.41-1991 recommended waveforms for location category B3 and IEC 801-4 standard waveforms for severity level 4

**Regulatory:**

FCC; DOC; CE; CCIR; IEC 215 Safety

#### ENVIRONMENTAL

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**Temperature Range:**

-10 degrees C to +50 degrees C

**Altitude:**

10,000 ft (3048 m)

**Humidity:**

95% maximum, non-condensing

#### STEREO PERFORMANCE

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**Operational Modes:**

Stereo, mono (L+R), L only, R only

**Input Level:**

AES: -2dBfs for 100% modulation; 16-24 bits (32, 44.1, 48 or 96kHz typical rates for AES/EBU devices) L&R: +10dBm for 100% modulation into 600 ohms

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**Impedance:**

AES: 110 ohms balanced L&R: 600 ohms or 10k selectable; balanced

**Connector:**

AES: Wire-XLR, Optical-Toshiba (TosLink) L&R: XLR

**Amplitude Response:**

+/- 0.5dB, 20Hz to 15kHz

**THD + Noise:**

0.03% or better

**IMD Distortion:**

0.03% or better

**S/N Ratio:**

85dB or better below 100% modulation @ 400Hz

**Stereo Separation:**

70dB, 20Hz to 15kHz

**Linear Crosstalk:**

70dB below 100% modulation; 20Hz to 15kHz; main to sub and sub to main

**Pilot Stability:**

+/- 0.3Hz, 0 degrees C to +50 degrees C

**Audio Overshoot:**

2dB max

**38,57,76 and 95kHz Suppression:**

80dB below 100% modulation

### COMPOSITE PERFORMANCE

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**Input Level:**

3.5V p-p for 100% modulation into 10k ohms

**Impedance:**

Balanced: 10k ohms or 50 ohms selectable Unbalanced: 10k ohms

**Connector:**

Balanced: BNC Unbalanced: BNC

**Amplitude Response:**

+/- 0.01dB; 20Hz to 53kHz; 0.1dB; 53kHz to 99kHz

**Phase Response:**

+/- 0.1 degree from linear phase; 53kHz to 100kHz

**THD + Noise:**

0.005% or less

**IMD Distortion:**

0.005% or less

**FM S/N Ratio:**

90dB below 100% modulation @ 400Hz

### MONO PERFORMANCE

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**Operational Modes:**

Mono (L+R), L only, R only

**Input Level:**

3.5V p-p for 100% modulation into 600 ohms

**Impedance:**

600 ohms or 10k ohms selectable

**Connector:**

XLR



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**Amplitude Response:**

+/- 5dB; 20Hz to 15kHz

**THD + Noise:**

0.05% or less; 20Hz to 15kHz

**IMD Distortion:**

0.05% or less; 20Hz to 15kHz

**FM S/N Ratio:**

90dB below 100% modulation @ 400Hz

### SCA 1&2 PERFORMANCE (INTERNAL)

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**Operational Modes:**

Mono (L+R), L only, R only

**Input Level:**

3.5V p-p for 100% modulation into 600 ohms

**Impedance:**

600 ohms or 10k ohms selectable

**Connector:**

XLR

**Amplitude Response:**

+/- 0.5dB; 20Hz to 7kHz

**THD + Noise:**

0.05% or less; 20Hz to 15kHz

**IMD Distortion:**

0.05% or less; 20Hz to 15kHz

**FM S/N Ratio:**

90dB below 100% modulation @ 400Hz

### RBDS/RDS PERFORMANCE (INTERNAL)

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**Frequency:**

57kHz

**Injection Level:**

2 to 15%; software programmable

### SCA/RBDS/RDS (EXTERNAL)

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**Input Level:**

3.5V p-p for 10% deviation

**Impedance:**

10k ohms unbalanced

**Connector:**

BNC

**Amplitude Response:**

+/- 0.5dB; 20Hz to 100kHz

**19kHz Output:**

19kHz synchronization clock for external RBDS/RDS operation 2.5V p-p into 50 ohms

### PHYSICAL

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**Height:**

# Broadcast Electronics

## Technical Specifications

7 inches

**Width:**

19" EIA rack mountable

**Depth:**

No rear rails required - fits into 24" deep rack

**Airflow:**

Intake and exhaust through back of unit

**Weight:**

38 lbs. unpacked

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

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