

Ranger™ Series

UHF Solid-State
ATSC Transmitters



Ranger™ Series solid-state UHFATSC transmitters share many of the unique features and field-proven benefits that have made Harris digital transmitters the industry standard. Ranger transmitters employ ultra-reliable, air-cooled LDMOS FET power amplifier modules and the industry's #1 selling exciter. A redundant control system combined with a serial bus architecture assure the highest levels of reliability and on-air availability.

FEATURES

- 100 to 1000 W from a single compact cabinet
- FCC mask filter built in for ease of installation (non "L" models)
- TCP/IP and SNMP remote transmission monitoring made easy with eCDI™ monitoring package
- Real-Time Adaptive Correction (RTAC) system provides continuous and automatic correction for linear distortions including mask filter
- Straightforward diagnostics using 320 x 240 pixel color touch screen
- On-air servicing of PA modules (1 kW model)
- Air-cooled amplifiers for ease of installation and maintenance
- Field-proven CD 1A exciter standard
- Industry standard remote control interfaces

Specifications

Specifications are subject to change without notice.

General

RF Load Impedance	50 ohms, 1.1:1 VSWR over any single TV channel
RF Output Connector	1-5/8 in. EIA flange
Frequency Range	470 to 806 MHz
MPEG Input	SMPTE 310M
Input Connector Type	BNC, 75 ohms, isolated
PFC Input	BNC, 50 ohms, 0 to +10 dBm, 10 MHz sinusoid

Performance

Power Output: Measured at output of the built-in mask filter	
CZ100	100 W
CZ250	250 W
CZ500	460 W
CZ1000	900 W
Power Output: Measured at output of the external mask filter	
CZ500L	500 W
CZ1000L	1000 W

Stability of Output Power	±2%
Signal-to-Noise Ratio (SNR)	≥ 27 dB (compliant with ATSC A/64, measured with Agilent 89441)
Pilot Phase Noise	≥ -104 dBc/Hz at 20 kHz (ATSC A/64)
Carrier Frequency Stability	< 200 Hz/month (< ±3 Hz with external PFC)
Frequency Offsets	FCC 73.622 and ATSC A/64
Frequency Offset Resolution	0.002 Hz
Spurious and Harmonic	
Radiation	Compliant with FCC 73.622

Service Conditions

AC Line Voltage	1-phase 50/60 Hz, 208/240 V
AC Line Variation	±10%
Power Factor	≥ 0.97
Power Consumption	
CZ100	1.5 kW
CZ250	2 kW
CZ500	2.5 kW
CZ1000	5 kW
Operational Temperature	
Range	32° to 113° F (0° to 45° C) (Derate linearly 35.6° F (2° C) per 1,000 ft (304.8 m) above sea level)
Altitude	0 to 7,500 ft (2,286 m) AMSL
Cooling Method	Air, self-contained fans
Physical Size (H x W x D)	72 x 28 x 41 in. (182.9 x 71.1 x 104.1 cm)



For more information, please visit www.broadcast.harris.com/tvtransmission.

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