

Platinum-*i*TM Series

Solid-State VHF ATSC DTV Transmitter



The Platinum-*i*TM series of solid-state VHF TV transmitters provides the ultimate solution for digital television transmission, offering the highest levels of performance, reliability and functionality. Employing the same field-proven technologies that have made Harris® Platinum Series® transmitters the world standard, Platinum-*i* transmitters incorporate the Harris® eCDi® integrated control system and remote interface. A highly intuitive color LCD graphical user interface provides detailed information, system control and in-depth diagnostics locally. The standard web GUI interface allows remote users to access full control and monitoring capabilities, at virtually any location, using a standard PC and web browser. Level-2 eCDi software provides additional ATSC measurement capabilities.

Upgrade your existing Platinum analog or digital transmitter for unsurpassed monitoring and control capability.

With the Platinum-*i* upgrade, your transmitters are able to provide IP-based control and monitoring by using the Harris eCDi remote monitoring system, tied to the station LAN or directly to the Internet.

FEATURES

Each Platinum-*i* transmitter includes market-leading features:

- Apex M2XTM multimedia exciter, allowing easy migration between standards
- Real-Time Adaptive Correction (RTACTM) provides continuous automatic correction, assuring optimum performance at all times
- Built-in eCDi control system with color touchscreen provides extensive local and remote control and monitoring capabilities

- Field-proven, ultra-reliable Platinum series amplifier modules provide unsurpassed system dependability
- Positive-pressure air cooling system with patented techniques to ensure the lowest FET junction temperatures and highest MTBF
- On-air replaceable modules and a distributed control architecture allow for on-air servicing and increased system availability

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 3-1/8 in., EIA flanged (each PA cabinet output)
 Frequency Range Any specified VHF TV channel, 2 to 6
 (54 to 88 MHz), 7 to 13 (174 to 216 MHz)
 Television System ATSC (8VSB, 6 MHz channel)

Power Factor 0.85 or better

Power Consumption

(typical, including internal cooling) PTCD5P1-*i*: 10.7 kW, PTCD10P1-*i*: 18.9 kW,
 PTCD20P2-*i*: 37.2 kW, PTCD30P3-*i*: 55.5 kW,
 PTCD40P4-*i*: 72.4 kW

Operational Temperature Range⁴ 32° to 122° F (0° to 50° C) (Derate maximum
 temperature 36° F (2° C) per 984 ft (300 m)
 above sea level)

Altitude⁵ 0 to 7,500 ft (2,286 m) AMSL

Cooling Method Forced air

Acoustic Noise <71 dBA (measured in front of cabinet, not
 including external air system components)

Physical Size (W x D x H) PTCD5P1-*i*: 57 x 61.3 x 72 in., 2,500 lbs
 and Weight PTCD10P1-*i*: 57 x 61.3 x 72 in., 2,730 lbs
 PTCD20P2-*i*: 91 x 61.3 x 72 in., 5,000 lbs
 PTCD30P3-*i*: 125 x 61.3 x 72 in., 7,270 lbs
 PTCD40P4-*i*: 159 x 61.3 x 72 in., 9,032 lbs

Digital Performance

Data Input	Data rate	19.39265846 Mb/s
	Impedance	75 ohms, unbalanced
	Standard	SMPTE 310M
	Connector	BNC, female, isolated
External Precise	Frequency	10 MHz sinusoid
Frequency Input	Impedance	50 ohms, unbalanced
	Level	0 to +10 dBm
	Connector	BNC, female

Signal to Noise (EVM)¹ ≥27 dB (≤4.2% EVM) (Ref: ATSC A/64)
 Pilot Frequency Stability² ≤±200 Hz/month (≤±3 Hz with external PFC)
 Stability of Output Power ±5% or better
 Harmonic Radiation and Spurious Compliant with title 47 CFR 73.622, when
 measured at output of Harris-supplied output filter
 Sideband Performance Compliant with title 47 CFR 73.622, when
 measured at output of Harris-supplied output filter

Service Conditions

AC Line Voltage (select one)³ 208/220/240 V, 3-phase, 4-wire, 50/60 Hz
 380/400/415 V, 3-phase, 4-wire, 50/60 Hz
 480 V, 3-phase, 3- or 4-wire, 60 Hz
 AC Line Variation ±10%

NOTES:

- ¹ Signal-to-noise ratio (modulation error ratio) measured HP89440A/HP89441A vector signal analyzer.
- ² After initial aging of 60 days.
- ³ For other AC voltages, consult Harris.
- ⁴ Derate maximum temperature linearly, from 122° F (50° C) at sea level, by 36° F (2° C) per 1,000 ft (305 m), up to 7,500 ft (2,286 m) AMSL. For operation outside these limits, consult Harris.
- ⁵ Higher altitude operation is possible, consult Harris for details.

ORDERING INFORMATION

For ordering information, contact your regional Harris sales representative.