



## PlatinumCD™ Series

VHF Solid State  
DTV Transmitters

PlatinumCD solid state VHF DTV transmitters employ the same field-proven benefits that have helped make analog Platinum series television transmitters the world standard. PlatinumCD transmitters use hot-swappable MOSFET amplifiers and provide unsurpassed system reliability through the use of conservative design and state-of-the-art cooling techniques. Each PlatinumCD system includes a control cabinet and one to three power amplifier cabinets. The control cabinet houses the system controller, exciter, monitoring, control panel and an optional second exciter with automatic changeover.

### Features/ Benefits

- ▶ Real-Time Adaptive Correction (RTAC™) system provides continuous automatic correction of the entire transmitter and RF system, optimizing performance.
- ▶ Remote transmission monitoring made easy with Harris' new optional CD Eye™ 8-VSB monitoring software.
- ▶ PlatinumCD transmitters combine the industry's standard in VHF transmitter reliability and the Harris CD 1A, the leading 8-VSB digital television exciter.
- ▶ Second generation CD 1A 8-VSB exciter defines expectations for DTV performance, stability and linearity.
- ▶ Ultra-redundant solid state transmitter provides superior on-air reliability—backed by the industry's only five-year warranty.
- ▶ Hot-pluggable solid state modules provide unsurpassed MTBF of 500,000 hours.
- ▶ Positive-pressure isolated air system prolongs transistor life and increases maintenance interval.



## Harris PlatinumCD Series Transmitter Specifications

- ▶ Efficient regulated power supplies eliminate need for automatic voltage regulator in most installations and provide consistent performance despite line voltage variations.
- ▶ Rigorous, 6-kilovolt transient testing (ANSI C62.41) ensures greater immunity to lightning and other static conditions.
- ▶ Straightforward controls and at-a-glance status indicators enable any user to operate the transmitter with minimal training.

### General

RF Load Impedance: 50 Ohms, 1.1:1 VSWR over specified TV channel  
RF Output Connector: 3-1/8" EIA (PA cabinet outputs)  
Frequency Range: Any specified VHF TV Channel, 2-6,7-13(54-88MHz, 174-216MHz)  
Data Input: SMPTE-310M, 19.39 Mb/s  
Data Input Connector: BNC, 75 Ohms  
PFC Input: 10 MHz sinusoid, 0 to +10 dBm, BNC, 50 Ohms

### Performance

DTV Power Output:	Model	Output Power
	PTCD5P1	5 kW Peak, 1.1 kW Average
	PTCD10P1	10 kW Peak, 2.2 kW Average
	PTCD20P2	20 kW Peak, 4.4 kW Average
	PTCD30P3	30 kW Peak, 6.6 kW Average
	PTCD40P4	40 kW Peak, 8.8 kW Average

Stability of Output Power:  $\pm 5\%$  or better  
Frequency Stability (Pilot):<sup>1,6</sup>  $\pm 200$  Hz / month  
Frequency Offsets: Per FCC requirements  
SNR (MER):<sup>2</sup>  $\geq 27$  dB  
Harmonic & Spurious Radiation: Compliant with FCC requirements  
Sideband Performance: Compliant with FCC mask, with optional Harris specified output filter

### Service Conditions

Ambient Temperature Range:<sup>3</sup> 0 to +50 deg C (+32 to +122 deg F)  
Ambient Humidity Range: 0 to 95% relative humidity, non-condensing  
Altitude:<sup>4</sup> 0-7,500 ft. AMSL

Physical Dimensions & Weights:	
PTCD5P1	Size: 57" W x 61.3" D x 72" H Weight: up to 2,500 lbs
PTCD10P1	Size: 57" W x 61.3" D x 72" H Weight: 2,730 lbs
PTCD20P2	Size: 91" W x 63" D x 72" H Weight: 5,000 lbs
PTCD30P3	Size: 125" W x 61.3" D x 72" H Weight: 7,270 lbs
PTCD40P4	Size: 159" W x 61.3" D x 72" H Weight: 9,032 lbs

Specifications subject to change without notice.

Electrical Requirements:<sup>5</sup> 208/240 volts,  $\pm 10\%$ , 3-Phase, 3 or 4 wire, 50/60 Hz  
380/415 volts,  $\pm 10\%$ , 3-Phase, 3 or 4 wire, 50 Hz  
480 volts,  $\pm 10\%$ , 3-Phase, 3 or 4 wire, 60 Hz (PTCD20P2, PTCD30P3 & PTCD40P4 Only)

Power Factor: 0.85, or better

Power Consumption:  
(typical, including internal cooling)

PTCD5P1	11.1 kW
PTCD10P1	18.5 kW
PTCD20P2	37 kW
PTCD30P3	55.5 kW
PTCD40P4	74 kW

#### Notes:

<sup>1</sup> After initial aging of 60 days

<sup>2</sup> Signal to noise ratio (modulation error ratio) measured with HP89440A/HP89441A Vector Signal Analyzer

<sup>3</sup> Derate maximum temperature linearly, from +50 deg C at sea level by 2 deg C per 1,000 ft., up to 7,500 ft. For operation outside these limits, consult Harris

<sup>4</sup> For higher altitude operation, consult Harris

<sup>5</sup> For other AC voltages, consult Harris

<sup>6</sup>  $\pm 3$ Hz or better with external precision frequency control option.



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