

# 400 W Compact Medium Power Amplifier

## Compact

Provides 400 watts of power in a 3 rack unit package, digital ready, for wideband, single- and multi-carrier satellite service in the 7.9 to 8.4 GHz frequency band. Ideal for transportable and fixed earth station applications where space and prime power are at a premium.

## Efficient

Employs a high efficiency dual-depressed collector helix traveling wave tube backed by many years of field-proven experience in airborne and military applications.

## Simple to Operate

User-friendly microprocessor-controlled logic with integrated computer interface. Digital metering, pin diode attenuation and optional integrated linearizer for improved intermodulation performance.

## Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2014/30/EU and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements.

## Easy to Maintain

Modular design and built-in fault diagnostic capability with convenient and clearly visible indicators for easy maintainability in the field.

## Worldwide Support

Backed by over four decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than twenty regional factory service centers.



**Model VZX-6984A4**

400 watt compact medium amplifier for satellite communications

### OPTIONS

- Remote Control Panel
- Redundant and Power Combined Subsystems
- External Receive Band Reject Filter



satcom products

811 Hansen Way, PO Box 51625  
Palo Alto, CA 94303 USA

tel: +1 (650) 846-3803

fax: +1 (650) 424-1744

e-mail: [satcommarketing@cpii.com](mailto:satcommarketing@cpii.com)

website: [www.cpii.com/satcom](http://www.cpii.com/satcom)

## 400 W Compact Medium Power Amplifier

Specification	Model VZX-6984A4
Frequency	7.9 to 8.4 GHz
Output Power TWT Flange	400 W min. (56.02 dBm) 350 W min. (55.44 dBm)
Bandwidth	500 MHz
Gain	75 dB min. at rated power output; 78 dB min. at small signal
RF Level Adjust Range	0 to 20 dB
Gain Stability	±0.25 dB/24hr max. at constant drive & temp.
Small Signal Gain Slope	±0.02 dB/MHz max.
Small Signal Gain Variation	Across any 80 MHz band: 1.0 dB pk-pk max. Across the 500 MHz band: 2.5 dB pk-pk max.
Input/Output VSWR	1.3:1 max.
Load VSWR	2.0:1 max operational; Any value operation without damage
Phase Noise	IESS-308/309 phase noise profile: -12 dB AC fundamentals related: -42 dBc Sum of spurs: (370 Hz to 1 MHz): -50 dBc
AM/PM Conversion	2.5°/dB max. for a single carrier at 6 dB below rated power (at 4 dB below rated power with optional linearizer)
Harmonic Output	-60 dBc at rated power, second and third harmonics
Noise and Spurious	<-75 dBW/4 kHz from 7.25 to 7.75 GHz; <-65 dBW/4 kHz, from 7.9 to 8.4 GHz (<-60 dBW/4 kHz with linearizer)
Intermodulation	-23 dBc or better typ. with two equal carriers at total output power 7 dB below rated single-carrier output (at 4 dB below with optional linearizer)
Group Delay	In any 40 MHz band: 0.01 ns/MHz linear max; 0.001 ns/MHz <sup>2</sup> parabolic max; 0.5 ns pk-pk ripple max.
Primary Power	110-240 VAC, ±10%, single phase 47-63 Hz
Power Consumption	1.3 kVA typ; 1.5 kVA max.
Power Factor	0.95 min.
Inrush Current	200% max.
Ambient Temperature	-10°C to +50°C operating; -54°C to +71°C non-operating
Relative Humidity	95% non-condensing
Altitude	10,000 ft. (3,048 m) with standard adiabatic derating of 2°C/1000 ft. (305 m) operating; 40,000 ft. (12,192 m) non-operating
Shock and Vibration	Designed for normal transportation environment per Section 514.4 MIL-STD-810E. Designed to withstand 20G at 11 ms (1/2 sine pulse) in non-operating condition.
Acoustic Noise	65 dBA (as measured at 3 ft.)
Cooling (TWT)	Forced air with integral blower. Rear air intake and exhaust.
RF Input Connection	Type N female
RF Output Connection	CPR112G waveguide flange, grooved, threaded UNF 2B 8-32
RF Output Monitor	Type N female
Dimensions (W x H x D)	19.0 x 5.25 x 24 in. (483 x 133 x 610 mm)
Weight	70 lbs (31.8 kg) max.