

For Satellite Communications Uplink Applications

Provides 1250 watts of CW power in a compact 9 RU package, digital ready, for satellite uplink service in Ku-band.

Touchscreen Graphical Interface

The CPI 1250 W Ku-band TWTA is equipped with a state-of-the-art touchscreen interface offering both amplifier- and system-level control capabilities. It includes fault logs, parameter trending and a scopescreen for monitoring performance. Its internal switch control eliminates the need for external controllers.

Simple to Operate

The amplifier features user-friendly microprocessor-controlled logic with integrated computer interface, Ethernet interface, digital metering, pin-diode attenuation, integrated linearizer for improved intermodulation performance, and an optional BUC for use with L-band modems.

Easy to Maintain

Its modular design includes built-in fault diagnostic capabilities, with convenient and clearly visible indicators for easy maintainability in the field. A USB port is available for uploading new firmware and system configurations, as well as downloading logs and system configurations for cloning to other units.

Meets Global Requirements

The amplifier meets International Safety Standard EN-60215, Electromagnetic Compatibility 2014/30/EU and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements. CE marked.



CPI 1250 W Ku-band TWTA,
Model T9UI

OPTIONS

- Remote control panel
- Redundant and hybrid power combined systems
- Integrated switch control and drive
- Integral block upconverter (BUC) or dual band BUC: Contact CPI for specifications
- External receive band reject filter
- LifeExtender/LifePredictor technology to significantly extend TWT lifespan
- Uplink power control

FEATURES

- Touchscreen user interface
- Integral linearizer
- Ethernet interface

Quality Management
System - ISO 9001:2015



Worldwide Support

CPI satcom amplifiers are backed by over 40 years of satellite communications experience, and CPI's global customer support network, including regional factory service centers located worldwide.

Specification	CPI Model T9UI, 1250 W Ku-Band TouchPower TWTA
Output Frequency	13.75 to 14.50 GHz
Output Power (min.) TWT Flange (P _{sat} , CW)	1250 W (60.97 dBm) min. 1100 W (60.41 dBm) min.
Bandwidth	750 MHz
Gain	70 dB min.
RF Level Adjust Range	0 to 30 dB (via PIN diode attenuator), 0.1 dB steps
Gain Stability	±0.25 dB/24 hour max,max. at constant drive and temperature, after 30 minute warmup ±0.1 dB typ. over operating temperature range, constant drive
Small Signal Gain Slope	±0.02 dB/MHz max.
Small Signal Gain Variation	1.5 dB pk-pk max. across any 80 MHz 4.0 dB pk-pk max. across the 750 MHz band
Input/Output VSWR	1.3:1 max. / 1:3:1 max.
Load VSWR	2.0:1 continuous operation; 1.5:1 for full spec. compliance; any value operation without damage
Phase Noise	-12 dB IESS-308/309 phase noise profile; -50 dBc AC fundamental (50/60 Hz); -47 dBc sum of spurs (370 Hz to 1 MHz)
AM/PM Conversion	2.5°/dB max. for a single-carrier at 57 dBm output power
Harmonic Output	-60 dBc max.
Noise Density	<-150 dBW/4 kHz from 10.0 to 12.7 GHz <-70 dBW/4 kHz in passband, <-65 dBW/4 kHz in passband <-105 dBW/4 kHz from 18.0 to 26.0 GHz, <-125 dBW/4 kHz from 26.0 to 40.0 GHz
Intermodulation - with respect to the sum of 2 equal carriers 5 MHz apart	-25 dBc at 540 W output power
Spectral Regrowth	-30 dBc at 1 symbol offset, 5.6 Msps, at 540 W output power
Group Delay (over any 80 MHz)	0.01 ns/MHz linear max; 0.001 ns/MHz ² parabolic max; 0.5 ns pk-pk ripple max.
Primary Power	Voltage: Three phase with neutral and ground, 200-240 VAC L-L ±10% OR 380-415 VAC L-L ±10%; Frequency: 47-63 Hz ±10% five wire
Power Consumption	4.9 kVA typ. at 1100 W output power
Power Factor	0.92 min; 0.95 typ.
Ambient Temperature	-10°C to +50°C operating, -54°C to +71°C non-operating
Relative Humidity	95% non-condensing
Altitude	10,000 ft. with standard adiabatic derating of 2°C/1000 ft. operating; 50,000 ft. non-operating
Shock and Vibration	Designed for normal transportation environment per section 514.4 MIL-STD-810E. Designed to withstand 20 G at 11 ms (1/2 sine pulse in non-operating condition)
Cooling	Forced air with integral blower. Rear air intake and exhaust. Maximum external pressure loss allowable: 0.25 inch water gauge
Connections	RF Input: Type N Female; RF output: WR75G waveguide flange; grooved, threaded, UNF 2B 6-32 holes; RF output monitor: Type N Female
M&C Interface	RJ45 Ethernet, includes embedded GUI control; RS422/485, RS232 serial interface
USB Port	Download/Upload software, logs
Dimensions, W x H x D	19 x 15.75 x 24 inches (483 x 400 x 610 mm)
Weight	155 lbs (70.5 kg) max.
Heat Dissipation	1,440 watts to duct; 360 watts to room
Acoustic Noise	68 dBA (as measured at 3 ft.) nom.
USB Port	Download/upload software, logs
Heat Dissipation	3300 W in duct, 500 W in room
Acoustic Noise	65 dBA (as measured at 3 ft.) nom.



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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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