

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 | Downlod/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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