

For Satellite Communications Uplink Applications

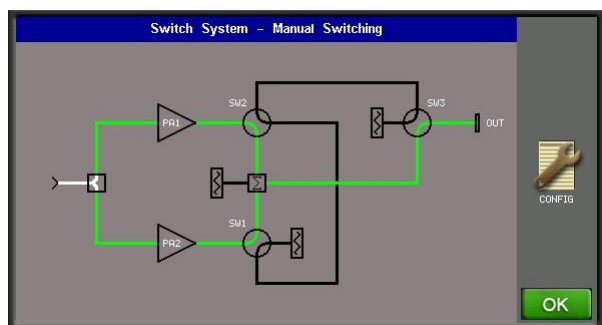
Provides 750 watts of power in a 5 rack unit package, digital ready, for wideband, satellite service within the Ku-band frequency range.

Touchscreen Graphical Interface

State of the art touchscreen interface with both amplifier and/or system level control capabilities. Includes fault logs, parameter trending and scopescreen for monitoring performance. Internal switch control eliminates need for external controllers.

Easy to Maintain

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



Touchscreen TWTA Sample Redundancy System Schematic Display; Various Configurations Available



CPI 750 W Ku-band TWTA, Model T5UI

OPTIONS:

- Remote control panel
- Redundant and hybrid power combined sub-systems
- Integral linearizer
- Integral block upconverter (BUC) - see TD-198 or contact CPI for specifications.
- LifeExtender™/LifePredictor
- Uplink Power Control
- External Receive Band Reject Filter (increases loss by 75 dB min. up to 12.75 GHz)

FEATURES:

- Ethernet interface
- SNMP interface (v1, v2, or v3)
- Serial interface (compatible with CHPA)
- CAN-Bus architecture improves reliability and noise immunity.

Quality Management System - ISO 9001:2015



Meets Global Requirements

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

Worldwide Support

Backed by over 40 years of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than 20 regional factory service centers.

Specification	CPI Model T5UI, 750 W Ku-Band TouchPower TWTA
Output Frequency	13.75 to 14.50 GHz, 12.75 to 14.50 GHz or 13.75 to 14.80 GHz
Output Power (min.) TWT Flange (P _{sat} , CW)	750 W (58.75 dBm) min. 650 W (58.13 dBm) min.
Gain	70 dB min. at rated power, 80 dB max; 75 dB min. at small signal, 85 dB max.
RF Level Adjust Range	0 to 30 dB (via PIN diode attenuator), 0.1 dB steps
Gain Stability Over temp, constant drive Over ±10°C, constant drive	±0.25 dB/24 hour max,max. at constant drive and temperature, after 30 minute warmup 2.0 dB pk-pk max. at 48.13 dBm output power, -10°C to +55°C 1.5 dB pk-pk max. at 48.13 dBm output power
Small Signal Gain Slope	±0.04 dB/MHz max.
Small Signal Gain Variation	1.0 dB pk-pk max. across any 80 MHz; 2.5 dB pk-pk max. across 750 or 1050 MHz (3.0 dB with linearizer); 4.5 dB pk-pk max. across 1750 MHz (5.0 dB with linearizer)
Input/Output VSWR	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); -50 dBc sum of spurs (370 Hz to 1 MHz)
AM/PM Conversion	2.5°/dB max. for a single-carrier at 6 dB below rated power. Improves to 2.0°/dB typ. at 3 dB OBO with optional linearizer
Harmonic Output	-70 dBc at rated power, second and third harmonics
Noise Density	<-150 dBW/4 kHz, 10.70 to 12.75 GHz; <-70 dBW/4 kHz passband; <-65 dBW/4 kHz passband with linearizer option
NPR	-19 dB at 4 dB OBO with optional linearizer
Intermodulation - with respect to each or two equal carriers 5 MHz apart	-23 dBc or better at 51.13 dBm; -26 dBc or better at 55.13 dBm with linearizer
Spectral Regrowth	-30 dBc at 1 symbol rate at 3 dB OBO with optional linearizer, QPSK and OQPSK
Group Delay (over any 80 MHz)	0.01 ns/MHz linear max; 0.005 ns/MHz ² parabolic max; 0.5 ns pk-pk ripple max.
Primary Power	Voltage: Single phase, 200-240 VAC ±10%; Frequency: 47-63 Hz, 15 A max.
Power Consumption	2.2 kVA typ. at P _{sat} ; 2.4 kVA max; 1.8 kVA typ. at P _{LIN}
Power Factor	0.95 min; 0.99 typ.
Inrush Current	200% max.
Ambient Temperature	-10°C to +55°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-810G. Designed to withstand 20G 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: 0.5" water column
Connections	RF Input: Type N Female; RF output: WR75 grooved waveguide flange; 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 8.75 x 24 inches (483 x 222 x 610 mm)
Weight	78 lbs (35 kg) nom.
Heat Dissipation	1,440 watts to duct; 360 watts to room
Acoustic Noise	68 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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