

750 W Touchscreen TWTA

Compact and Efficient

Provides 750 watts of power in a 5 rack unit package, digital ready, for wideband, single- and multi-carrier satellite service in the 13.75 to 14.50 or 12.75 to 14.50 GHz frequency range, with other frequency ranges available as well. Ideal for transportable and fixed earth station applications where space and prime power are at a premium. CAN-Bus architecture improves noise immunity and reliability.

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.

Global Applications

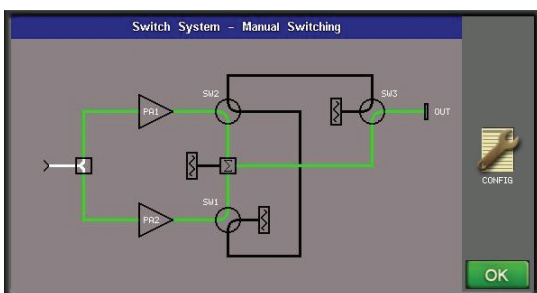
Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy world requirements.

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.

Worldwide Support

Backed by over 35 years of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than 20 regional factory service centers.



Touchscreen TWTA Sample Redundancy System Schematic Display;
Various Configurations Available



Models T5UI

750 watt Ku-band Touchscreen TWTA for **satellite uplink applications**

OPTIONS

- Integral linearizer
- Remote control panel
- Redundant and power combined sub-systems
- External receive band reject filter (increases loss by a minimum of 75 dB up to 12.75 GHz)
- SNMP compatibility
- LifeExtender™/LifePredictor
- High altitude/temperature kit
- L-band block upconverter (BUC) --- specifications for when BUC is included are not contained in this document. Contact CPI for details.
- Multi-band block upconverter (BUC) --- specifications for when BUC is included are not contained in this document. Contact CPI for details.



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750 W Ku-Band TouchPower™ Touchscreen TWTA

Specification	Model T5UI
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; 70 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; -52 dBc AC fundamentals (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 7 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, 208-240 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.