

TORTOISE™

Multi-Band Transmitter

Tortoise™ is a portable, rugged, high-power signal generator system comprised of dual, independent modules giving the user freedom to operate on any 2 unique frequency bands simultaneously all in one portable device. Tortoise™ features two dynamically controlled Class AB amplifiers for the cleanest signal output (up to 50 watts) and VSWR protection. Tortoise features built-in thermal overheat protection circuitry with quad cooling fans to ensure against overheating during operation. Remote adjustments include power level, channel or frequency assignment and transmit On/Off via USB connection to any PC. Optional MODULATORS allow Tortoise™ to simulate LTE, UMTS, CDMA or WiMAX base stations complete with adjustable step sizes, channel bandwidth and user settable ID Cell, Segment and frame lengths.

Choose
Your
Internal
Modulation

CDMA

LTE

UMTS

WiMAX

Simulate any WiMAX, UMTS, CDMA or LTE base station with optional modulation.

FEATURES

- Two independent CW transmitter module bays
- Optional LTE, UMTS, CDMA IS-95 or WiMAX Modulation
- Weighs under 20 pounds
- Water resistant, ruggedized plastic case
- Class AB power amplification up to 50 watts per band
- Quad cooling fans with built-in thermal amplifier overheat protection
- Power levels, channels and frequencies controlled from the front panel or included PC software
- VSWR antenna protection and internal power meter measurement for precise output power control
- All parameters adjustable remotely via USB or directly in 0.1 dBm increments

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**Berkeley**
Varitronics Systems
Wireless Detection



TORTOISE™

CW BAND CONFIGURATIONS

TORTOISE SINGLE BAND	
170 - 220 MHz	25 Watts
400 - 500 MHz	25 Watts
690 - 960 MHz	25 or 50 Watts
1700 - 2200 MHz	25 Watts
3400 - 3700 MHz	10 or 20 Watts

TORTOISE WIDE BAND - SINGLE BAND	
540 - 2500 MHz	25 Watts
690 - 2700 MHz	25 Watts

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**CHOOSE BETWEEN 2
CW BAND CONFIGURATIONS**

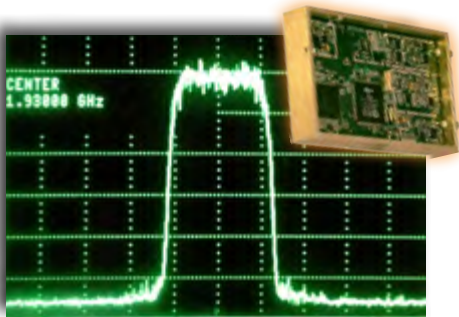


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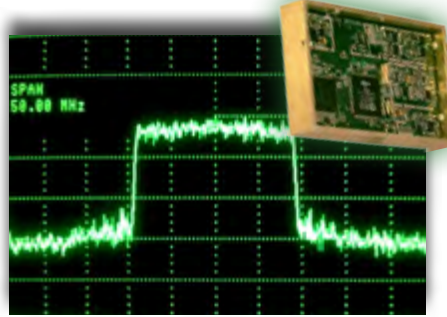
TORTOISE DUAL BAND	
170 - 220 MHz	25 Watts
400 - 500 MHz	25 Watts
690 - 960 MHz	25 or 50 Watts
1800 - 2200 MHz	25 Watts
3400 - 3700 MHz	10 or 20 Watts

TORTOISE WIDE BAND - DUAL BAND	
540 - 2500 MHz	25 Watts
690 - 2700 MHz	25 Watts

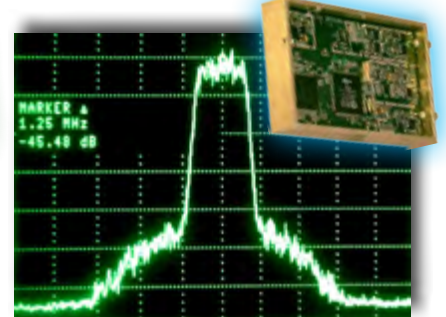
MODULATION SCHEMES



UMTS



LTE



CDMA

WiMAX Mobile 802.16e, WiMAX Fixed 802.16d and custom modulation schemes are also available.

All modulation schemes have a maximum power output of 10 Watts. Wideband not supported. Ask for custom frequencies.

TECHNICAL SPECIFICATIONS

Selectable step sizes of 2.5 kHz, 5 kHz, 15 kHz, 20 kHz, 25 kHz, 50 kHz and 200 kHz. *Custom frequency bands available upon request

DISPLAY	640 x 240 LCD (1/2 VGA)
STABILITY	Stability better than 1.5 PPM for first year, ± for 1 PPM for aging
OUTPUT POWER	Continuous adjustable power output from 30 dBm to 47 dBm with ±0.5dBm accuracy & 0.1dBm resolution
OUTPUT CONNECTOR	Type 'N' female, 50 Ohm
SPECTRAL PURITY PHASE	-78 dBc/Hz @ 10 kHz offset
NOISE TYPICAL at 2GHz	-105 dBc/Hz @ 100 kHz offset
REMOTE CONTROL	Control via USB connected to any PC
SPURIOUS OUTPUT	> 50 dBc
HARMONICS OUTPUT	> 25 dBc
OPERATING TEMP	-20 degrees C to 35 degrees C
POWER	Internal power supply 100-240 VDC, 5 Amp
INCLUDES	2 Antennae output ports (Type N female) and PC Software
OPTIONS	Modulation schemes (WiMAX, UMTS, LTE or CDMA) Pure sine power inverter 600 watts 12 VDC to 120 VAC power

Cellular • WiMAX • LTE • IS-95 CDMA • LMR • Paging • SMR • GSM • ISM • WCS • iDEN • AMPS • PACS • ETACS • IS-136 • AWS

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