

# XIEGU

Wireless Technology,  
Unlimited Creativity

## A New Generation X Series Portable SDR Flagship

# X6100

HF/50MHz Full-mode Ultra-portable Transceiver

### Integrated, portable

X6100 inherits the compact and high performance characteristics of the X series. As a new generation flagship ultra-portable transceiver, it still achieves a powerful integration to meet your various expectations and requirements for portable ones.

### Complete functions and rich configuration

In terms of X6100, it has most of the unique functions of SDR device, such as: variable bandwidth digital filter, digital noise reduction, digital pulse interference elimination, recording call, spectrum/waterfall display, preset message, modem (CW/RTTY/PSK), IQ signal output, etc. It complies with the functional configuration requirements of the current mainstream digital devices.

### Powerful baseband and control system

Using a deeply optimized system, it is the first to use an architecture with fully independent baseband unit and RF unit for X series, obtaining extraordinary user experience. The powerful multimedia capabilities help users to communicate in a more pleasant manner, and realize the integrated USB control/transmission/automatic telegraph functions, making connection not complicated any more.



Overall dimensions:  
180mm\*86mm\*49mm  
(excluding projections)

X6100 is an ultra-portable shortwave transceiver, and adopts the SDR software radio platform architecture of excellent performance, which carries powerful baseband and RF unit, and integrates rich and diversified operating functions, bringing you a brand-new recognition and experience on amateur radio. With its compact structure and tiny appearance, you can immediately set forth on a journey with it, get close to nature, and enjoy the fun of outdoor communication.

- HF/50MHz full mode (supporting data communication)
- Transmitting power: External power supply: 10W, battery: 5W
- 4" high-resolution color screen, 800\*480
- Built-in large capacity lithium battery pack (3500mAh, 12V)
- Built-in efficient automatic antenna tuner
- Integrated standing wave scanner, voice pager
- Integrated modem, preset message, CW automatic call
- Native Bluetooth/wifi function, can realize wireless audio/keyboard & mouse operation.
- Integrated USB line control/transmission, supports USB HOST.
- Standard high stability TCXO internal clock source

- The 4" high brightness high-resolution color screen (800\*480), carrying a powerful quad-core mobile processor, 4G ROM, 512MRAM, is designed to meet future requirements.

- It has all the elements that an ultra-portable machine should have, including built-in rechargeable battery pack, built-in high-performance automatic antenna tuner, built-in microphone, and standing wave scanner. It has everything you want.

- The high-performance SDR platform can meet your daily/competition requirements. Functions comparable to desktop computers, such as recording call, variable bandwidth digital filter, digital noise reduction, etc., everything needed is ready.

- The powerful baseband processing and control platform supports a wider range of function extensions and applications. With native Bluetooth/wifi support, wireless interconnection is easily realized.

X6100 adopts independent baseband and RF unit. The baseband unit provides control, advanced data processing, signal digital processing, and multimedia interface functions, and can add new functions continuously through system upgrade. The RF unit adopts the SDR structure, to receive and transmit the radio signals, and uses the dual-channel structure with separate transmitting and receiving, under the cooperation of the 24bit sampling and large dynamic RF front-end unit, it can obtain extremely high radio indicators, making it no longer difficult to listen to the world.

The whole machine provides two USB interfaces, supporting HOST and DEVICE. It has an extensible external TF card, which is used to store channel information or voice information. It provides an ACC interface, with a dedicated cable, it can be directly connected to the XPA125B amplifier, to achieve automatic control. It provides a 3.5mm-KEY interface for the connection of hand keys and automatic keys. It provides an S/P interface, which can be customized as an external speaker or earphone through menu selection. The whole machine also provides an IQ signal output interface, which is used to connect to external sampling equipment for auxiliary reception.

Conventional indicators	
Frequency range	Receiving: 0.5MHz~30MHz, 50MHz~54MHz Transmitting: 1.8~2.0MHz, 3.5~3.9MHz 5.3515~5.3665MHz 7.0~7.2MHz 10.1~10.15MHz 14.0~14.35MHz 18.068~18.168MHz 21.0~21.45MHz 24.89~24.99MHz 28.0~29.7MHz 50~54MHz
Operation Mode	USB/LSB (J3E), CW (A1A), FM (F3E), RTTY (F1B), AM (A3E)
Minimum frequency step	1Hz
External power supply voltage	DC 9.0V~15.0V
Frequency stability	±1ppm (20 minutes after start)
Antenna port impedance	50Ω
Antenna interface type	BNC
Operating Temperature Range	0℃~50℃
Transmission power	Battery: 5W External power supply: 10W
Current consumption	Standby: 550mA (Max) Transmit: 3.0A (Max)
Overall dimensions	About 180*86*49mm

Transmitter index	
Stray suppression	≥60dB
Carrier suppression	≥40dB
Sideband suppression	≥50dB
SSB frequency response range	300Hz~2700Hz (-6dB)
FM modulation frequency offset	±5kHz
Microphone impedance	200~10kΩ (600Ω in general)
Antenna tuner tuning impedance range	12.5Ω ~ 200Ω
Antenna tuner initial tuning time	≤10s
Antenna tuner tuning read time	≤0.1s

Supported peripherals	
XPA125B	Power amplifier and antenna tuner integrated machine
GSOC	Data/control terminal

Receiver indicators			
Receive sensitivity (10dB S/N) (PRE=on, ATT=off, NB=off, NR=off, SSB/CW/AM = 10dB S/N, FM = 12dB SINAD)		SSB/CW/FM	AM
	0.55 - 1.79MHz	/	10uV
	1.8~27.999MHz	0.20uV	2uV
	28~30MHz	0.20uV	2uV
	50~54MHz	0.20uV	2uV
Digital indicators	ADC: 24bit		
	Spectrum display bandwidth: 96kHz		
	NR signal-to-noise ratio improvement: ≥6dB		
Spectrum background noise	Spectrum refresh rate: 25 frames/s		
Spectrum background noise	-140dBm		
Audio output	0.5W (4Ω, ≤10% THD)		
2kBDR (Critical frequency suppression)	≥110dB		
RMDR	≥85dB		
IMD3	≥95dB		
MDS	-138dBm		



Xiegu Technology devotes itself to designing and manufacturing excellent professional and amateur radio communication devices, so as to help China's professional wireless communication products go to the world.

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