

WECEG400

Parallel Testing ECG Tester for wearable device production lines

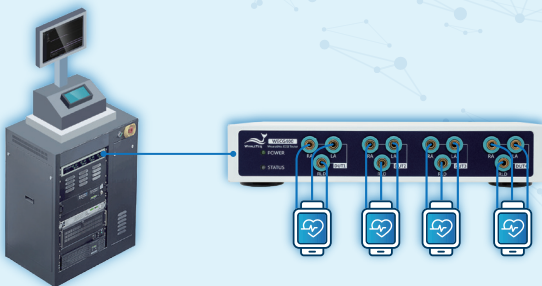
Simultaneously test ECG function on up to 4 wearable devices with a single computer

- **Parallel testing** – sends the same signals to 4 DUTs simultaneously to accelerate testing time
- **Integrates IEC 60601-2-47 test items** – includes dynamic range, input impedance, frequency response, etc.*, to assist DUTs in conforming with regulatory requirements
- **Raw data playback** – reproduces clinical data or user-defined waveforms for customized testing
- **Equipped with 4 sets of electrode terminals** – RA / LA / RLD electrode terminals on each set to meet testing needs for wearable device's ECG function
- **Outputs 7 types of standard ECG waveforms** – ECG Waveform, Sine, Triangle, Square, Exponential, Rectangle Pulse, and Triangle Pulse
- **Provides SDK** – users can flexibly develop automated testing programs and control multiple WECEG400 to test more than 4 DUTs simultaneously
- **Supports sequential testing** – tests DUTs one at a time according to a user-defined sequence
- **Equipped with 4 DUT Monitor ports to connect to an oscilloscope** – amplifies the ECG signals to help users monitor the signal output with higher resolutions
- **Rack-mountable** and easy to deploy with the 1U height design

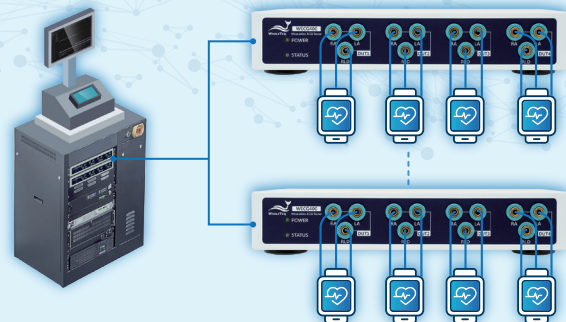
*Note: For the two test items as system noise and common mode rejection, please refer to the WhaleTeq CMRR 3.0+ Common Mode Rejection Ratio Tester for testing.

Testing Scenario

• Single WECEG400



• Multiple WECEG400



Medical Standard Coverage

IEC 60601-2-47 YY 0885 YY 9706.247-2021

Specifications

Standard ECG waveforms

Parameters	Range	Resolutions	
ECG Waveform	Frequency (Hz)	0.02 – 6Hz	0.01
	Frequency (BPM)	1 – 360BPM	1
	Amplitude	(-5) – 5mV	0.01
Sine	Frequency (Hz)	0.05 – 500Hz	0.01
	Frequency (BPM)	3 – 3000BPM	1
	Amplitude	(-10) – 10mV	0.01
Triangle	Frequency (Hz)	0.05 – 500Hz	0.01
	Frequency (BPM)	3 – 3000BPM	1
	Amplitude	(-10) – 10mV	0.01
Square	Frequency (Hz)	0.05 – 500Hz	0.01
	Frequency (BPM)	3 – 3000BPM	1
	Amplitude	(-10) – 10mV	0.01
Exponential	Frequency (Hz)	0.05 – 5Hz	0.01
	Frequency (BPM)	3 – 300BPM	1
	Amplitude	(-5) – 5mV	0.01
Rectangle Pulse	Frequency (Hz)	0.05 – 5Hz	0.01
	Frequency (BPM)	3 – 300BPM	1
	Amplitude	(-5) – 5mV	0.01
	Pulse width (frequency: 0.05Hz)	1 – 300ms	1
	Pulse width (frequency: 5Hz)	1 – 200ms	1
Triangle Pulse	Frequency (Hz)	0.05 – 5Hz	0.01
	Frequency (BPM)	3 – 300BPM	1
	Amplitude	(-5) – 5mV	0.01
	Pulse width (frequency: 0.05Hz)	1 – 300ms	1
	Pulse width (frequency: 5Hz)	1 – 200ms	1

Input Impedance / Frequency Response Signal add-on

Parameters	Range	Default Values	Resolutions
Play raw data	Sample rate	Maximum: 40K Hz	
DC offset (non-Variable)	-300, 0, +300mV	0mV	300
DC offset (Variable)	(-1000) – 1000mV	0mV	100
Input impedance switch	100Ω (short circuit)		
	620kΩ / 4.7 nF on / off	Off (on: short circuit)	
	10MΩ / 180 pF on / off	Off (on: short circuit)	

Product System Capacity and Standard Requirements Table

Parameters	Specifications	System Capability
Main output voltage accuracy	±1% for amplitudes of 0.5mVpp or higher	±0.3%
Main output voltage resolution (DAC resolution)	N/A	0.15μV
Frequency / pulse repetition rate accuracy	±1%	±0.1%
Pulse duration / timing accuracy	±1ms	±0.2ms
Resistor tolerance	±1%	±0.5%
Capacitor tolerance	±5%	±5%
Precision 1000 : 1 divider	±0.5%	±0.3%
Sample rate	5kHz±0.1%	10kHz±0.05% (50ppm)
DC offset (fixed, noise-free, sourced from the internal supercapacitor)	300mV±1%	300mV±0.1%
DC offset (variable, up to 1000mV)	Setting±1% or ±3mV	Setting±1% or ±3mV
Environment	15 – 30°C (by design) 30 – 80% RH (by design)	5 – 40°C 30 – 80% RH altitude < 2000M Overvoltage CAT II

Ordering Information

WECG400 Standard Package

Part No.	Description	Quantity
100-AE00009	Model No.: WECG400 Model Name: Parallel Testing ECG Tester for wearable device production lines	1

Optional Calibration Service and Warranty Extension

Part No.	Description
YY0007	Model No.: C3 Provides (3) years of calibration service coverage. WhaleTeq equipment can be calibrated to original performance on the basis of (1) year interval.
YY0008	Model No.: R3 Extends the limited warranty from (1) year to (3) years.

Optional Accessories

Part No.	Description	Quantity
S92-0204021	DC12V power adaptor	1
K21-0738301	RCA to BNC cable (73.8cm)	1
K27-1800301	USB Type-A to Type-B cable (male to male) (1.8m)	1
K22-1000701	Signal grounding wire (alligator clip to banana male) (1m)	1
K29-1000801	Grounding wire (alligator clip to ring terminal) (1m)	1
N54-0120013	Compound terminal	1



WECG400
Scan for
more information

www.whaleteq.com

service@whaleteq.com

8F., No. 125 Songjiang Rd., Zhongshan Dist., Taipei City 104474, Taiwan

+886-2-2517-6255

+886-2-2596-0702