



FUNCTION GENERATOR

GPS-2100X series

4.3" TOUCHSCREEN

GPS

# 2100X

Our most powerful series of signal generators guided by an intuitive touchscreen

The 2100X series combines the DDS architecture of the conventional function generator capabilities with a true point-by-point architecture (TrueArb) to produce accurate and precise arbitrary waveforms. The 2100X has outstanding performance, offering 16-bit vertical resolution and up to 8MPts of horizontal memory. Standard or arbitrary waveforms are created through the front panel or optional EasyWave software. The adjustable sample clock can deliver up to 1.2GSa/s. The 2100X's superior fidelity and wide dynamic range make it ideal for applications involving high precision, low voltage or signal amplification. The series also includes the EasyPulse technology found in our other generators. Some applications include micro miniature machine stimulation (MEMS), sensor simulations, sonar, automatic airbag triggering, multi-tone audio signals, cardiac and respiratory device testing.



Figure 1 Model shown GPS-2040X

## Key Features

- High performance sampling system with a 1.2GSa/s sampling rate and 16-bit vertical resolution provides accuracy and low distortion
- TrueArb<sup>®</sup> technology supports any 8pts~8MPts Arb waveform with a sampling rate in range of 1 $\mu$ Sa/s~75MSa/s to deliver accurate point-by-point signal reconstruction
- Innovative EasyPulse<sup>®</sup> technology
- Harmonics generator function
- High precision frequency counter
- Extensive features such as internal or external AM, FM, and FSK modulation along with versatile sweep capabilities
- Waveforms can be output in continuous, triggered, gated, or burst modes
- Remote control using SCPI-compliant commands via USB and GPIB
- 196 built-in arbitrary waveforms

[www.gpslimited.com/2100X](http://www.gpslimited.com/2100X)  
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## Technical Specifications

Model	GPS-2040X	GPS-2180X	GPS-21120X
Maximum output frequency	40 MHz	80 MHz	120MHz
Output channels	2		
Sampling rate	1.2 GSa/s (4 x interpolation)		
Wave length	8Pts ~ 8MPts		
Frequency resolution	1 $\mu$ Hz		
Vertical resolution	16-bit		
Waveform	Sine, Square, Ramp, Pulse, Gaussian white noise; Arbitrary waveform: 196 types of built-in arbitrary waveforms		
Sine wave	1 $\mu$ Hz ~ 40 MHz	1 $\mu$ Hz ~ 80 MHz	1 $\mu$ Hz ~ 120 MHz
Square wave	1 $\mu$ Hz ~ 25 MHz		
Pulse	1 $\mu$ Hz ~ 25 MHz		
Ramp/Triangular	1 $\mu$ Hz ~ 1 MHz		
Gaussian white noise	20 ~ 120 MHz		
Arbitrary waveform	1 $\mu$ Hz ~ 20 MHz		
Modulation function	AM, DSM-AM, FM, PM, FSK, ASK, PSK, PWM, Sweep, Burst		
Standard configuration	USB Host, USB Device, LAN Optional: GPIB (USB-GPIB adaptor)		
Amplitude (high impedance)	4 mVpp~20 Vpp ( $\leq$ 20 MHz), 4 mVpp~10 Vpp ( $>$ 20 MHz)		

### Standard Accessories

EasyWave© software  
 USB cable & BNC Coaxial cable  
 220V AC EU power cord  
 (unit is 220V and 110V selectable)  
 Quick-start guide  
 Calibration certificate

### LVD

IEC 61010-1:2010

### EMC

EN61326-1:2013

### Input Voltage

100 - 240 Vrms ( $\pm$  10%), 50 / 60 Hz  
 100 - 120 Vrms ( $\pm$  10%), 400 Hz

### Languages

English, French, Japanese, Korean, German, Russian, Italian,  
 Portuguese

## General Specifications

Part Numbers / Optional Accessories		
Code	Item	Part Number
GPS-2040X	40MHz, 2 channels, touch screen function/arbitrary waveform generator	223142
GPS-2180X	80MHz, 2 channels, touch screen function/arbitrary waveform generator	224082
GPS-21120X	120MHz, 2 channels, touch screen function/arbitrary waveform generator	224122

### Dimensions

260 x 107 x 295mm / 10 x 4 x 12" (w x d x h) approx.

### Mass

3.4kg/7.5lbs approx.

### Operating:

0°C ~ 40°C  
 Below +30°C:  $\leq$ 90% relative humidity  
 +30°C ~ +40°C:  $\leq$ 50% relative humidity  
 $\leq$ 3048m

### Services

1-year warranty (subject to product registration with GPS Ltd)

Visit [www.gpslimited.com/register-product](http://www.gpslimited.com/register-product)  
 Service and calibration available.

Please contact for more information

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 For all enquiries, Tel: +44 (0) 208 964 3600  
 Email: [info@gpslimited.com](mailto:info@gpslimited.com)