GPS LTD.

GPS-1000B+ series

Digital Storage Oscilloscope

Clarity in Every Measurement.

Three two-channel digital storage oscilloscopes at 70, 100 and 150 MHz, sampling in real time to 1 GSa/s and in equivalent time to 50 GSa/s, on a 7 inch colour display.

Memory depth is what separates these from cheaper instruments. Long memory reaches 2 Mpts on a single channel, so expanding the timebase to look at a detail does not throw away the resolution you captured it with.

Five trigger types cover most of what a bench needs: edge, pulse, slope, video and alternate, the last of which watches two unrelated signals at once. Thirty-two measurements are made for you, five shown at a time, with manual, tracking and automatic cursors alongside.

A digital filter cleans a noisy input before it is measured, a recorder captures a sequence with no dead time and replays it, and a pass/fail mask with a TTL output turns the instrument into a go/no-go test on a production bench.

USB host and device, LAN and the pass/fail output are all fitted as standard, with control software supplied on disc.

KEY FEATURES

- 70, 100 or 150 MHz, two channels
- 1 GSa/s real time, 50 GSa/s equivalent
- Long memory to 2 Mpts
- 32 automatic measurements
- Digital filter, recorder and pass/fail
- USB, LAN and pass/fail fitted

IDEAL FOR

- Education and training laboratories
- Embedded and electronics development
- Service, repair and fault finding
- Power electronics and SMPS work
- Production and go/no-go testing

MODELS IN THE SERIES

Item	GPS-1072B+	GPS-1102B+	GPS-1152B+
Three models · two channels and external trigger · 7 inch display			
Bandwidth	70 MHz	100 MHz	150 MHz
Rise time, typical	5.0 ns	3.5 ns	2.3 ns
Fastest timebase	5.0 ns/div	2.5 ns/div	2.5 ns/div
Real-time sampling	1 GSa/s	1 GSa/s	1 GSa/s
Equivalent-time sampling	50 GSa/s	50 GSa/s	50 GSa/s
Memory, normal	40 kpts	40 kpts	40 kpts
Memory, long	2 Mpts	2 Mpts	2 Mpts
Part number	300072	300450	300670

Long memory reaches 2 Mpts on one channel and 1 Mpts on two, and applies at sampling rates of 500 MSa/s and below; at the full 1 GSa/s on one channel the instrument uses the 40 kpts normal memory. Rise time is typical and overshoot is under 10%. Timebase accuracy is ± 50 ppm and channel skew under 500 ps.

WHAT'S IN THE BOX

- GPS-1000B+ oscilloscope
- Two passive probes, bandwidth matched
- Mains lead and USB cable
- Control software on disc
- Quick start guide and calibration certificate

AVAILABLE SEPARATELY · A soft carrying case, SC2, is available separately. Current, differential and high-voltage probes, an isolated front end and a demonstration board are available from GPS.

GENERAL SPECIFICATIONS

Code	Item	Part Number
GPS-1072B+	70 MHz two-channel digital storage oscilloscope, 1 GSa/s, 2 Mpts, 7 inch display	**300072**
GPS-1102B+	100 MHz two-channel digital storage oscilloscope, 1 GSa/s, 2 Mpts, 7 inch display	**300450**
GPS-1152B+	150 MHz two-channel digital storage oscilloscope, 1 GSa/s, 2 Mpts, 7 inch display	**300670**
SC2	Soft carrying case	**900055**

VERTICAL

8-bit resolution · 2 mV/div to 10 V/div in a 1-2-5 sequence at probe 1X · offset ± 1.6 V to 200 mV/div and ± 40 V above it

ACCURACY AND NOISE

DC gain ≤ ± 3.0% from 5 mV/div to 10 V/div and ≤ ± 4.0% at 2 mV/div · noise standard deviation ≤ 0.6 division at 5 mV/div and above, ≤ 0.7 at 2 mV/div

TRIGGER

Auto, normal and single · level ± 6 divisions internally, ± 1.2 V on EXT and ± 6 V on EXT/5 · holdoff 100 ns to 1.5 s · AC, DC, LF reject and HF reject coupling · sensitivity 1 division to 10 MHz and 1.5 above

ACQUISITION

Normal, peak detect and average of 4, 16, 32, 64, 128 or 256 · sin(x)/x or linear interpolation · real time and equivalent time

CAPTURE AND TEST

Digital filter, low pass, high pass, band pass and band reject · waveform recorder and replay with no dead time · pass/fail mask with adjustable clearance and a 3.3 V TTL output

INTERFACES

USB host and USB device, class-compliant USBTMC · LAN using VXI-11 · pass/fail output · SCPI command set · control software supplied on disc

MEASUREMENT CATEGORY

Not rated for installation measurement · not for use in CAT II, CAT III or CAT IV, nor on mains circuits · confirm the declaration of conformity with your enquiry

INPUT

1 MΩ ± 2% in parallel with 18 pF ± 3 pF · 400 V maximum · channel isolation better than 100:1 · probe attenuation 1X to 1000X

BANDWIDTH

Flatness ± 1 dB to a tenth of bandwidth, ± 2 dB to half, +2/–3 dB to full · 20 MHz ± 40% limit switchable · low-frequency response ≤ 10 Hz at the BNC in AC

TRIGGER TYPES

Edge on rising, falling or both · pulse and slope from 20 ns to 10 s · video on NTSC and PAL/SECAM by field, line or line number · alternate, watching two unrelated signals at once

MEASUREMENT AND MATHS

32 automatic parameters with 5 shown at once, or all of a type together · manual, tracking and automatic cursors · hardware counter to 1 Hz · add, subtract, multiply, divide and FFT with four windows, full screen or split

STORAGE

20 instrument setups, 10 waveforms and 2 reference waveforms internally · setups, waveforms, screen images and CSV to a USB drive

DISPLAY

7 inch TFT-LCD, 800 × 480, 24-bit colour · 500:1 contrast · 300 nit · 8 by 16 divisions · persistence off, 1, 2 or 5 seconds or infinite · 12 languages with embedded help

POWER, ENVIRONMENT AND SIZE

100 to 240 Vrms at 50/60 Hz or 100 to 120 Vrms at 400 Hz, 50 W maximum · operating 10 °C to 40 °C, storage −20 to 60 °C, 85% RH at 40 °C, to 3000 m · 323.1 × 135.6 × 157 mm (l × w × h), 2.5 kg