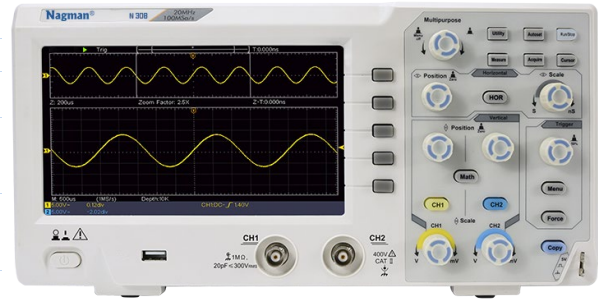


## 2 CHANNEL ECO OSCILLOSCOPE

NAGMAN 308

### SALIENT FEATURES

- Max 35MHz frequency output
- 500MSa/s Sample rate, Vertical resolution 1 $\mu$ Hz
- 14 bits Vertical Resolution, 10Marb waveform length
- Comprehensive waveform output : 6 basic waveforms, and 150 built-in arbitrary waveforms
- Comprehensive modulation functions : AM, FM, PM, FSK, 3FSK, 4FSK, PSK, OSK, ASK, BPSK, PWM, Sweep, and Burst
- High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- SCPI, and LabVIEW supported
- 7 inch (800  $\times$  480 pixels) multi-touch screen, support



Typical Photo: Final Product look may vary

### GENERAL SPECIFICATIONS

Display Type	7" Colored LCD (Liquid Crystal Display)
Display Resolution	800 (Horizontal) $\times$ 480 (Vertical) Pixels
Display color	65536 colors, TFT screen
Output Voltage (Typical)	About 5 V, with the Peak-to-Peak voltage $\geq$ 1 M $\Omega$ .
Frequency (Typical)	Square wave of 1 KHz
Mains Voltage	100 - 240 VACRMS, 50/60 Hz, CAT II
Power Consumption	< 15 W
Fuse	2 A, T class, 250 V
Temperature	Working temperature: 0 $^{\circ}$ C - 40 $^{\circ}$ C Storage temperature: -20 $^{\circ}$ C - 60 $^{\circ}$ C
Relative Humidity	$\leq$ 90%
Height	Operating: 3,000 m Non-operating: 15,000 m
Cooling Method	Natural cooling
Dimension	301 mm $\times$ 152 mm $\times$ 70 mm (L*H*W)
Weight	About 1.1 kg
Interval Period of Adjustment	One year is recommended for the calibration interval period

### PERFORMANCE CHARACTERISTICS

Bandwidth		200 MHz
Channel		2 channels
Acquisition	Mode	Normal, Peak detect, Averaging
	Sample Rate (Real Time)	1 GS/s
Input	Input Coupling	DC, AC, Ground
	Input Impedance	1 M $\Omega$ $\pm$ 2%, in parallel with 20 pF $\pm$ 5 pF
	Input Coupling	1X, 10X, 100X, 1000X
	Max. Input Voltage	400V (DC+AC, PK - PK)
	Channel – Channel Isolation	50Hz: 100 : 1 10MHz: 40 : 1
	Time Delay between Channel (Typical)	150ps
	Bandwidth limit	20 MHz, Full Bandwidth

Horizontal System	Sampling rate range		0.5 S/s~1 GS/s
	Interpolation		(Sinx)/x
	Max Record length		10K
	Scanning speed (S/div)		2 ns/div – 1000 s/div, step by 1 – 2 - 5
	Sampling rate / Relay time accuracy		±100 ppm
	Interval (ΔT) Accuracy (DC - 100MHz)		Single : ±(1 interval time+100 ppm×reading+0.6 ns); Average>16 : ±(1 interval time +100 ppm×reading+0.4 ns)
Vertical system	Vertical Resolution (A/D)		8 bits (2 channels simultaneously)
	Sensitivity		5 mV/div~5 V/div
	Displacement		±2 V (5 mV/div – 200 mV/div) ±50 V (500 mV/div – 5 V/div)
	Analog bandwidth		200 MHz
	Single bandwidth		Full bandwidth
	Low Frequency		≥10 Hz (at input, AC coupling, -3 dB)
	Rise Time (at Input, Typical)		≤ 1.75 ns
	DC Gain Accuracy		±3%
	DC Accuracy (average)		Delta Volts between any two averages of ≥16 waveforms acquired with the same scope setup and ambient conditions (ΔV): ±(3% reading + 0.05 div)
	Waveform Inverted ON/OFF		
Measurement	Cursor		ΔV, ΔT, ΔT&ΔV between cursors, auto cursor
	Automatic		Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude, Overshoot, Preshoot, Rise Time, Fall Time, +PulseWidth, -PulseWidth, +Duty Cycle, -Duty Cycle, Delay A→B , Delay A→B , Cycle RMS, Cursor RMS, Screen Duty, Phase, +PulseCount, -PulseCount, RiseEdgeCnt, FallEdgeCnt, Area, and Cycle Area
	Waveform Math		+, −, *, / ,FFT
	Waveform Storage		16 waveforms
	Lissajous Figure	Bandwidth	Full bandwidth
		Phase Difference	±3 degrees
Communication Port	USB 2.0 (USB storage)		
Counter	Support		

## TRIGGER

Trigger level range	Internal	±5 div from the screen center
Trigger level Accuracy (typical)	Internal	±0.3 div
Trigger Displacement	According to Record length and time base	
Trigger Holdoff Range	100 ns – 10 s	
50% level setting (typical)	Input signal frequency ≥ 50 Hz	
Edge Trigger	Slope	Rising, Falling
Video Trigger	Modulation	Support standard NTSC, PAL and SECAM broadcast systems
	Line number range	1-525 (NTSC) and 1-625 (PAL/SECAM)

## STANDARD INCLUSIONS

- Basic Instrument
- Probe
- Probe Adjust
- Power Cord
- USB cable
- CR Rom
- Conformance Certificate
- Instruction Manual

## OPTIONAL

- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards

Manufactured by



Since 1972

**NAGMAN INSTRUMENTS AND ELECTRONICS PRIVATE LIMITED**

**AN ISO 9001:2015 CERTIFIED COMPANY**

170/1a2, Chennai Bangalore Highway Road, Sembarambakkam, Chennai – 600 123. INDIA.

Phone - Domestic Sales 044-6677 7024, 044-6677 7005 Email: [mktqchennai@nagman.com](mailto:mktqchennai@nagman.com)

Phone - Export Sales +91-44-6677 7025. Email: [exports@nagman.com](mailto:exports@nagman.com)

[www.nagman.com](http://www.nagman.com)



Specifications subject to change owing to continuous development. Contact us for latest Datasheet.

NIE/TDS/308/0126/00