

Environmental Noise Assessment

Urban Noise Monitoring: Evaluate noise pollution in city environments to support urban planning and noise control measures.

Construction Site Monitoring: Measure noise impact on surrounding areas and ensure compliance with noise regulations during construction projects.

Residential Noise Studies: Assess and mitigate noise levels in residential areas to improve living conditions and public health.



Building Acoustic

Professional Building Acoustics Assessments: Ideal for architects, engineers, and acousticians conducting noise assessments, sound insulation tests, and reverberation time measurements in buildings.

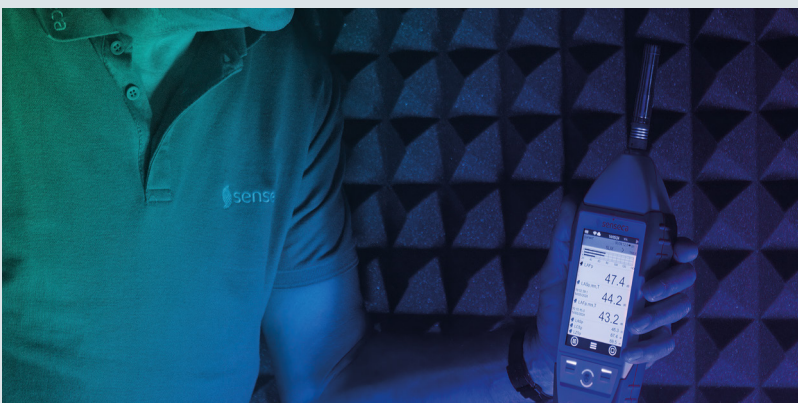


Occupational Noise and Vibrations

Exposure Assessment: Helps in assessing noise and vibrations exposure levels to protect public health and safety, particularly in workplaces and residential areas.

Robust body design and operation even via keyboard in harsh environments.

Industrial Noise Assessment: Monitor and manage noise levels in industrial settings to protect worker health and comply with regulations.



Product Noise Testing

Enhanced Product Quality: Ensures that products meet noise level standards, improving customer satisfaction and product quality.

Regulatory Compliance: Helps manufacturers comply with noise regulations ensuring smooth market entry.

Efficient Testing Process: Streamlines the noise testing process with real-time data, continuous monitoring, and comprehensive analysis tools.

Versatile Applications: Suitable for a wide range of products and testing environments, offering flexibility and adaptability.

Data management

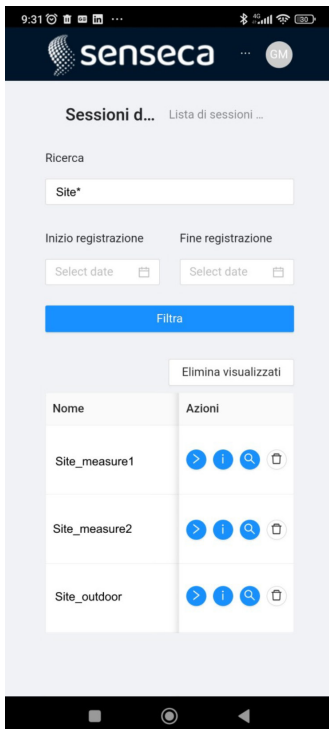
Data stored in the new sound level meters XPT800 and XPT801 are manually archived* or automatically synchronized (only with Push option for XPT80x via Wi-Fi, Lan or 4G device) in the cloud service through the NS Storage web application.

Data stored and organized in workspaces protected by access credentials can be viewed by the workspace owner as graphs and tables through any device equipped with a web browser connected to the Internet and can be exported in text format.

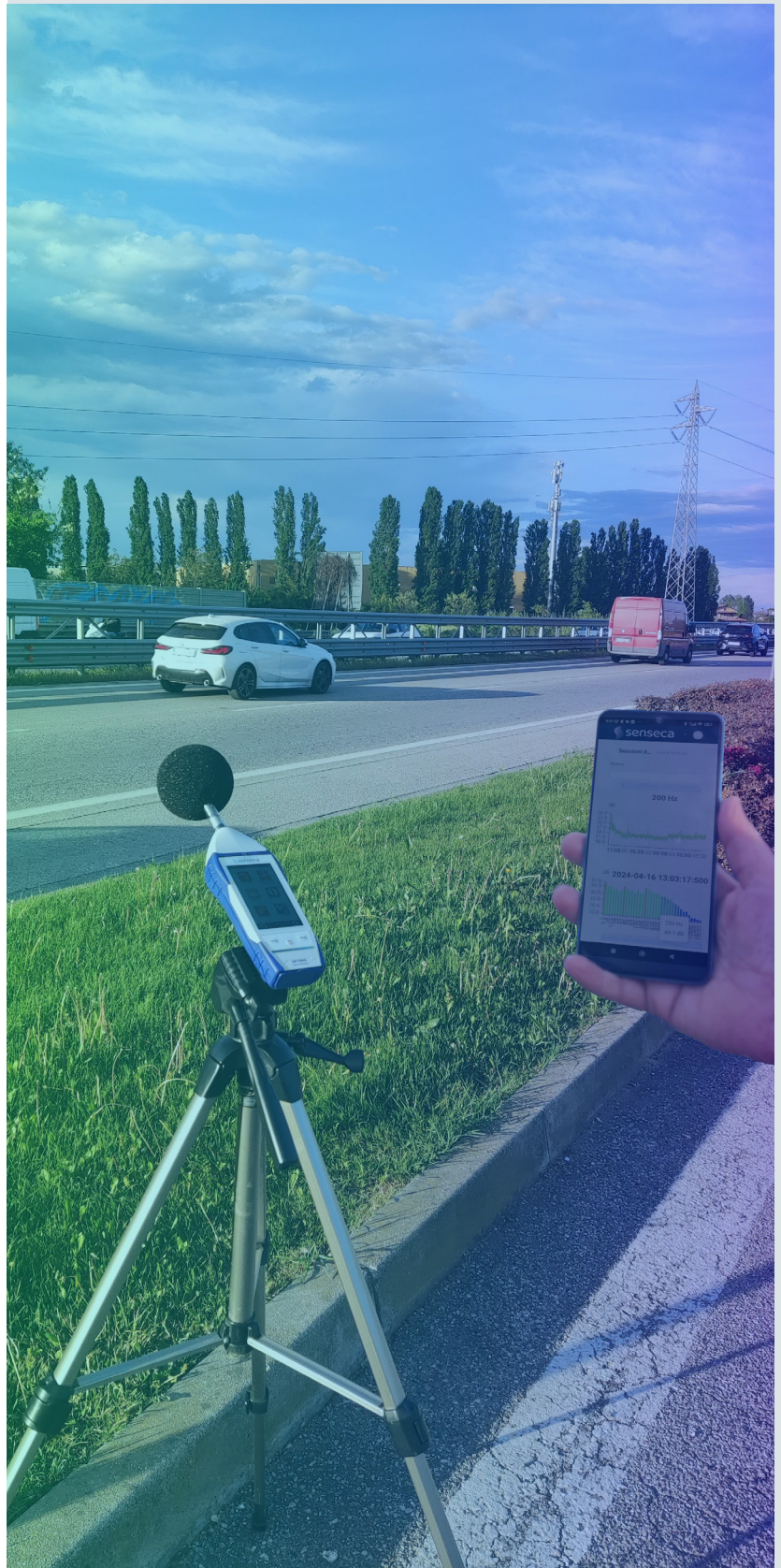
Workspace owners can share their data with any user by assigning, for example to a collaborator, specific (revocable) permissions for the use of one or more workspaces.

The data in the workspaces are directly accessible through the NS-ENS software and can be downloaded and archived locally for analysis.

**Limited free storage space.*



NS Storage for mobile



Technical specifications

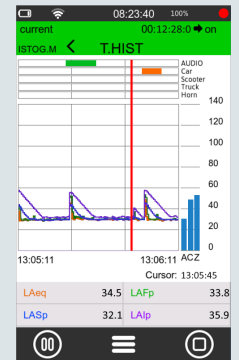
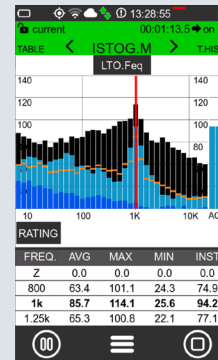
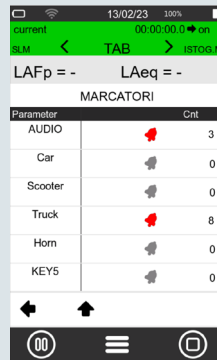
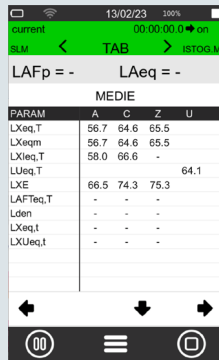
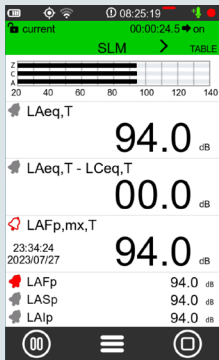
Inputs	Microphone	MC800: Free field ½", 50 mV/Pa sensitivity; 0 V; IEC 61094-4 WS2F, 3.15 Hz-20 KHz. MP800: preamplifier, automatic detection of model and calibration data. SDI (Sensor Digital Interface). CTC automatic electric calibration
	Accelerometer	IEPE, 4-pin circular push-pull, tri-axial
Measuring ranges <small>(with MC800 microphone, MP800 preamplifier)</small>	Dynamic range	> 125 dB
	Linear	A (1kHz) 20 dB – 137 (140 pk)
	Operating Range	C 22 dB – 137 (140pk) Z 25 dB – 137 (140 pk)
Frequency weightings		A, C + B or Z (user selection). 3 simultaneous
Time constants		Fast, Slow, Impulse, Peak simultaneous
Averaging		Linear, exponential, moving, max, min
Parameters*		$L_p, L_{eq}, L_{leq}, SEL, L_{eq_{mov}}$ (Sliding), $L_{min/max}, L_{peak},$ Level diff. (i.e. $L_{Ceq}-L_{Aeq}$), L_{UP}, L_{Ueq} (User between two sel. bands), L_{AFT}, L_{AFTEq} (TaktMax), $L_{PER}(L_{den}, L_{dn}, L_{day}, L_{evening}, L_{night}), L_p^{1/1}, L_p^{1/3}, L_{eq}^{1/1}, L_{eq}^{1/3}, L_{eq_{mov}}^{1/1}, L_{eq_{mov}}^{1/3}, L_n$ (0.1%-99.9%), $L_{n_{mov}}, L_n^{1/1}, L_n^{1/3}, pL, pL^{1/3}$ *For more details about measurement parameters see user manual
Spectral Analysis	Octave	Real time, 1/1 octave, 8 Hz to 16 kHz, IEC 61260-1:2014 Real time, 1/3 octave 6.3 Hz to 20 kHz, IEC 61260-1:2014
	FFT ⁽¹⁾	Real time FFT in parallel with 1/3 oct. (specifications TBA)
Noise Criteria		NC, NR, RNC, RC
Reverberation time		T60 calculation ⁽¹⁾
Intelligibility		STI/STIPA ⁽¹⁾
Statistical Analysis		Broad band and Spectral: $7 \times L_n$ (Lin and Mov) selectable percentile levels (0.1%-99.9%). Probability/Cumulative distribution.
Audio	Recording	Mode: continuous, manual or event triggered. Resolution 16, 24, 32-bit. Audio-band: 10, 20 KHz. Format: Wave or compressed (ADPCM ⁽¹⁾)
	Playback	Embedded codec for signal generation. Playback channels: Generator, Trace (.wav) or Measurement (Mic input). Playback Mic or Mic-filtered (Wide Band A, C, Aux or 1/3 band selectable) for Audio playback of microphone input.
Measurement Control		Start, stop, pause, reset, back-erase, continue, event marking, manual audio recording. Measure timer from 1 s to 23:59:59 hr
Calibration	Acoustic	Manual or automatic (tone detection). Calibrations history: date/time, dB correction. Free Field, Random Incidence, environmental and shield corrections
Vibration Measurements ⁽¹⁾	Triaxial	Human exposure to hand-transmitted vibration (ISO 5349)
	vibration	Human exposure to whole-body vibration (ISO 2631-1)
		Human exposure to whole-body vibration in buildings (ISO 2631-2)
Triggers	Broad band	Single or multiple (OR/AND) on broad-band levels, levels difference, $L_n, L_{n_{mov}}$
	Spectra	On 1/1 or 1/3 oct. masks. Single - All bands mode. Max, min thresholds editable (man or json file)
Detectors	Tonality ⁽¹⁾	Automatic identification according to DM 16/03/1998 and ISO1996-2
	Impulsivity ⁽¹⁾	Automatic identification according to DM 16/03/1998
Storage	Physical	Embedded 4GB eMMC and up to 64GB μ SD (TBA); USB memory stick.
	Cloud	Upload to cloud storage service (NS-Storage). Manual or automatic (Push)
	Archive	List, preview and plot with zoom function of stored data. Manual data upload on NS-Storage cloud service.
Datalogging		Time history: independent Short, Standard, Report steps. Short: 10 ms. Standard: 100/200/500 ms / 1 s. Reports: 10/20/30 s, 1/2/5/10/20/30/60 m Events: triggered broad-band, octave, L_n values Globals: Continuous, Daily integrations

Notes (for more information contact sales department):

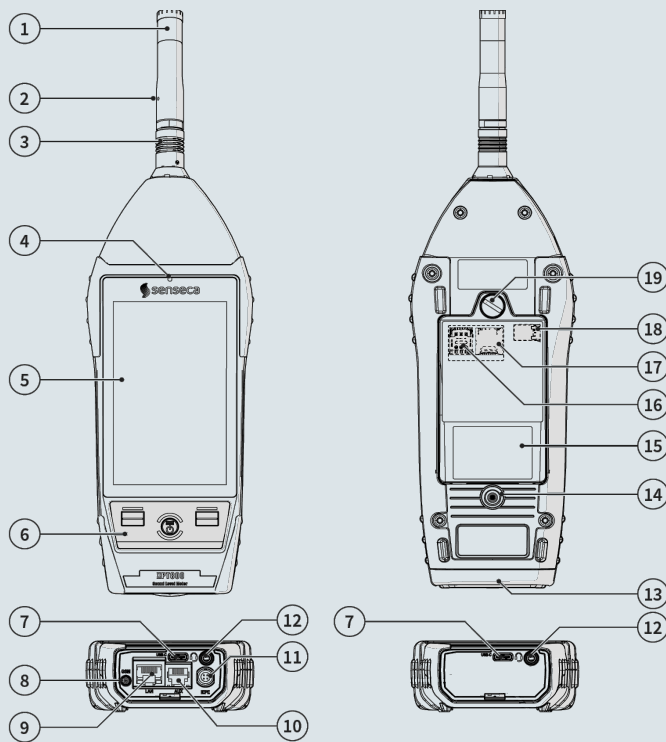
- some hardware and firmware features may be subject to the purchase of specific options.
- some features and applications may be under development (planned) and available later (TBA)
- specifications may be subject to change without notice.

⁽¹⁾ Planned functionality

Views	SLM	6 user selectable parameters with easy-to-read numbers - Levels difference (selectable) - Bar graph of 3 broadband levels - Alarms display on exceedances
	Numerical tables	Broad-band parameters, weightings & time const. all in parallel: Inst., Average, Max-Min. 7xLn percentiles broad-band, Ln moving, 7xLn of 1/1 or 1/3 octave frequency bands. Spectrum: Inst, Min, Max, Avg, Mov, Ln Exceedances: ongoing exceedances; n° of occurrences (SLM, Markers, audio.)
	Frequency spectrum	Histograms: up to 4 selectable. Values @cursor position. Overall A, C, Z, User 1/1 or 1/3 octave; Spectrum ponderation: A, C, or Z; Time constants: Lin, Fast or Slow Type: Inst, Mov, Avg, Max, Min, Rep-Avg, Rep-Max, Rep-Min, Evn-Avg, Evn-Max, Evn-Min
	Time history	Simultaneous display of up to 4 selectable parameters with display/hide feature. 1xAudio and 4xEvent-Marker as presence-coloured bars. 3xBroad-band values bars. Cursor with inst. level and time display.
	Statistics ⁽¹⁾	Probability/cumulative distributions plots. Ln vs frequency bands (histogram)



Display		4.3" touch, 480x800 px, colour TFT, high brightness, sunlight readability. Auto brightness.
Keyboard		ON/OFF/MENU key with RGB backlight; Function keys (2x); Multi-colour Status Indicator.
Battery	Type	Rechargeable battery pack, Li-Ion polymer, 9000 mAh. PCM circuit for battery protection
	Operating time	> 24 h
Wireless	Wi-Fi	Embedded Wi-Fi module (IEEE 802.11 b/g/n), for web communication and time sync
	GSM ⁽¹⁾	Embedded 4G-LTE modem module for web communication and time sync
Hardware interface	USB-C	USB-C, OTG 2.0. MS (Mass Storage) and CD (Communication Device)
	Ethernet	RJ45 10/100 Ethernet for web communication and time sync
	Aux	RJ12: auxiliary connector for external devices as Meteo stations (Meteo interface ⁽¹⁾)
	Audio I/O	3.5 mm 4-pin audio jack: audio I/O and trigger I/O
Localization	GPS ⁽¹⁾	Location tracking, time synchronization
Physical		Dimensions: 304x86x38 mm. Weight: 505 g (incl. batteries). Dust and water-resistant case (IP Rating pending). Standard 1/4" tripod mount thread.
Language		English, Italian (others TBA)
System	Status bar	Battery, GPS, Wi-Fi/Lan/4G conn., Cloud conn.level, upload/download, notifications, date/time, active storage media, remaining storage, overload/underload, audio recording, active measurement mode
	Monitor	Battery level [%], device temp [°C], pressure [hPa], charge voltage, pre temp [°C]
	Fw/Options upgrade	Via USB connection or Over-the-air (OTA) ⁽¹⁾ updates of firmware and new options.
Acoustic standards	IEC	Sound Level Meter IEC 61672-1 (2013) classe 1 IEC 60651 (1979) plus Amendment 1 (1993-02) and Amendment 2 (2000-10), type 1 IEC 60804 (2000-10) type 1 Octave and fractional octave band filters IEC 61260-1 (2014)
	ANSI	Sound Level Meter ANSI S1.4-1983 plus ANSI S1.4A-1985 Amendment type 1 (sound level meter) ANSI/ASA S1.4-2014 class 1 ANSI S1.43-1997 type 1 Octave and fractional octave band filters ANSI/ASA S1.11-2014 Part 1
Software	Desktop	Noise Studio NS-ENS: environmental noise analysis Noise Studio NS-SIS ⁽¹⁾ : buildings acoustic performance analysis
	Web applications	Noise Studio NS-Storage: storage and display of measurement data Noise Studio NS-Monitor ⁽¹⁾ : remote management of compatible devices



XPT800 with OH3B hardware option
connector panel

XPT800 base version
connector panel

- 1 Microphone capsule
- 2 Preamplifier
- 3 Push-pull connector
- 4 Light sensor
- 5 Touch Display
- 6 Keyboard
- 7 USB-C connector
- 8 GSM external antenna connector (optional)
- 9 LAN socket (optional): RJ45 type connector
- 10 AUX (optional): connector RJ12 type, for connection to external devices
- 11 IEPE type push & pull connector (optional): for connection to a triaxial accelerometer (TBA)
- 12 Connector for audio output/filtered trigger I/O: Ø 3.5 mm jack socket
- 13 Rubber protection for connectors
- 14 1/4" threaded hole for stand
- 15 Battery compartment
- 16 SIM slots (TBA)
- 17 Micro SD card slot (TBA)
- 18 Battery connection
- 19 Battery compartment opening/closing screw

● = Included in base model.
○ = Available separately.

Ordering codes

XPT800 Sound Level Meter can ordered as base model and additional functionalities can be added later as retrofit.

XPT800 Class 1 Sound level meter, MC800 microphone, MP800 preamplifier (incl. carrying case, windshield, USB cable, conformity certificate)

Hardware options

XPT800-OH3B	○	Monitor module with tri-axial accelerometer input
XPT800-OH3M	○	4G network module with GPS
XPT800-OH4	●	Outdoor measurement (CIC and preamplifier heater)
XPT800-OH5	●	Trace/Signal generator (playback + measuring)

Software options

XPT800-OF1E	○	1/1 + 1/3 Octave bands Advanced Spectrum analyzer
XPT800-OF1AE	○	1/1 Octave bands Advanced Spectrum analyzer
XPT800-OF2	○	FFT spectrum analyzer
XPT800-OF3	●	Statistic analyzer
XPT800-OF3S	○	Advanced statistic analyzer
XPT800-OF4	○	Audio Recording
XPT800-OF5S	●	Push Automatic data upload
XPT800-OF5A	○	Measure Monitor web service
XPT800-OF6	○	STI/STIPA calculation
XPT800-OF8A	●	Event Detector
XPT800-OF8B	●	Fast data logging
XPT800-OF8C	●	Moving average calculations
XPT800-OF8D	●	Noise Assessment Periods levels
XPT800-OF9	○	Noise Ratings calculation
XPT800-OF10A	○	Human vibrations (ISO5349, ISO2631-1)
XPT800-OF10B	○	Human vibrations in buildings (ISO2631-2)
XPT800-OF11A	○	Tonality and impulsivity detectors (ISO1996)
XPT800-OF11B	○	Tonality and impulsivity detectors (DM16/03/98)
XPT800-OF12	○	Reverberation time calculation
XPT800-OF13A	●	Datalogger
XPT800-OF13B	●	Advanced datalogger
XPT800-OF13M	○	Meteo parameters datalogger
XPT800-OF15	●	Extended dynamic range

Calibrations

XPT800-CAL	○	ISO 17025 Accredited Calibration
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Accessories

HD2020	○	Class 1 sound calibrator
WSO	○	Outdoor microphone protection
WSO-C	○	Outdoor microphone protection with sound source

Software

NS-STORAGE	●	NS-Storage web service
NS-MONITOR	○	NS-Monitor web service
NS-ENS	○	"Environmental Noise Studio" desktop application module
NS-SIS	○	"Sound Insulation Studio" desktop application module