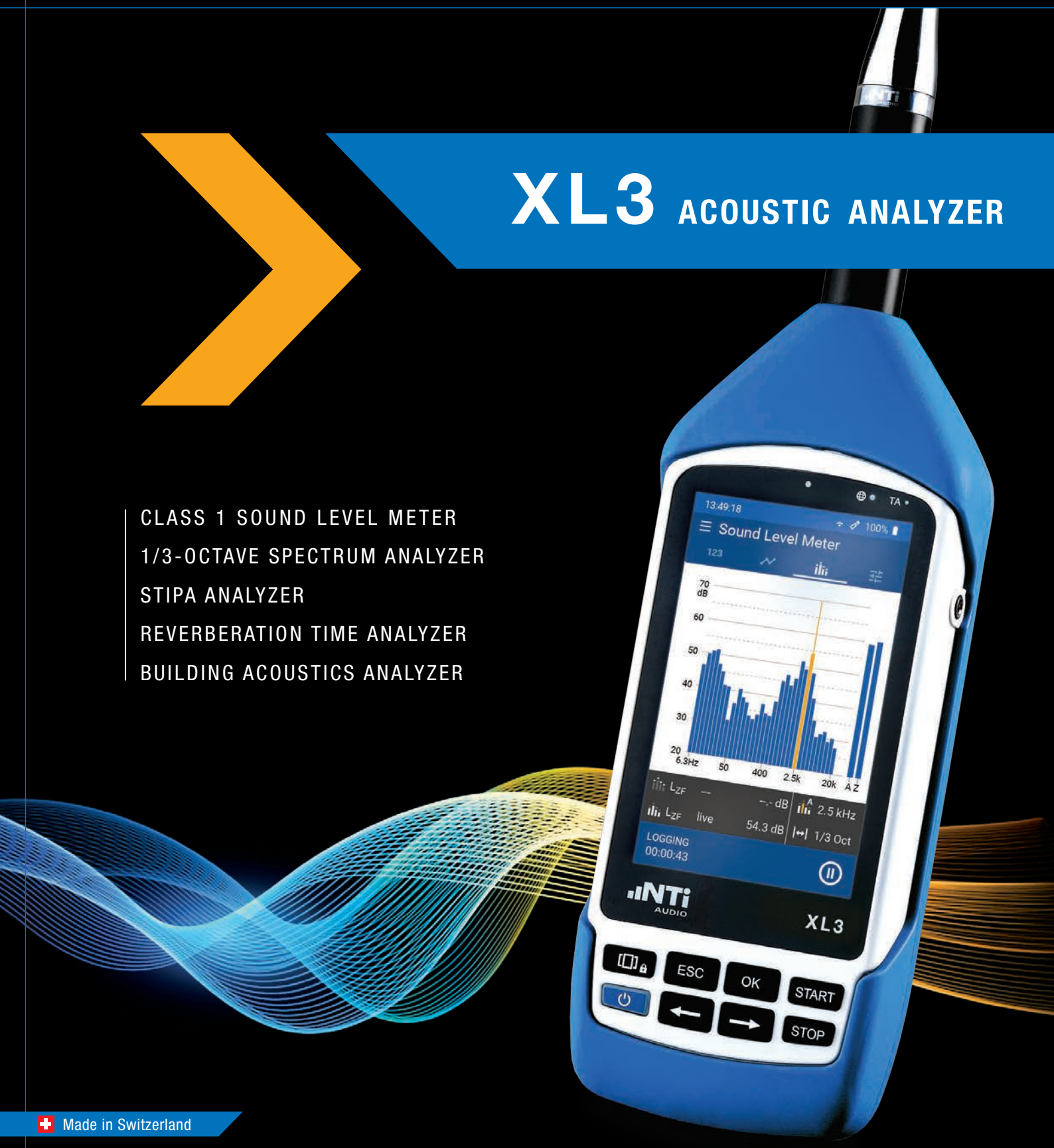
NTi AUDIO

ACOUSTIC MEASUREMENT SOLUTIONS

XL3 ACOUSTIC ANALYZER

- CLASS 1 SOUND LEVEL METER
- 1/3-OCTAVE SPECTRUM ANALYZER
- STIPA ANALYZER
- REVERBERATION TIME ANALYZER
- BUILDING ACOUSTICS ANALYZER



Made in Switzerland

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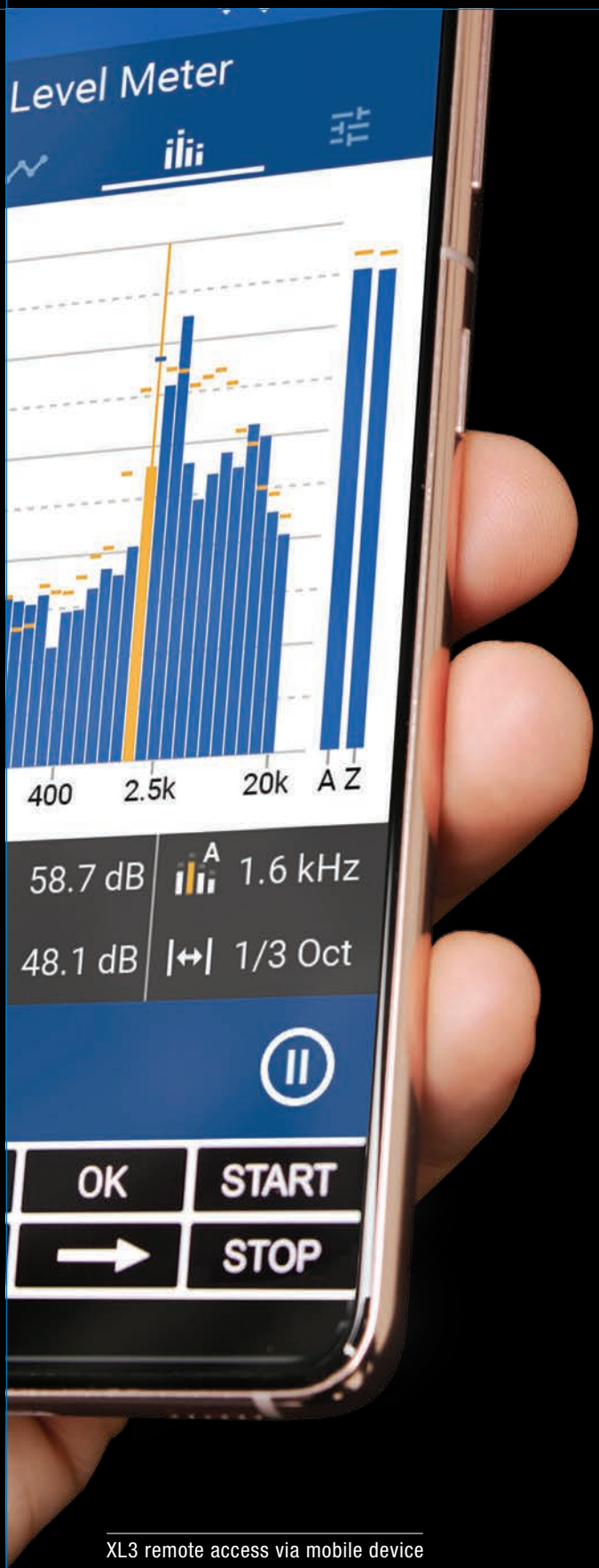


XL3 remote access via mobile device

New Technologies

State-of-the-art hardware and software technologies, high-performance processors and enough memory to cover all requirements, make the XL3 the ideal solution for experts. The unit offers a wide single range for easy usage, which is covered without any range switching.

Smart User Interface

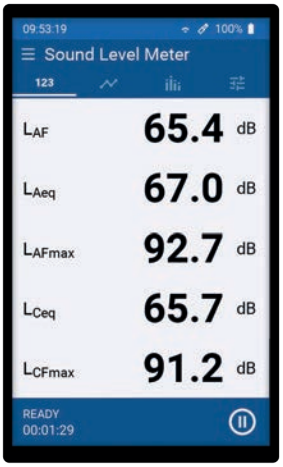
The high-resolution 4.3-inch color touch display allows intuitive control of all measurement functions. All common operating functions are also accessible on the keypad below the display.

Access to measurement data. Anywhere. Anytime.

The XL3 is fully network-compatible and the built-in web server allows operation and data access from any mobile device. The sound level meter can communicate and upload data to the cloud via the USB interfaces and WLAN. The XL3 is fully network-capable and can be connected with USB or Wi-Fi via an external router to the internet at any time for upload of data to the cloud. The binary streaming format facilitates compact data transmission over cellular networks. In addition to a large SD memory card, the XL3 also supports the connection of an external hard disk. A weather station can be connected directly to the XL3 via the SDI-12 interface.

XL3 – The Professional Sound Level Meter

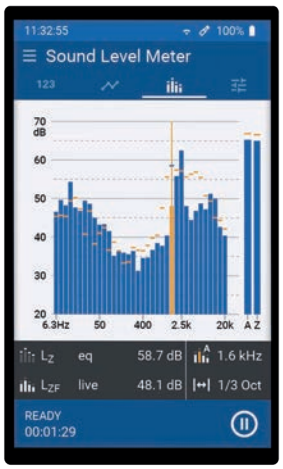
Sound Level Meter



The Class 1 Sound Level Meter records numerous levels in parallel over the entire measurement period. At the same time the XL3 logs the frequency spectrum and, if desired, records the audio as a wav file.

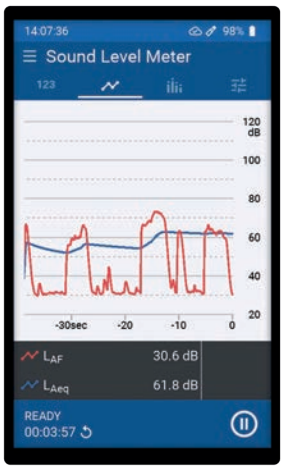
All stored measurement data is available in simple text format. Professional data evaluation and further calculations are carried out in the optional Data Explorer PC Software.

Spectrum



The XL3 determines the frequency spectrum with a Class 1 filter bank in octave or 1/3 octave resolution between 6.3 Hz and 20 kHz. All values are calculated in parallel. In addition, two spectra can be selected and displayed simultaneously. Both the level and the frequency axes can be freely zoomed and scrolled.

Level Time History

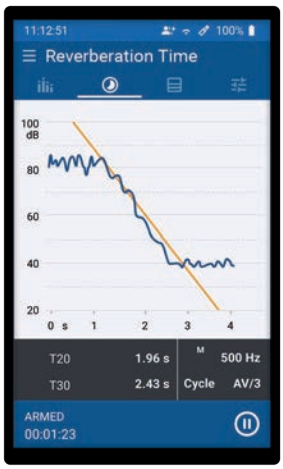


In the Sound Level Meter function, the Level Time History is available in addition to the broadband levels and spectrum views. Two selectable level values are displayed over time. This allows a detailed view of the level curves in three choosable time resolutions. The level data is optionally recorded and displayed in 100ms or 1s intervals. This function is included in the Extended Noise Measurement option.

STIPA

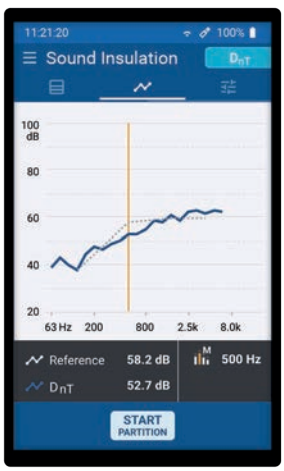
The XL3 Analyzer, with the STIPA Option installed, measures the speech intelligibility according to the latest revision of standard IEC 60268-16:2020 (edition 5) and older editions. It offers ambient noise correction and automated averaging for repeated measurements. The XL3 displays the speech transmission index (STI) and the common intelligibility scale (CIS), accompanied by the individual levels and modulation indices of the seven octave bands.

Reverberation Time



The standard reverberation time measurement determines T20 or T30 in octave bands from 63 Hz - 8 kHz. The values of a measured position or of an entire room are averaged on the XL3. The optional Room Acoustics Package extends the Acoustic Analyzer to 1/3 octave band resolution, T15 or EDT. Use either an impulse source or an interrupted pink noise as the test signal.

Building Acoustics



The optional Building Acoustics module enables direct determination of airborne and impact sound insulation, according to ISO 16283 and other standards, while you are on site. Measure in the source and receiving rooms and see the sound insulation results on the display. A detailed measurement report is easy to create with the optional Sound Insulation Reporter PC Software.

Connected – Always and Everywhere

The XL3 has a built-in web and data server accessible via the instrument's Wi-Fi or LAN connection. Connect via the Sound Level Meter's IP address (within the local network), or by using the authorized user via the NTi Connect application, and control all the functions of your Sound Level Meter, from wherever you are.

All recordings, as well as current noise levels, audio and weather data, can be accessed at any time via the NTi Connect platform or on-site through the USB-C connection. Additionally, measurement data, reports and audio files can also be automatically saved to a cloud drive.

Swiss Precision Work

For convenient operation, the Sound Level Meter uses the latest processor technologies. Powerful hardware in a rugged housing provides precise 96 kHz data sampling in 32 bit resolution. With a frequency range of 0.3 Hz – 40 kHz, the XL3 is ready for infra- and ultrasonic measurements. Not to forget the wide level range without switching and the automatic sensor detection that reads the electronic data sheet of the connected measurement microphone. The XL3 is indeed the Swiss Army knife of Sound Level Meters for the professional.

Optional Extensions

Firmware Packages

EXTENDED NOISE MEASUREMENT

LAE, Pulse Time Weighting, Percentiles, 100ms Logging, Uncompressed WAV Recording, Level Time History and more.

SOUND INSULATION

Direct determination of airborne sound, impact sound and facade sound insulation according to ISO 16283 and numerous other standards.

EXTENDED ROOM ACOUSTICS

Reverberation time measurement in one-third octave resolution. EDT, T15, T20 and T30. Calculation of the room average. Audio recording.

STIPA OPTION

Speech intelligibility measurements according to the latest revision of standard IEC 60268-16:2020 (ed. 5) and older editions, as well as numerous referring standards.

API PROGRAMMING INTERFACE

Full control over measurement configuration and data. Easy integration into customized software solutions.

Software Products

DATA EXPLORER SOFTWARE

Easy and fast analysis, post-processing and visualization of sound level recordings.

SOUND INSULATION REPORTER SOFTWARE

Analysis, post-processing and measurement reports of sound insulation measurements.

ROOM ACOUSTICS REPORTER SOFTWARE

Post-processing and measurement reports for room acoustics measurements. (Reverberation time, spectrum, noise curve)

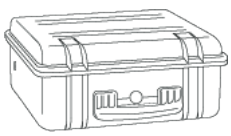
ACCESSORIES

Precision Calibrator
600 000 388

Calibration Certificate
600 000 018

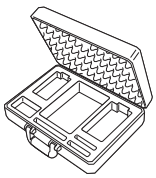
GPS Mouse for XL3
600 000 358

XL3 display protection
600 000 744



Weatherproof case IP43/65
600 000 704/05

Backpack
600 000 706



System case
600 000 701

Ever-ready Pouch
600 000 735

Technical Specifications

SOUND LEVEL METER XL3+M2230 / XL3+M2340	
Accuracy	· Class 1 according to IEC 61672 and ANSI S1.4 · Type-Approved configuration · System Self-test (CIC) with M2340 microphone
Level	· Frequency weighting: A, C, Z · Time weighting: Slow, Fast · Min, Max, Peak, EQ, EQT, Taktmax
Functionality	· Single measurement range: 17 dBA – 137 dB · Frequency range: 4.3 Hz – 23 kHz · Level limits · Logging interval 1 s · Voice notes (planned)
Audio	· Compressed (ADPCM), 24 kHz, 12 kHz
Extended Noise Measurement Option	· Sound Exposure Level LAE · Time weighting: Impulse · Percentile statistics L% (broadband, spectrum) · Logging 100 ms (broadband, spectrum) · Audio: 24, 32 bit with 12, 24, 48, 96 kHz · Level-time history graph, Back-erase (planned), Pre-trigger (planned)

SPECTRAL ANALYZER	
Accuracy	· Class 1 according to IEC 61260 and ANSI S1.11
Frequency range	· Octave band: 8 Hz – 16 kHz · 1/3 octave band: 6.3 Hz – 20 kHz
Functionality	· Filter base 10 · Leq with frequency weighting A, C, Z · Spectrum logging Leq, Lmin and Lmax

REVERBERATION TIME	
Accuracy	· ISO 3382 and ASTM E2235 · Schroeder backward integration
Functionality	· Octave band: 63 Hz – 8 kHz · Measurement parameters T20, T30 · Impulse and interrupted noise source · Automatic averaging
Extended Room Acoustics Option	· 1/3 octave band: 50 Hz – 10 kHz · T20, T30, T15, EDT simultaneously · Minimum trigger level · Automatic room averaging of multiple positions · Audio recording · Decay curve (planned)

STIPA ANALYZER	
Standards	· IEC 60268-16 (ed. 2, 3, 4 and 5) and others that refer to this IEC standard
Frequency range	· Octave band: 125 Hz – 8 kHz
Modulation Frequencies	· 0.63 Hz – 12.5 Hz in 1/3 octave resolution
Further Functionalities	· Single value STI and CIS test result · Ambient noise correction
	· Automated averaging of measurements · Modulation indices and individual band level results with error indicator

BUILDING ACOUSTICS (optional)	
Standards	Airborne and impact sound insulation according to: · ISO 16283 and ISO 717 · Document E · ASTM E336 · SIA 181 (planned) · DIN 4109 (planned)
Functionality	· Results shown on XL3 · Averaging of source and receiving room · Flatness of adjacent 1/3 octave band (planned) · Requires Sound Insulation Option
Results	· D, Dn, DnT, and R' · Chart and table

INTERFACES	
Input	· XLR balanced with 48 V phantom power
Network	· Wi-Fi integrated (2.4 GHz) · LAN via USB adapter · USB-C as host or slave, USB-A as host · File-Push Service to Cloud Drive · Data and website access via USB · Web server, ftp, ntp · 4G/5G via optional external gateway · Remote access connect.nti-audio.com
API-interface Option	· Data and audio streaming · Control, configuration & data retrieval
Digital I/O	· Connection of accessories · SDI-12 and 1-Wire
Memory	· Removable SD card with 32 GB memory · Supports external hard disk
Further Functionalities	· Automatic microphone detection (ASD) · Built-in microphone for voice notes · Loudspeaker · Headphone/line output: 3.5 mm jack, stereo
Power supply	· Removable battery (Li-Po) · Battery life > 8 hours · Power supply 9 VDC, USB-C

GENERAL	
Display	· 4.3" IPS color display with capacitive touch · 480 x 800 pixels
Mechanics	· 1/4" tripod mount · Device stand
Dimensions	· 210 x 85 x 45 mm, 8.3 x 3.3 x 1.8" (L x W x H)
Weight	· 510 g, 18 oz
Scope of delivery	· XL3, battery, power supply, USB-C/USB-C cable · and USB-C/USB-A adapter

more information is listed in the product specifications

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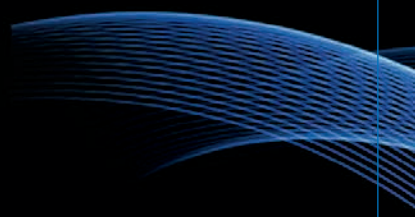

XL3

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