

LMS SCADAS XS Data Acquisition System

The LMS SCADAS XS features many testing functionalities in a compact, hand-held solution. Available in 6- or 12-channel versions, it is a true personal noise and vibration measurement front end and is suitable for virtually almost any test setup. The system comes with a 7-inch tablet installed with the LMS Smart Scope application. Through a wireless connection, this app allows on-the-go data monitoring and validation.

Compact and Rugged Design. Measuring 170 mm in height, 114 mm in width, and 23 mm in depth (approximately 6.7 × 4.5 × 0.9 inches), the LMS SCADAS XS fits in your hand. Its compact size makes the system easy to carry and easy to install, even under the most extreme circumstances and in locations that are difficult to access.

Input Flexibility. The system features 6 or 12 analog input channels for V/IEPE (Voltage/Integrated Electronics PiezoElectric), including TEDS (Transducer Electronic Data Sheet). Additionally, the LMS SCADAS XS also supports the LMS SCADAS 3D Binaural Headset for binaural recording and stereo audio replay. Additional supported signals include: digital head through a dedicated SPDIF (Sony/Philips Digital Interface Format) binaural input; dual analog tachometer; digital CAN (automotive Controller Area Network); and GPS (Global Positioning System).

Freedom of Movement. Battery autonomy of over six hours and onboard storage capacity (32-GB micro SD card) add a new dimension of mobility to noise and vibration data acquisition. What's more, the LMS SCADAS XS interfaces seamlessly with a PC or tablet.

Entry-Level or Advanced. The LMS SCADAS XS is available in an entry-level version (XS06-E) with 6 analog input channels and in an advanced 12-channel version (XS12-A). Both versions include all of the additional inputs ensuring that all analog input channels are available at all times, under any circumstances.

LMS Smart Scope. Maximum testing flexibility implies that test engineers should be able to work independently, away from their PCs and work stations. To serve this need, Siemens has developed the LMS Smart Scope. This tailor-made application runs under Android on a 7-inch Google Nexus tablet which comes included with the LMS SCADAS XS system.

Through a wireless connection with the LMS SCADAS XS, the app allows engineers to monitor and control all test settings and measurements, flip through existing measurement setups, or create a new configuration from scratch. A wide range of display types and layouts offers online data viewing, post-run data validation, and signal replay at the click of a button. Use of the tablet brings additional freedom to test engineers, making it possible, for instance,



LMS SCADAS XS system.

to install the LMS SCADAS XS on or near the test object and walk around freely during a test, calibrating or monitoring signals on the tablet in real time. With its intuitive user interface, LMS Smart Scope allows you to easily take your pick among the test setups preconfigured in the lab, or even create a complete new test setup on the spot.

Choose from a range of recording views to monitor and control data online during the test, or offline during post-run test data validation:

- Base view for concise control and relevant parameter feedback
- Strip-chart time overview of all channels
- Level bars and numerical displays with configurable layouts
- Customizable view for signal replay and quick validation of time signals, frequency content, frequency orders, and more

3D Audio Recording and Validation.

The LMS SCADAS XS fully supports high-quality recording and stereo audio replay through the LMS 3D Binaural Headset. A single connector on the LMS SCADAS XS is used for both recording and replay functions. The LMS SCADAS 3D Binaural Headset offers an easy and cost-effective solution for reliable binaural recording and immediate, high-quality data validation of any analog or SPDIF channel.

Mobile Noise and Vibration Recording.

Noise and vibration test teams and engineers often need mobile measurements to complement their lab-based data. Trips to the proving grounds, where vehicles are tested in real-life circumstances, are needed to acquire a comprehensive data set. This, however, can put a strain on available equipment and resources.

Any noise and vibration testing team can now rely on an LMS SCADAS XS to acquire vital noise and vibration data in mobile setups. The system covers a full range of channels, including GPS, CAN, dual tachometer,



LMS SCADAS XS being monitored using an LMS Smart Scope on the dash panel and LMS 3D Binaural Headset.



LMS SCADAS XS connected to pump sensors being remotely monitored using an LMS Smart Scope and LMS 3D Binaural Headset.

or a digital binaural head. Template-based target setting and validation, using the LMS SCADAS XS tablet and Smart Scope application, allows on-the-go testing and noise and vibration troubleshooting.

The compact and rugged, battery-operated design makes the LMS SCADAS XS the ideal companion for mobile, track-based testing. The fact that it can be used as a regular front end – connected to a PC running LMS Test.Lab – but also as a full stand-alone recorder with or without the tablet, gives testing teams maximum flexibility. Thanks to a wireless connection to the tablet, the LMS SCADAS XS hardware can always be installed anywhere, even in the vehicle trunk, while the driver monitors the acquired data in real-time on the tablet, using the LMS Smart Scope application.

Machinery Monitoring and Fault Diagnosis.

In any production environment, avoiding unplanned downtime is a key priority. In-depth analysis of the noise and vibration characteristics of your machines and equipment can help determine the root causes of impending failure and design corrective actions to avoid downtime.

Thorough field diagnostics to identify component failure at an early stage, however, are not always practical, let alone feasible. The LMS SCADAS XS responds

to this challenge and allows engineers to quickly assess noise and vibration data on a running machine. Small enough to be carried on-person by an expert engineer, the system can be brought along for diagnostic measurements on site, even in locations that are difficult to reach.

Additionally, the LMS SCADAS XS can also be preconfigured and shipped for use by a non-expert operator. The only thing the operator needs to do is take the pocket-sized LMS SCADAS XS, connect the sensors, select one of the predefined templates, and

push a button to start the measurement process and record the data to the onboard memory card.

In-Flight VibroAcoustics. OEMs who provide parts for passenger aircraft, business jets or rotorcraft need in-flight cabin noise and vibration data to analyze their components' behavior. Be it for interactive troubleshooting, or for advanced acoustic comfort assessments, cabin trim or damping material suppliers rely on real-life test data to qualify and improve their products' performance.

The LMS SCADAS XS offers OEMs a new, battery-operated solution for recording vibration and acoustic data. It is certified for in-flight measurements and the compact design of the system also makes it a carry-on solution, easily fitting into any passenger's cabin luggage.

For additional information on the LMS SCADAS XS and other LMS products, please visit: www.lmsintl.com.