

Connect and measure immediately



QUANTUM^X

XXL performance in mini format

Reliable data acquisition opens up fascinating, new opportunities



APM

Advanced Plug & Measure



QUANTUMX

XXL performance in mini format

Here is the universal DAO instrument that provides the extra added value for your demanding projects in test and measurement: **QuantumX by HBM**. Data acquisition at the highest level: small, fast, universal. Upgraded and exponentially enhanced to the power of "X" to give you fascinating, new opportunities: XXL flexibility. XXL efficiency. XXL reliability. Demand more for your measurement tasks. Demand QuantumX!

XXL flexibility ...

What do you want to measure today?

Benefit from the universal connections QuantumX provides for almost all transducer technologies.

QuantumX propels your test and measurement projects into the fast lane regardless of the combination of principles of measurement – just connect your transducers and start measuring ... with 24-bit resolution!



Full-bridge strain gages



Inductive transducers



LVDT



Voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$)



Current ($\pm 30\text{mA}$)



PT100 and PT1000 resistance thermometers



Thermocouples (Type K, J, ...)



Potentiometers



Frequency measurement, pulse counting



CANbus

... more than compact!

QuantumX requires only minimal space for bundling technically superior functions.

At only 174 x 44 x 119 mm (6.9 x 1.7 x 4.7 inch), QuantumX fits perfectly into every test bench – even where space is a constraint. The compact design considerably expands the range of applications you can cover – be it centralized or distributed data acquisition.

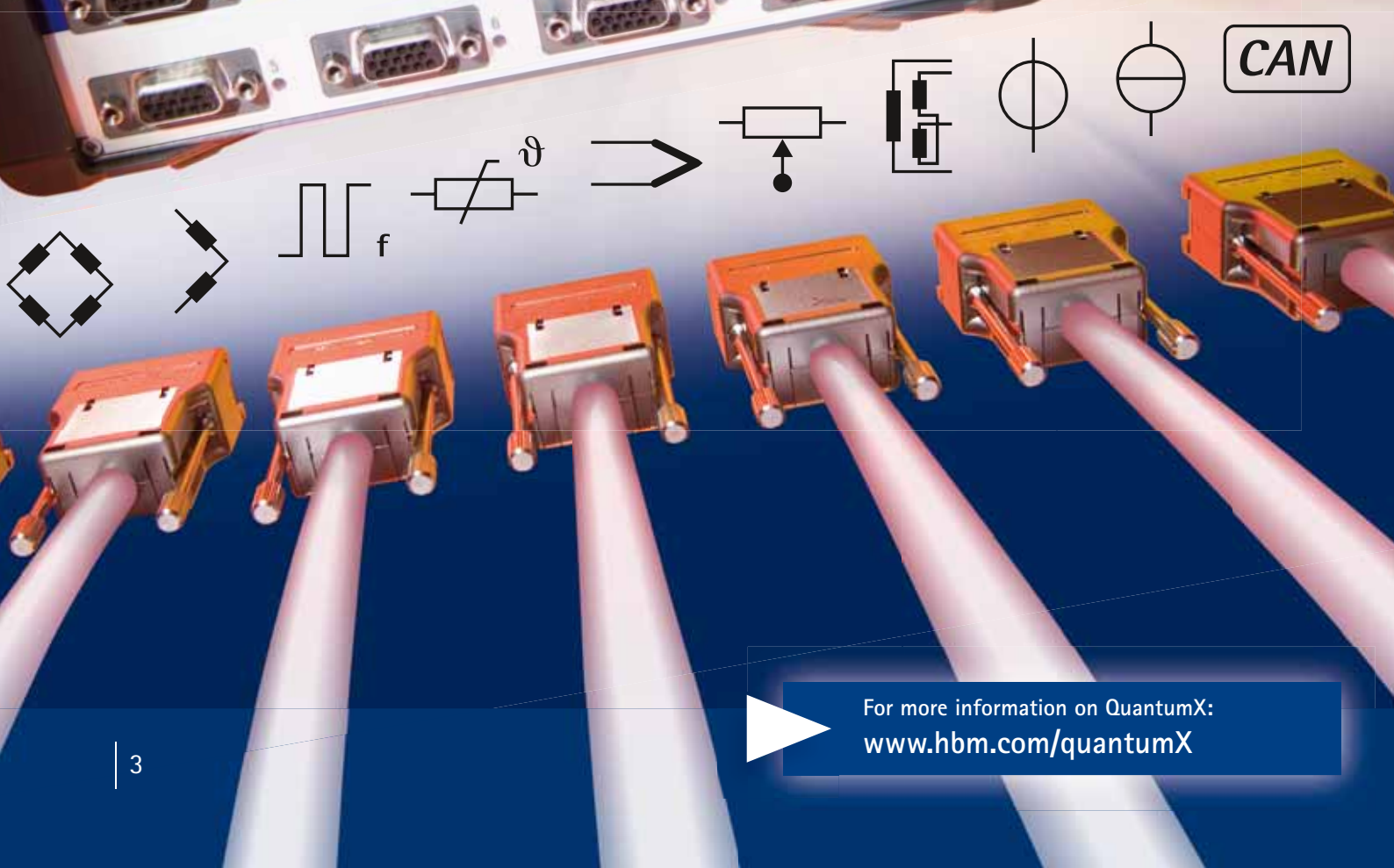


TEDS

by HBM™

... redefined

Increase the number of QuantumX channels to match your application:
Either as a compact cluster of devices joined in seconds by integrated clips, or as a distributed system.



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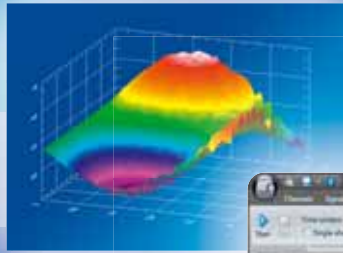


... using Advanced Plug & Measure,
the exclusive technology for immediate results

— QuantumX recognizes your transducer as soon as it is connected. Automatically and immediately – using HBM's exclusive APM technology (Advanced Plug & Measure)

— 100% TEDS-compatibility: APM uses TEDS, the Transducer Electronic Data Sheet. TEDS ensures that transducer data is rapidly, conveniently and reliably transmitted to QuantumX.

If your transducers do not yet support TEDS, you can manage your transducer data in HBM's easy-to-use sensor database in which a large number of transducers are already predefined.



Ethernet

Firewire*)

*) available soon



XXL software for QuantumX

Setup and parameter adjustment: The QuantumX Assistant

The QuantumX Assistant sets new standards for functionality and convenience. Benefit from the following features:

- ___ Fast and easy setup or parameterization of QuantumX
- ___ Automatic sensor recognition through TEDS
- ___ Sensor and CAN database
- ___ Graphical visualization of test data

Professional data acquisition made easy: catman®AP

Ideal for acquiring and analyzing your measurement data

Easy to use and powerful: catman®AP bundles highly efficient modules for many different measurement tasks. Each module is a champion in its specific field of application. The modules in combination provide a flexible, powerful, and networked high-performance package.

Advanced programming tool: API interface

The ideal solution that enables programmers to integrate QuantumX into other applications and programs.

LabVIEW® driver

Convenient and easy integration of QuantumX into LabVIEW®

*) LabVIEW® is a registered trademark of National Instruments Corporation.

Free demo version at www.hbm.com/quantumX

Uncompromising high quality

QUANTUMX

Benefit from new possibilities in test bench engineering

Each test bench is different. Regardless of whether there is abundant or limited space available for your amplifier, regardless of whether your tests are changing every day or you perform long-term endurance tests: QuantumX provides you with the extra added value, even for a wide range of test bench requirements. QuantumX adapts to your environment – not least because of its conveniently small dimensions.



QuantumX is ideally suited to the following applications:

- ___ Functionality test benches
- ___ Power test stands
- ___ Laboratory measurements
- ___ Industrial measurements
- ___ Mobile testing
- ___ Calibration



The facts in brief

MX840 is the QuantumX universal amplifier that offers XXL performance in a mini format.

Special features at a glance:

- ___ Universal amplifier with 8 individually adjustable inputs
- ___ Accuracy class: up to 0.01
- ___ Sampling rate: up to 19.2 kHz/channel (adjustable for each channel)
- ___ 24-bit A/D converter per channel for synchronous, parallel measurements
- ___ Filter: Bessel, Butterworth 0.01 Hz up to 3.2 kHz (-3dB) (individually adjustable for each channel)
- ___ Required supply voltage: 10 ... 30 VDC
- ___ All inputs electrically isolated
- ___ Supply voltage for active transducers: 5 ... 24 VDC (individually adjustable for each connector socket)
- ___ Transducer connection: D-Sub-15HD plug
- ___ PC connection: Ethernet TCP/IP, Firewire^{*})
- ___ Dimensions: 44 x 174 x 119 mm (1.7 x 6.9 x 4.7 inch)
- ___ Admissible cable length to transducer: 100 m (328 ft)
- ___ Nominal (rated) temperature range: -20 °C to +60 °C (-4 °F to + 140 °F)

^{*}) available soon

Principle of measurement	Accuracy class	Measurement properties	Connector socket No.
Strain gage full bridge	0.05	Excitation 1V or 2.5V with 4.8 kHz carrier frequency	1-8
Inductive full bridge	0.05	Excitation 1V or 2.5V with 4.8 kHz carrier frequency	1-8
Inductive half bridge	0.1	Excitation 1V or 2.5V with 4.8 kHz carrier frequency	1-8
LVDT	0.1	Excitation 1V with 4.8 kHz carrier frequency	1-8
Potentiometer	0.1	Excitation 1V DC	1-8
Voltage	0.05	Meas. ranges: +/- 100mV, 10V or 60V	1-8
Current	0.05	Meas. ranges: +/- 30 mA	1-8
Thermocouple	0.5 °C	Types K, N, R, S, T, B, E, J	1-8
Resistance thermometer	0.05	PT100, PT1000	1-8
Frequency	0.01	Meas. range up to 1,000 kHz	5-8
Pulse counting	0.01	Meas. range up to 1,000,000 impulses/s	5-8
CAN	---	Up to 128 channels	1

For more information on QuantumX:
www.hbm.com/quantumX

Fascinating, new opportunities. Well-proven high reliability.

QuantumX provides you with extra added value for your projects – and, at the same time, offers the uncompromisingly high quality you expect from HBM.

Precise, reliable, robust: For over 50 years, measurement engineers all over the world have associated the name HBM with measurement technology at its best. The same applies to QuantumX.

- ___ Unique manufacturing know-how in the field of measurement: Perfectly matched transducers, DAQ systems, and software from a single source
- ___ Accredited by national calibration institutes – worldwide
- ___ Competent support and service network – in over 60 countries

The extra plus of safety for you: Working standard calibration included!

Calibrating your amplifier is the best way to ensure correct and traceable test results.

Using QuantumX you benefit from the security provided by a working standard calibration – right from the start. Because every QuantumX device is delivered complete with a valid electronic working calibration certificate.

We guarantee this with a calibration seal on the device.

Find out more now – and request a quotation online:

www.hbm.com/quantumX



measurement with confidence

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