The small but mighty DSA engine.

The Data Physics Quattro provides the perfect balance of portability and measurement processing power, all contained in a rugged housing. With thousands in use worldwide, the Quattro has proven its reliability and ease of use in a wide variety of industries and applications. Featuring 4 inputs, 2 outputs and 1 dedicated tachometer channel, the Quattro represents the complete solution for small channel count applications.

The Definition of Easy
Designed to fit into a briefcase or even a pocket, the Quattro can transform any PC into a powerful dynamic signal analyzer. With USB connectivity, the Quattro is completely bus-powered from a host PC or laptop. Simply load the software and connect the USB cable between the Quattro and the PC, and you are ready to begin measurement.
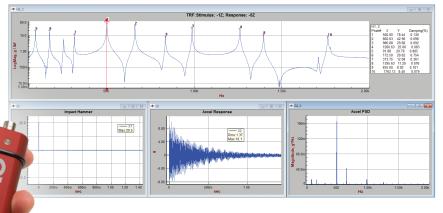
Perfect for Many Applications
The Quattro provides a powerful and highly mobile backbone for many applications. Standard FFT analysis and acoustic analysis benefit greatly from the system's accuracy and channel to channel phase matching. Quattro is perfect for advanced modal testing including MIMO analysis. The easily configurable tachometer input and a host of available software measurements make it ideally suited for troubleshooting rotating machinery problems. The optional 204.8 kHz sampling and real-time SRS capability make Quattro well suited for shock measurement.

Record and Analyze Data Anywhere
With its compact size, rugged design and ability to record data on all channels at a rate of 204.8 kHz, Quattro based analyzers can tackle measurement in aircraft, within vehicles, and in industrial environments with efficiency and ease.

SignalCalc Software Suite
The Quattro interfaces with the powerful SignalCalc software environment. User-configurable measurement and control panels, unlimited display layouts and intelligent data measurement combine to make your PC a powerful and intuitive dynamic signal analyzer.

Specifications

Input

2 to 4 channels

ADC Resolution (Analog AAF): 24-bits

Sample Resolution (Digital AAF): 32-bit floating point

Coupling: AC/DC, DIFF/SE. ICP, TEDS

Anti-alias Filters: 100 dB protection, all ranges

Dynamic Range: 120 to 150 dB

Input Ranges: 0.1, 1, 10 V Full Scale (20 V optional)

Input Impedance:
100 kΩ symmetric for Diff.;
100 kΩ with 50 Ω shield to GND for SE

Max Input Voltage: 80 vPeak, 2.5 V rms Shield (SE)

CMRR: 60 dB (typical), f < 40 kHz

Amplitude Accuracy: +/- 0.020 dB (0.2% FS) at 1 kHz
for 59ºF (15º C) < T < 104ºF (40º C)

Amplitude Ripple: (Digital AAF) - 0.005 dB for 0 < f < fS / 2.56

Amplitude Droop:
(Analog AAF) - 0.005 dB at 5 kHz; 0.010 dB at 25 kHz;
0.050 dB at 49 kHz

Residual Offset: +/- 0.1% FS AND not larger than 3 mV DC

Phase Accuracy: 0.05º to 0.5º for DC to 40 kHz

Crosstalk between Inputs: < -100 dB

Crosstalk between inputs and source: < -90 dB

THD: -100 dB @ 1 kHz

Minimum SampleRate: < 1 Hz

Maximum SampleRate: 102.4 kHz standard
(204.8 kHz optional)

Maximum useful Frequency: 40 kHz standard
(94 kHz optional)

Frequency Accuracy: 25 ppm

Time Accuracy: 25 ppm

Tachometer Input

1 channel

Maximum Frequency: 200 kHz

Input Range: +/- 24 V FS

Adjustable threshold, holdoff, prescaling

Output

1 to 2 channels

Dynamic Range: > 100 dB

Resolution: 24-bit

Voltage Range: 10 V FS

Output Current: 1 mA min., continuous short

THD: -100 dB @ 1 kHz

Output Waveforms: 65536 max blocksize for arbitrary;
unlimited for recorded (optional)

Chassis Detail

Dimensions: 5.6" x 4.0" x 0.9" (142 x 102 x 23 mm)

Weight: 1.2 lbs (.54 kg)

Operating Temperature: 32 to 131ºF (0 to 55º C)

Power: USB 2.0 Bus Powered

Lights: Input OK (4), Output Active (2), Trigger Signal (1),
DSP Active (1), USB Active (1)

NOTE: Continued product improvement necessitates that Data Physics reserve the right to modify these specifications without notice.

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