



nanoDAQ 32

Sub-Miniature Pressure Scanner

- **32 channel sub-miniature pressure scanner module with engineering unit output.**
- **Complete with IEEE 1588 PTP V2.**
- **Can be configured for differential or absolute measurement.**
- **Up to 5Khz per channel measurement frequency.**
- **Configurable pneumatic interface (tubulations, QDCM connector or direct mount).**
- **Output over Ethernet (100Mbit TCP / UDP) and CAN.**
- **Embedded web server for configuration and calibration.**
- **Wide thermal operating range (-20 to 100° C)**
- **Fully sealed and vibration tested to D0160F.**
- **Power Over Ethernet version available.**



The nanoDAQ represents a significant step forward in pressure scanning in terms of reduced size and increased performance.

The nanoDAQ is a development of the popular MicroDAQ range which Chell have been supplying into demanding applications for the last 5 years.

The nanoDAQ features one or two TE MicroScanners which provide unrivalled pressure scanning in a package size that makes implementation significantly easier.

The nanoDAQ acquires data from the two scanners in parallel enabling measurements at speeds up to 5Khz per channel. This can be output directly or internally averaged.

Fully calibrated and temperature compensated data is output via Ethernet or CAN in engineering units direct to a PC or on-vehicle acquisition unit.

The acquisition parameters can be configured on the nanoDAQ by using its embedded web server which gives intuitive and complete control over the NanoDAQ.

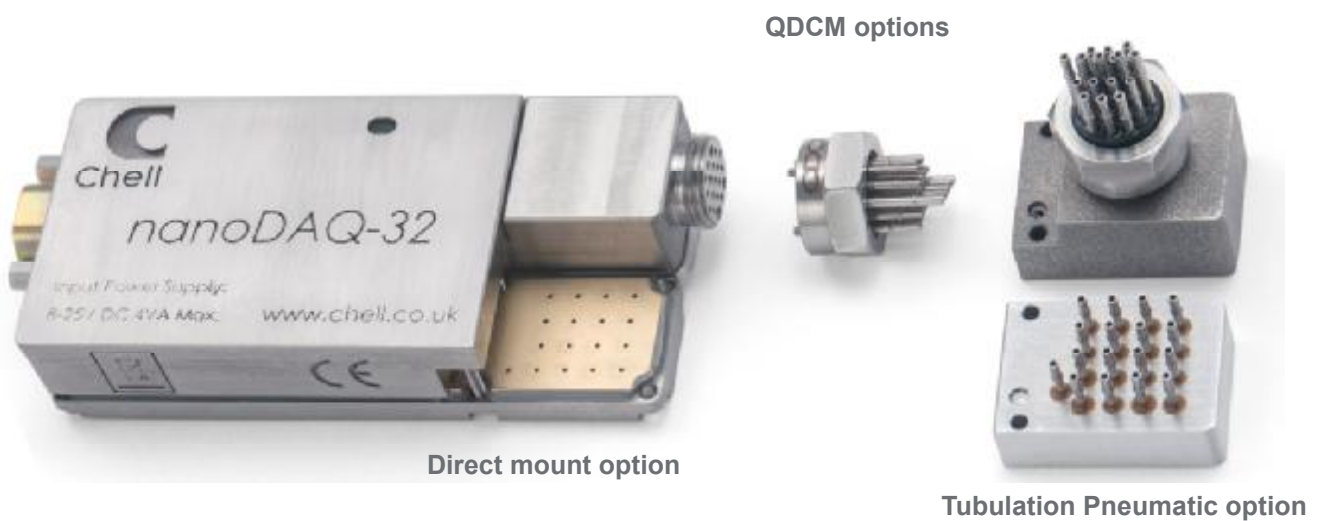
The nanoDAQ features a configurable pneumatic manifold that enables the user to connect the pressures to be measured in one of four ways; bulged tubulations, QDCM miniature connector (in line or 90°) or direct manifolding.

The option of direct manifolding provides the facility to connect the NanoDAQ directly to the model / vehicle structure. This negates the need for flexible tubing and can enhance the dynamic response of the measurement system.

The nanoDAQ features IEEE 1588 PTPV2 time stamping as standard. Also as standard is the ability to output absolute or differential measurements. Differential measurements are direct from the scanner and an on-board barometric sensor can be used to give an absolute output and remove the need for a reference pressure.

nanoDaq Specifications	
	nanoDaq 32
High speed data output.	CAN and Ethernet (TCP/IP and UDP)
System accuracy (DTC scanner range ≥ 5 PSI)	+/- 0.05% FS (plus +/- 0.2mbar for absolute mode)
System accuracy (DTC scanner 10" water \leq range ≥ 5 PSI)	+/- 0.1% FS (plus +/- 0.2mbar for absolute mode)
System accuracy (DTC scanner range < 10" water)	+/- 0.15% FS (plus +/- 0.2mbar for absolute mode)
Dimensions (width x depth x height in mm excluding connectors.)	75 x 33 x 15
Weight (with DTC scanner)	75 to 110 grams (depending on pneumatic connection option).
Maximum acquisition Speed (measurements / channel / second).	5000
Input supply	8 to 28 VDC at 3VA
Input supply (POE version)	44 to 57 VDC at 3VA
Pressure connection (tubulation)	1mm (0.040") bulged tubulations
Pressure connection QDCM (in-line and 90°)	Direct connection of 19 way QDCM (part number of mating part QDCM-1901000101)
Pressure connection (manifold)	Direct connection via silicone 'O' ring array (solid model available from Chell).
Mating electrical connector	9 way micro-miniature 'D' type.
System resolution	16 Bit
System timing	IEEE1588 PTP V2 and Hardware trigger (5v TTL)
Operating temperature range.	-20 to +100°C
Maximum relative humidity	95% at 50°C (non-condensing)
Ethernet specification	Auto-negotiating 100Mbit TCP/IP or UDP (user configurable)
POE specification	IEEE 802.3af (type 1) and IEEE 802.3at (type 2)
CAN specification	2.0 B

nanoDaq Pneumatic Connection Options



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