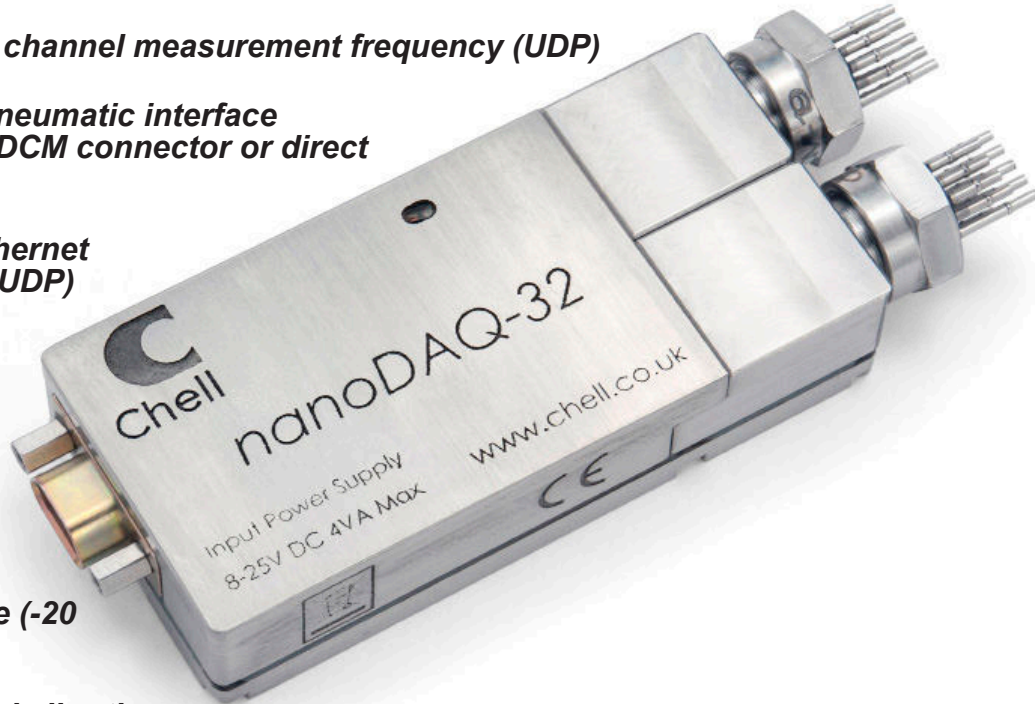




# nanoDaq-32

## 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 4Khz per channel measurement frequency (UDP)**
- **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.**



The nanoDaq-32 represents a significant step forward in pressure scanning in terms of reduced size and increased performance.

The nanoDaq-32 is a development of the popular MicroDaq range which Chell have been supplying into demanding applications since 2007.

The nanoDaq-32 features one or two MicroScanners which provide pressure scanning in a package size that makes implementation significantly easier.

The nanoDaq-32 acquires data from the two scanners in parallel enabling measurements at speeds up to 4Khz 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.

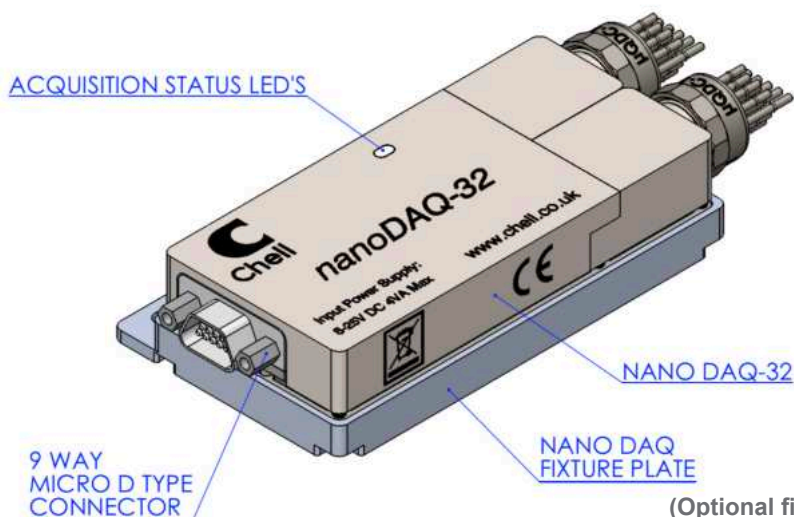
The acquisition parameters can be configured on the nanoDaq-32 by using its embedded web server which gives intuitive and complete control over the nanoDaq.

The nanoDaq-32 features a configurable pneumatic manifold that enables the user to connect the pressures to be measured in one of four ways; bulged tubuations, QDCM miniature connector (in line or 90°) or direct manifolding.

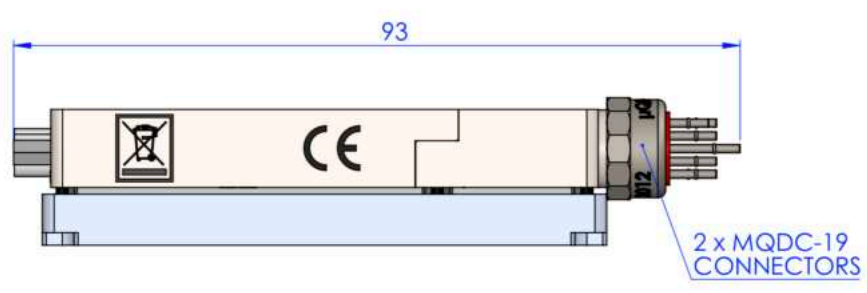
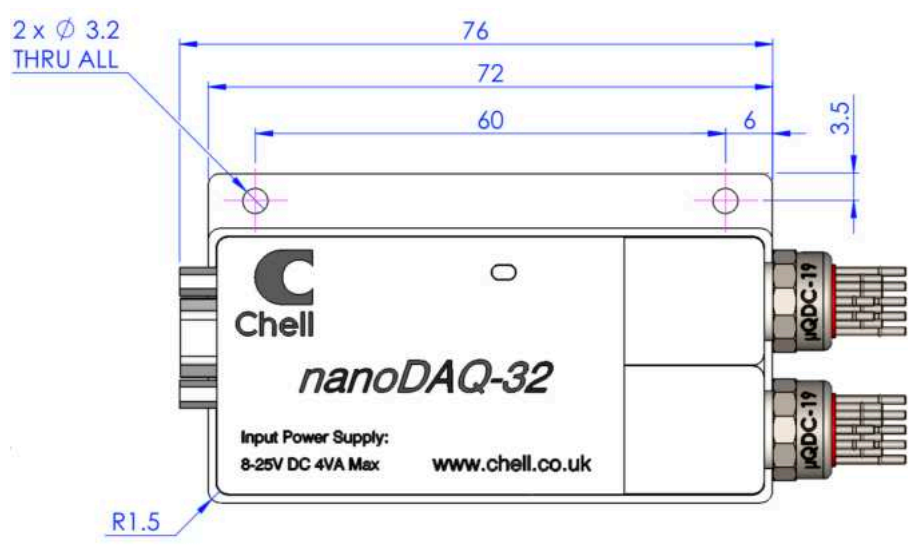
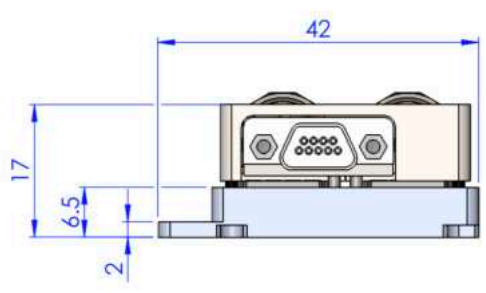
The option of direct manifolding provides the facility to connect the nanoDaq-32 directly to the model / vehicle structure. This negates the need for flexible tubing and can enhance the dynamic response of the measurement system.

The nanoDaq-32 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-32 Dimensions



(Optional fixture plate provides mounting features for the nanoDAQ-32)



## nanoDaq-32 Specifications

	nanoDaq 32
High speed data output.	CAN and Ethernet (TCP/IP and UDP)
Available ranges (differential)	1, 2.5, 5, 15 and 45 psi
System accuracy (DTC scanner range > 5 PSI)	+/- 0.05% FS (plus +/- 0.3mbar for absolute mode)
System accuracy (DTC scanner 1PSI ≤ range ≤ 5 PSI)	+/- 0.1% FS (plus +/- 0.3mbar 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).	4000 (4kHz per channel only available over UDP and subject to network conditions)
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)
Time stamping resolution	1µS
CAN specification	2.0 B

## nanoDaq-32 Pneumatic Connection Options



Direct mount option

### QDCM options



Tubulation Pneumatic option



Chell Instruments Ltd  
Folgate House  
Folgate Road  
North Walsham  
Norfolk NR28 0AJ  
England



ISO 9001:2015  
BSI membership number 41103115

Tel.: +44 (0)1692 500555  
Fax: +44 (0)1692 500088

E-mail : sales@chell.co.uk



0687