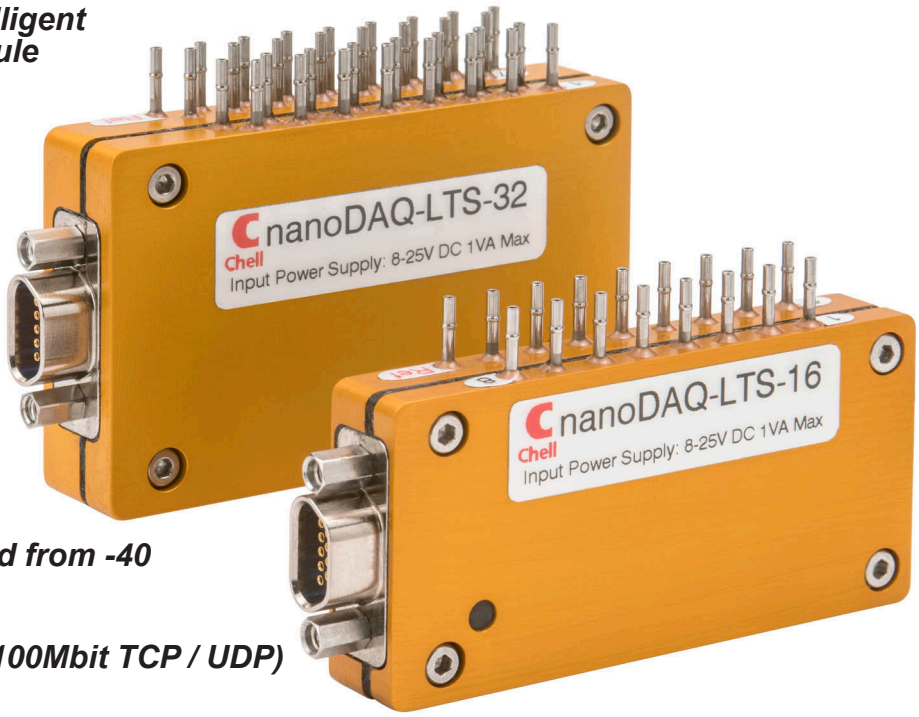
nanoDaq-LTS

16 and 32 Channel Low Cost Miniature Smart Pressure Scanner

Chell Instruments

- ***16 and 32 channel Intelligent pressure scanner module with engineering unit output.***
- ***User selectable absolute or differential measurement***
- ***Up to 0.04% FS accuracy output.***
- ***Complete with IEEE 1588 PTPv2 time stamping***
- ***Thermally compensated from -40 to 90ºC***
- ***Output over Ethernet (100Mbit TCP / UDP) and CAN.***
- ***Rugged enclosure for on-vehicle applications. Sealed to IP67***
- ***Fully configurable over Ethernet with embedded web server.***



The nanoDaq-LTS is a new development by Chell Instruments utilizing the latest technology in digital transducers.

The nanoDaq-LTS is now available in 16 and 32 channel forms in a ultra-miniature slim-line package.

The nanoDaq-LTS is a fully configurable smart pressure scanner that will output pressure data in engineering units over Ethernet and CAN. The data output over all interfaces is identical to the nanoDaq-LTS's sister products; the nanoDaq and the MicroDaq.

The nanoDaq-LTS makes use of 17 or 35 absolute transducers which are thermally compensated and conditioned to provide 16 or 32 either absolute or differential measurements relative to one reference port.

The user can select a number of operating parameters using the embedded web server. These include; absolute or differential, TCP and UDP setup, data averaging and units, CAN setup and time stamp configuration.

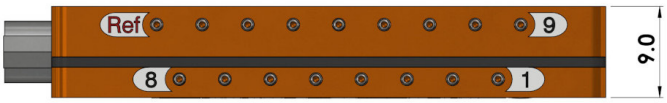
The nanoDaq-LTS features a hardware implementation of the IEEE 1588 PTPv2 time stamping protocol which allows the pressure data to be time stamped to a resolution of 1µSecond.

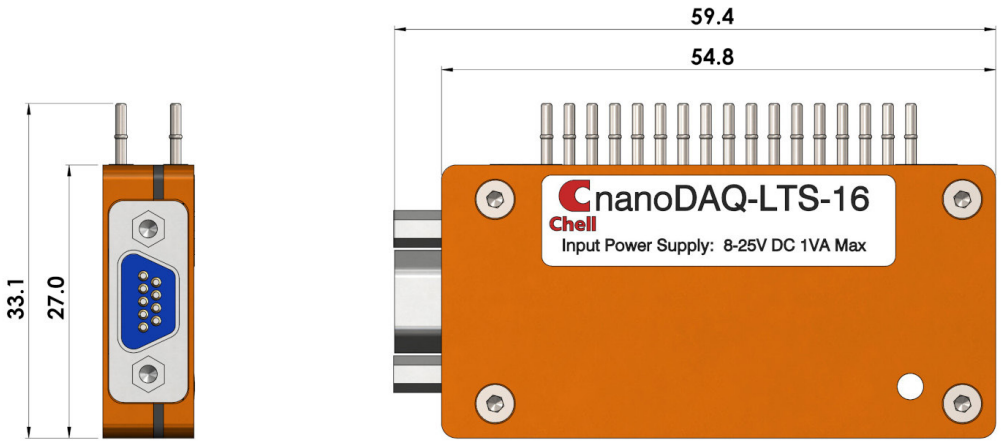
The nanoDaq-LTS also features a hardware trigger allowing the pressure acquisition to be synchronised to an external TTL pulse.

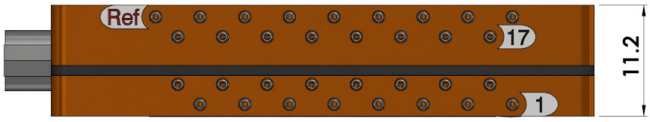
The nanoDaq-LTS is contained within a miniature package which is sealed to IP67 enabling it to be used in harsh environments. It is also available with alternative packaging to suit particular applications - please contact Chell for more details.

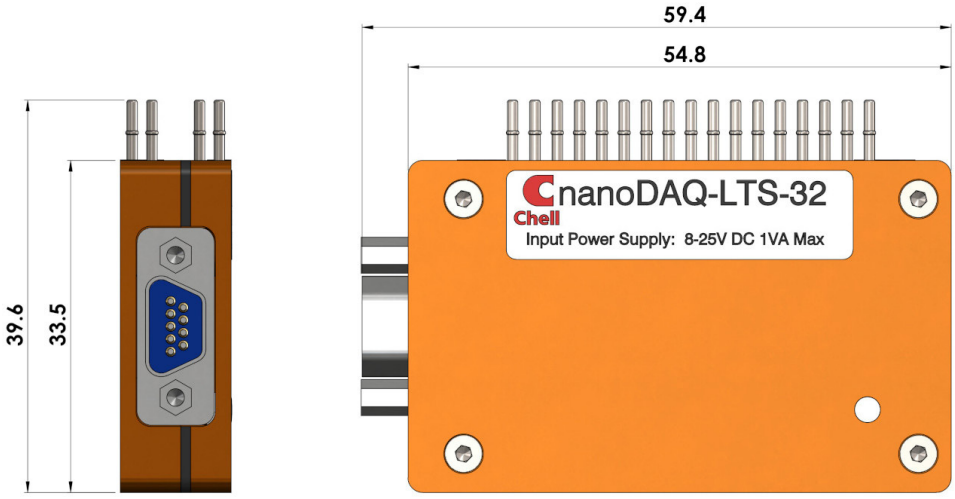
The transducers within the nanoDaq-LTS have a very high proof pressure (50psig, 64.5 psia) which reduces the chances of in-field transducer damage.

nanoDaq-LTS Specifications	
Number of channels	16 or 32
Data output.	CAN and Ethernet (TCP/IP and UDP)
System accuracy* (Range = 35 kPa / 5 psi)	± 0.1% Full Scale
System accuracy* (Range = 17 kPa / 2.5 psi)	± 0.2% Full Scale
System accuracy* (Range = 7 kPa / 1 psi))	± 0.5% Full Scale
System accuracy* (absolute measurement)	± 0.04% Full Scale
Resolution	16 bit or ±range / 65536
Absolute range	15,000Pa to 115,000Pa (2.2 psia to 16.8 psia)
Optional extended absolute range	13,700Pa to 152,000Pa (2 psia to 20 psia)
Proof pressure	50 psig (64.5 psia)
16 Channel dimensions (width x depth x height in mm)	59.4 x 27 x 9 excluding tubulations
32 Channel dimensions (width x depth x height in mm)	59.5 x 33.5 x 11.2 excluding tubulations
Weight (16 / 32 channel)	24g / 36g
Enclosure sealing	IP67
Maximum acquisition Speed (measurements / channel / second).	180
Input supply	8-25 VDC
Power consumption	1VA Max
System resolution	16 Bit
Operating temperature range	-40 to+90°C
Storage temperature range	-40 to+90°C
Ethernet specification	Auto-negotiating 100Mbit TCP/IP or UDP (user configurable)
Time stamping	IEEE 1588 PTPv2
Time stamping resolution	1µS
Hardware trigger	5V TTL pulse, maximum 180 Hz
CAN specification	2.0 B
Mating connector	9-way micro-miniature ‘D’ type (suggested mate : Glenair MWDM2L-9PSL - solder cup version)
Pneumatic connections	17 or 35 x 1.0mm (0.040”) bulged tubulations x 6.5mm long
*** Accuracy figure includes nonlinearity, hysteresis, non-repeatability and thermal gain error over the full operating temperature range.**	









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