MicroDaq Pressure Scanner

Miniature Smart Pressure Scanner

Chell Instruments

- *Intelligent pressure scanner module with engineering unit output.*

- *Compatible with all PSI Pressure Scanners.*

- *Up to 0.05% FS accuracy output.*

- *Up to 4Khz per channel measurement frequency.*

- *Output over Ethernet (100Mbit TCP / UDP) and CAN.*

- *Rugged enclosure for on-vehicle applications.*

- *Supplied with full software for configuration, calibration and data logging.*

- *Data output with time stamping for dynamic measurements*

The µDaq is a development of the well established CANdaq system. The µDaq is a single box solution providing an ultra-miniature complete pressure scanning unit that outputs engineering unit data over Ethernet and CAN.

The µDaq contains a PSI ESP™ pressure scanner with which it interfaces, providing the user with a straight-forward digital interface. Where available, the MicroDaq takes full advantage of the DTC technology within the scanners.

The DTC scanners contain all their coefficients in an EEPROM and the temperature of every transducer is measured to calculate the compensation. The DTC scanners also contain a 3X deranging option and shuttle valve position sense and all these functions can be accessed by the supplied software.

The µDaq may also be used with conventional scanners and provides the user with a scanner temperature measurement so that thermal mapping of the scanner can be carried out using the supplied software.

The µDaq can scan at the maximum speed of the new Gen2 scanners (70KHz) enabling it to produce data at more than 4KHz per channel.

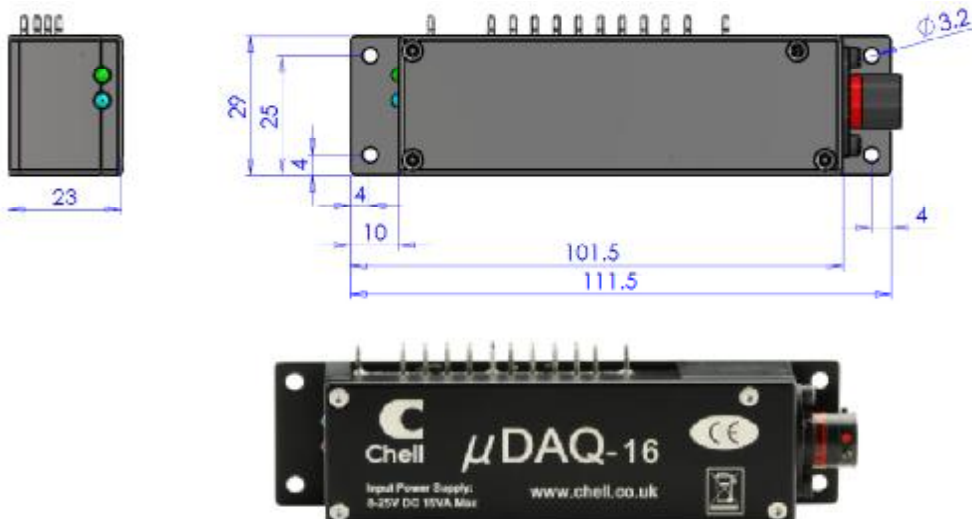To facilitate dynamic measurements, the data output is available with time stamping.

The data is available over Ethernet which is auto-negotiating 10 / 100Mbit. The Ethernet can be configured as TCP or UPD and when in UPD it can auto-identify over the network.

The µDaq is packaged to enable it to withstand the harsh environments of on-car testing. It also affords the scanner some protection by enclosing all of it bar the top plate.
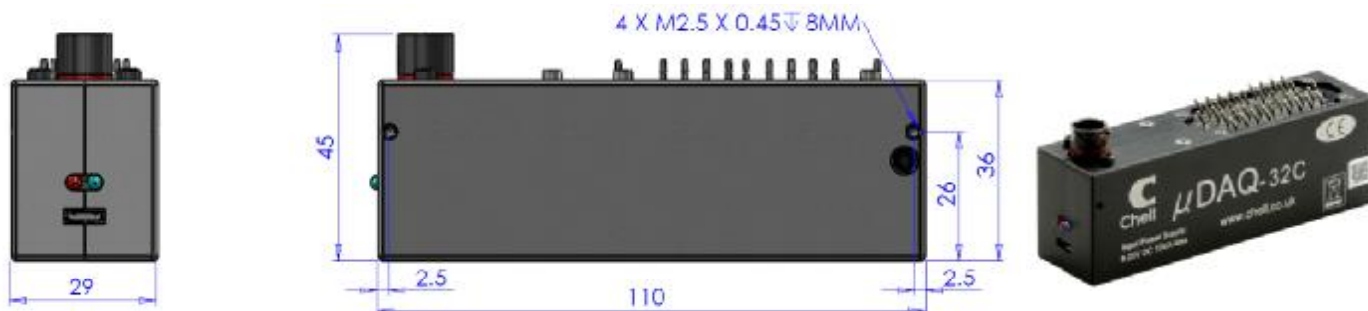
The software supplied with the µDaq allows the user to configure the acquisition and basic setup parameters of the µDaq. The µDaq can then be further controlled (if necessary) over the Ethernet and CAN interfaces.

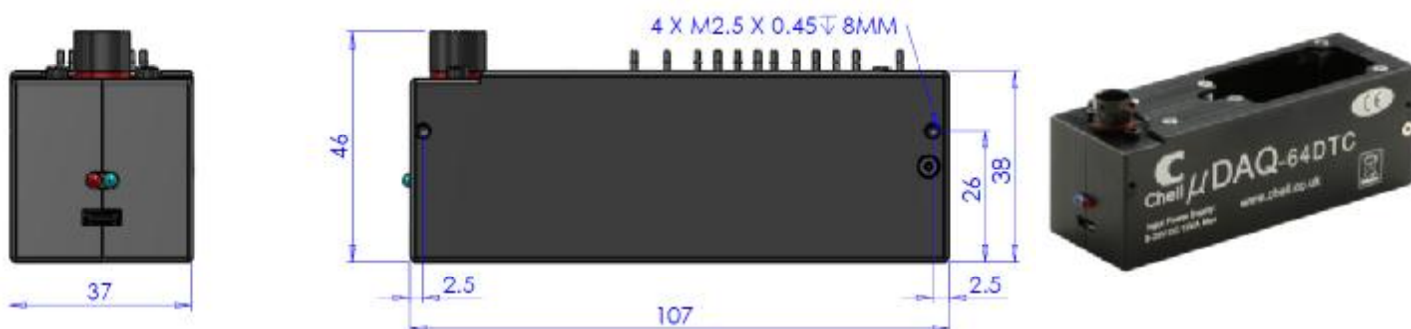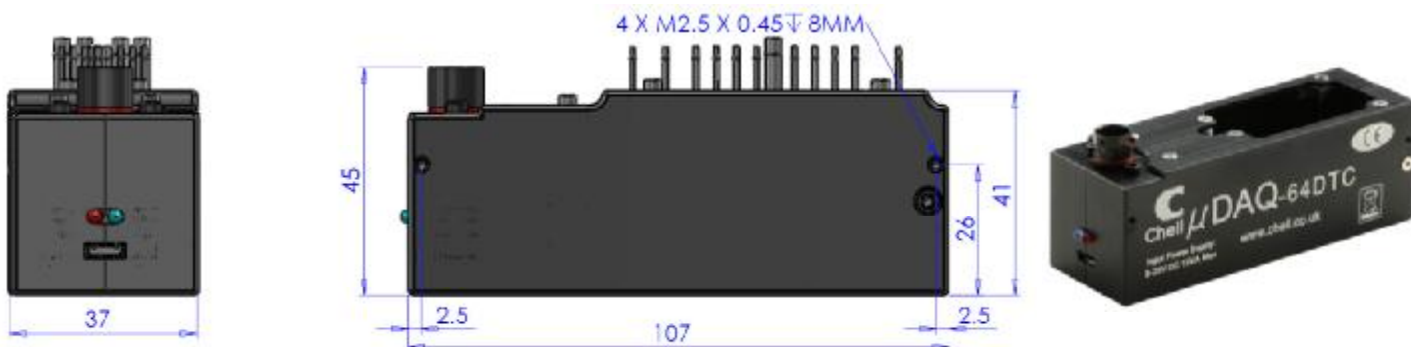| µDaq Specifications			
	µDaq		
	MicroDaq 16	MicroDaq 32	MicroDaq 64
High speed data output.	CAN only	CAN and Ethernet (TCP/IP and UDP)	CAN and Ethernet (TCP/IP and UDP)
System accuracy (DTC scanner range ≥ 5 PSI)	N/A	+/- 0.05% FS	+/- 0.05% FS
System accuracy (DTC scanner 10" water ≤ range ≥ 5 PSI)	N/A	+/- 0.1% FS	+/- 0.1% FS
System accuracy (DTC scanner range < 10" water)	N/A	+/- 0.15% FS	+/- 0.15% FS
System accuracy (standard scanner range ≥ 5 PSI)	+/- 0.1% FS	+/- 0.25% FS	+/- 0.25% FS
System accuracy (standard scanner range ≤ 5 PSI)	+/- 0.2% FS	+/- 0.25% FS	+/- 0.25% FS
Dimensions (width x depth x height in mm)	111.5 x 23 x 29	110 x 29 x 45	107 x 37 x 46
Weight (with DTC scanner)	N/A	207g	278g
Weight (with conventional scanner)	116g	201g	275g
Weight (without scanner)	70g	95g	135g
Maximum acquisition Speed (measurements / channel / second).	4375	2000	1000
Input supply	8-25 VDC at 2 VA	8-25 VDC at 3 VA	8-25 VDC at 4VA
Consumption at 24 VDC	150mA	200mA	350mA
System resolution	16 Bit		
Operating temperature range	+5 to+90°C		
Storage temperature range	-20 to+90°C		
Maximum relative humidity	95% at 50°C (non-condensing)		
Ethernet specification	Auto-negotiating 100Mbit TCP/IP or UDP (user configurable)		
CAN specification	2.0 B		
Mating connector	ASDD606-09SN-HE		

µDaq 16

µDaq 32

µDaq 64 (non-purge)

µDaq 64 - P

Ordering Codes			
Options	**Number of channels**		
	16	32	64
No Scanner	MicroDaq16-NS	MicroDaq32-NS	MicroDaq64-NS
Conventional Scanner	MicroDaq16-C	MicroDaq32-C	MicroDaq64-C
DTC Scanner	MicroDaq16-DTC	MicroDaq32-DTC	MicroDaq64-DTC
Purge option suffix (required for 64 channel scanner only)			Add -P