nanoDAQ-LTR-64

64 Channel Digital Pressure Scanner

- **64 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 -20 to 90°C.**
- **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.**
- **Manifold mount with optional tubing plates (straight and angled tube versions available).**

The nanoDAQ-LTR-64 is a new development by Chell Instruments utilizing the latest technology in digital transducers.

The nanoDAQ-LTR-64 is now available in 64 channel slim-line package featuring a configurable manifold mount. The scanner can either be placed directly onto the customers manifold or purchased with tubing plates. Straight and angled tubing plates are available.

The nanoDAQ-LTR-64 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-LTR's sister products; the nanoDAQ and the MicroDAQ.

The nanoDAQ-LTR-64 makes use of 66 absolute transducers which are thermally compensated and conditioned to provide 64 absolute measurements or 64 differential measurements relative to the reference ports. There is a reference port per bank of 32 channels and the user can select either to use one reference or the other, or an average of the two.

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-LTR-64 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-LTR-64 also features a hardware trigger allowing the pressure acquisition to be synchronised to an external TTL pulse.

The nanoDAQ-LTR-64 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.

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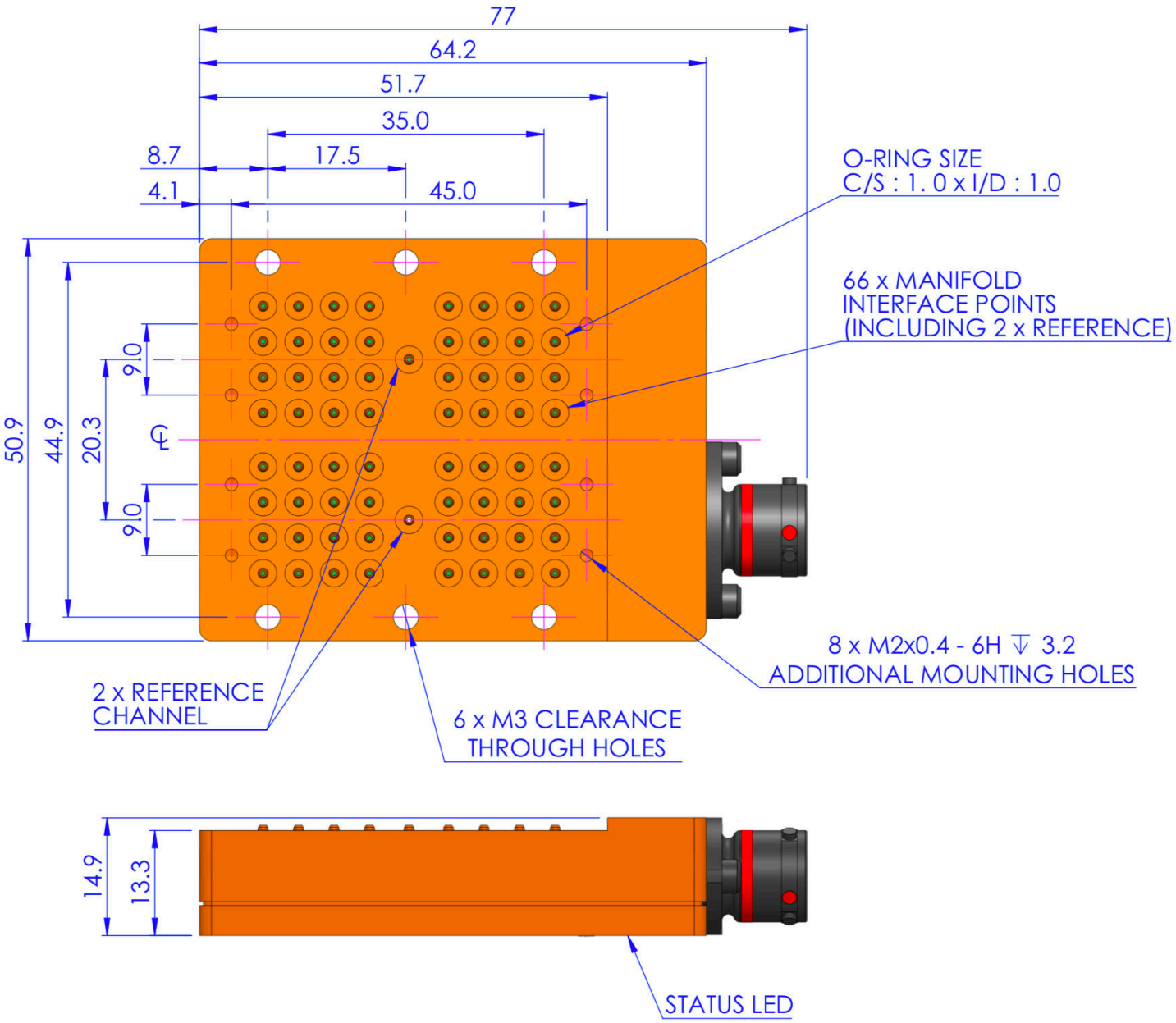
General	
Ranges Available	1, 2.5, 5, 7, 10, 17 and 35 kPa
Number of channels	64
Maximum Acquisition Speed (measurements / channel / second)	200
Data Output	
Output formats	CAN and Ethernet (TCP/IP & UDP), IENA
Ethernet Specification	100Mbit TCP/IP or UDP (user configurable)
CAN Specification (DC Powered version only)	2.0B
Performance	
Differential Ranges	
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
Absolute Ranges	
15 to 115 kPa (2.2 to 16.8 psia) for differential ranges ≤ 35 kPa (5psi)	0.04% FS
13 to 160 kPa (1.885 to 23.2 psia) for differential ranges = 55 kPa (8psi)	0.04% FS
Reference pressure range	13 kPa to 160 kPa (1.89 psia to 23.2 psia)
Line pressure effect	Negligible
Proof Pressure (all ranges)	50 psig (64.5 psia)
Ouput Resolution	16 bit or ±range / 65536
System Resolution	24 bit
Mechanical	
Dimensions	77 x50.9 x 14.9mm
Weight (16 Channel / 32 Channel)	79g (104g with 2 x tubing plates)
Enclosure Sealing	IP67
Measurement ports	66 x 1.0 mm (0.04”) bulged tubulations
Power Supply	
Input supply	8-25 VDC
Power consumption	1VA Max
Electrical Connector	Souriau 8STA0-06-9PN
Environment	
Operating Temperature Range	-20 to +90°C
Compensated Temperature Range	20 to 90°C (optional -20 to +90°C)
Storage Temperature Range	-20 to +90°C
Ambient Pressure	100 mbar abs (52,000 ft) to 2.5 bar abs
Vibration	Engine standard vibration test to DO160E category S, curve W with duration of 1 hr/axis. Fan blade (20 g 2 kHz)
Shock	Fan blade out to DO160F section 7 (40g 11 m/s)
Maximum relative humidity	95% at 50°C (non-condensing)
Timing / Data Synchronisation	
Time Stamping	IEEE 1588 PTPv2
Time Stamping Resolution	1µs
Hardware Trigger	5 V TTL pulse, maximum 400 Hz, minimum 2 Hz

*** Accuracy figure includes nonlinearity, hysteresis, non-repeatability and thermal gain error over the full operating temperature range.**

Dimensions


77
64.2
51.7
35.0
8.7
17.5
4.1
45.0
O-RING SIZE
C/S : 1. 0 x I/D : 1.0
66 x MANIFOLD
INTERFACE POINTS
(INCLUDING 2 x REFERENCE)
9.0
9.0
50.9
44.9
20.3
8 x M2x0.4 - 6H ↧ 3.2
ADDITIONAL MOUNTING HOLES
2 x REFERENCE
CHANNEL
6 x M3 CLEARANCE
THROUGH HOLES
14.9
13.3
STATUS LED