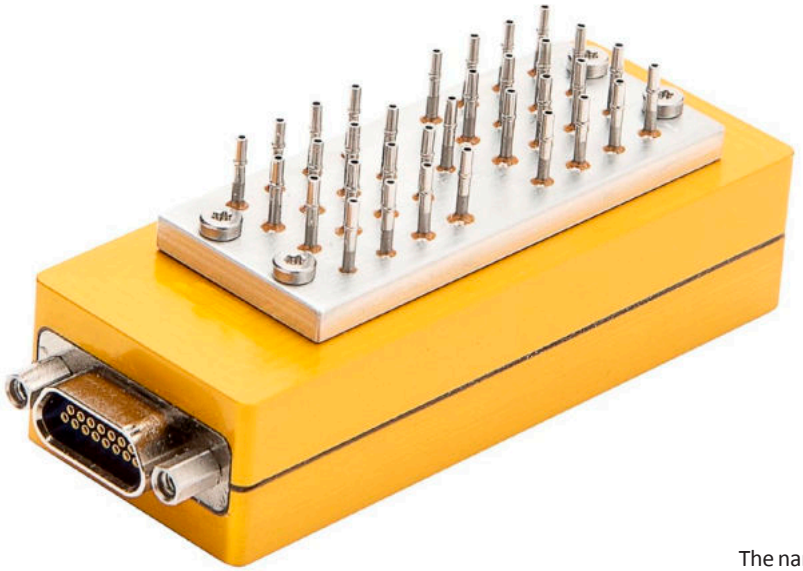


nanoCAT-LTM-32

32 Channel EtherCAT Manifold Mount Pressure Scanner

- **32 channel intelligent EtherCAT pressure scanner module with engineering unit output.**
- **Manifold mount for easy inegration.**
- **User selectable absolute or differential measurement**
- **Up to 0.04% FS accuracy output.**
- **Thermally compensated from -20 to 90°C.**
- **Output over EtherCAT and CAN.**
- **Rugged enclosure for on-vehicle applications. Sealed to IP67**
- **Fully configurable over Ethernet with embedded**

The nanoCAT-LTM-32 is a another new development by Chell Instruments utilizing the latest technology in digital transducers.

The nanoCAT-LTM-32, like its sister products; the nanoCAT-LTR-64 and nanoCAT-LTS-32, is a fully configurable smart pressure scanner that will output pressure data in engineering units over EtherCAT and CAN.

In place of tubulations, the nanoCAT-LTM-32 features the same manifold mount features as the nanoCAT-LTR-64. This can be used with a removable top plate supplied by Chell or a customer manifold produced to drawings and models available from Chell.

The use of EtherCAT gives the user the following advantages:

[1] Increased bandwidth. EtherCAT is many times more efficient than Ethernet making the acquisition of high speed data from multiple units much more straight forward.

[2] Non-vendor specific protocol. As the nanoCAT-LT adheres to the EtherCAT standard, no special code needs to be written in order to interface with it.

[3] Integrated time stamping. The EtherCAT pro- tocol includes a distributed clock that time stamps the data to within ±20µS

[4] Network topology independent. EtherCAT is insensitive to network topology and the units are designed to be daisy-chained in loop or star configuration.

The nanoCAT-LTM-32 makes use of 33 absolute transducers which are thermally compensated and conditioned to provide 32 either absolute or differential measurements relative to the reference port.

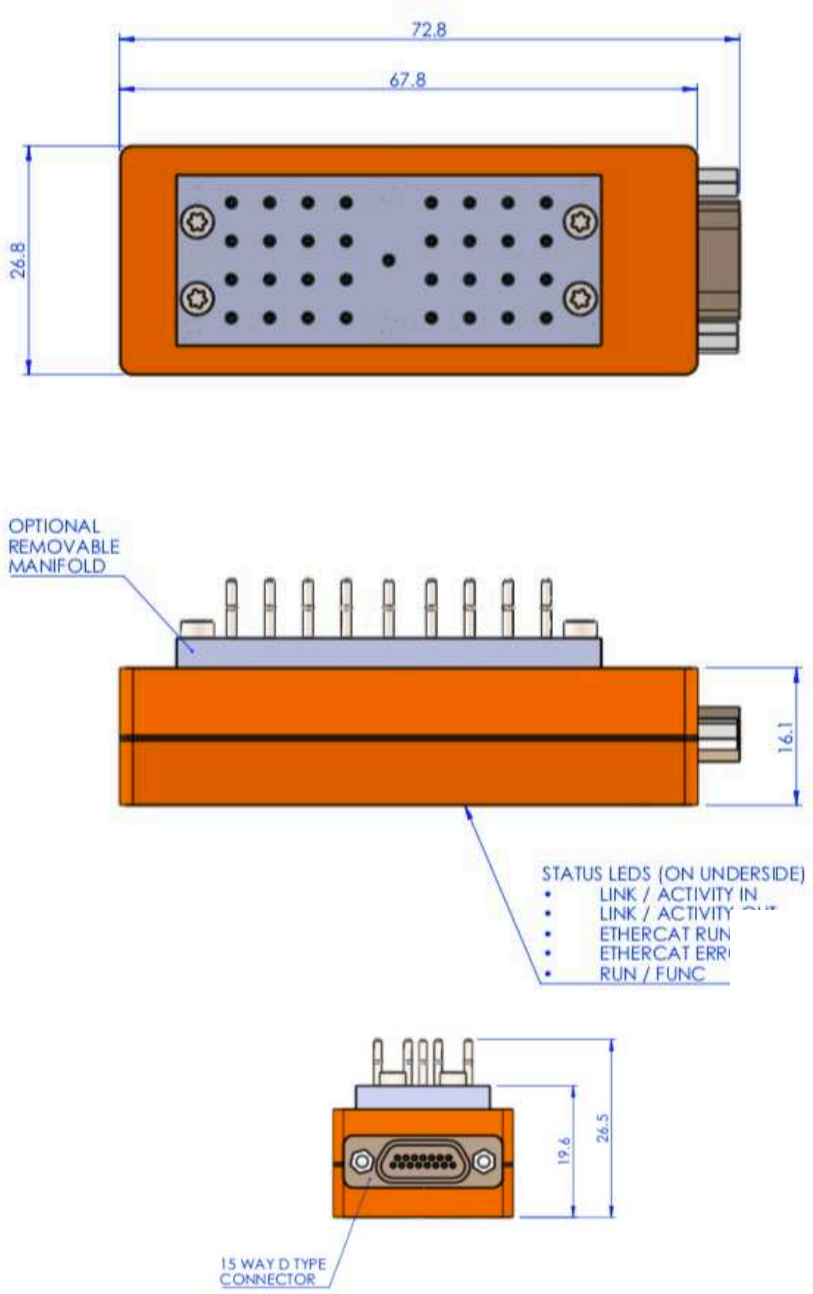
To reduce the package size, the nanoCAT-LTM-32 features a single connector for both the EtherCAT in and EtherCAT out.

Configuration of the nanoCAT-LTM-32 is carried out by using the embedded web server. When the unit is powered up with a link in place on the connector, it will boot up in Ethernet mode to facilitate configuration. When this link is removed, the nanoCAT-LTM-32 will boot up in EtherCAT mode ready to communicate with an EtherCAT master.

General	
Ranges Available	1, 2.5, 5, 7, 10, 17 and 35 kPa
Number of channels	32
Maximum Acquisition Speed (measurements / channel / second)	200
Data Output	
Output formats	CAN and EtherCAT
EtherCAT	EtherCAT slave compliant with EtherCAT Technology Group (ETG) standards
CAN Specification	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
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	72.8 x 26.8 x 16.1mm (excluding tubulation plate).
Weight (16 Channel / 32 Channel)	40g
Enclosure Sealing	IP67
Measurement ports	33 x 1.0 mm (0.04”) bulged tubulations on optional tubing plate (straight or inclined at 60°)
Power Supply	
Input supply	8-25 VDC
Power consumption	2VA Max
Electrical Connector	15 way Male Micro-D (Glenair MWDM2L-15PS)
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	EtherCAT

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

Dimensions



Connector Pin-Out

Input connector – mates with 15-way Male Micro-D connector (Glenair MWDM2L-15PS)

Pin	Name	Name	Pin
1	0V (COM)	+24V SUPPLY	9
2	CAN L	0V (COM)	10
3	CAN H	Mode	11
4	Trigger IN (5V TTL)	EtherCAT1 TX+	12
5	EtherCAT0 TX+	EtherCAT1 TX-	13
6	EtherCAT0 TX-	EtherCAT1 RX+	14
7	EtherCAT0 RX+	EtherCAT1 RX-	15
8	EtherCAT0 RX-		

Leave MODE pin unconnected for default EtherCAT operation.
Connect MODE pin to 0V COM to boot device in Ethernet mode on port 0.