

nanoCAT-LTR-64

64 Channel Low Cost Miniature EtherCAT Pressure Scanner

- **64 channel intelligent EtherCAT pressure scanner module with engineering unit output.**
- **User selectable absolute or differential measurement**
- **Up to 0.04% FS accuracy output.**
- **Thermally compensated from -40 to 90°C**
- **Output over EtherCAT and CAN.**
- **Rugged enclosure for on-vehicle applications. Sealed to IP67**
- **Fully configurable over Ethernet with embedded web server.**
- **'O' ring manifold with optional tubing plates.**



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

The nanoCAT-LTR is a fully configurable smart pressure scanner that will output pressure data in engineering units over EtherCAT and CAN.

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-LTR adheres to the EtherCAT standard, no special code needs to be written in order to interface with it.

[3] Integrated time stamping. The EtherCAT protocol includes a distributed clock that time stamps the data to within $\pm 20\mu\text{S}$

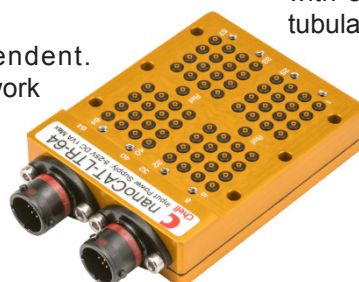
[4] Network topology independent. EtherCAT is insensitive to network topology and the units are designed to be daisy-chained in loop or star configuration.

The nanoCAT-LTR makes use of 66 absolute transducers which are thermally compensated and conditioned to provide 64 either absolute or differential measurements relative to one reference port per bank of 32 channels. The user can configure the nanoCAT-LTR-64 to use one reference port for each 32 channels, one for all 64 channels or the average of both references for all 64 channels.

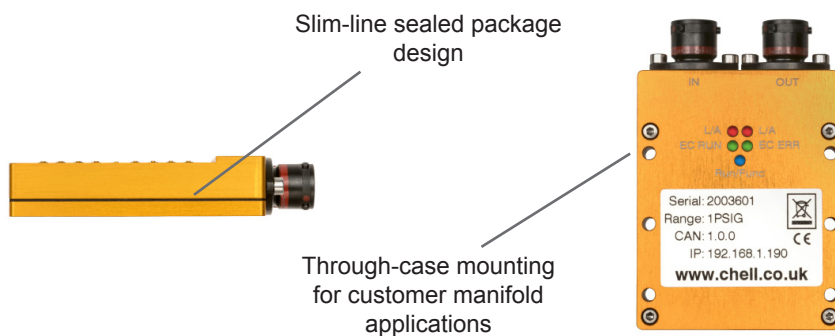
The nanoCAT-LTR can be configured over Ethernet by using its embedded web server. To boot the nanoCAT-LTR is Ethernet mode, a link plug is connected to the EtherCAT out connector when the nanoCAT-LTR is powered on. When the link is removed and the nanoCAT-LTR re-started, it will boot into its default EtherCAT mode.

The nanoCAT-LTR is contained within a miniature package which is sealed to IP67 enabling it to be used in harsh environments. It features two removable top plates than can be ordered with straight or angled (at 60°) 1mm (0.040") tubulations

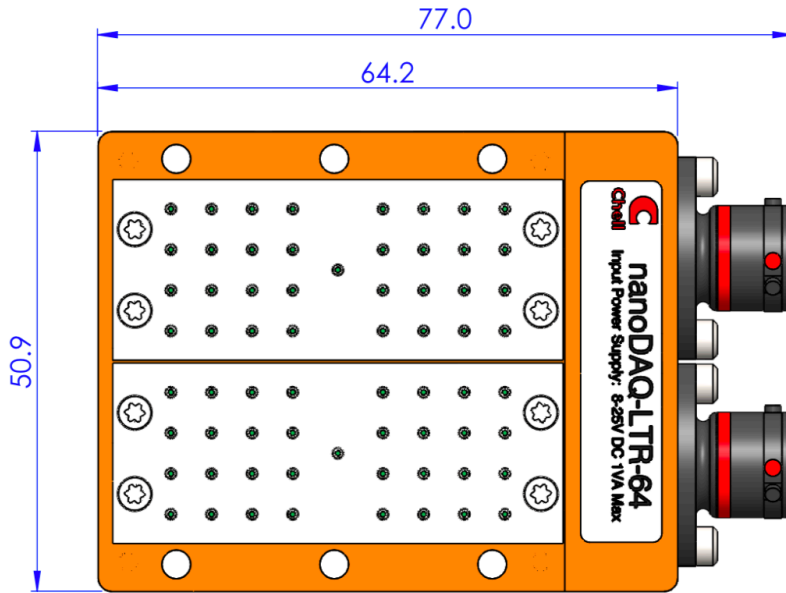
The transducers within the nanoCAT-LTR have a very high proof pressure (50psig, 64.5 psia) which substantially reduces the chances of in-field transducer damage.



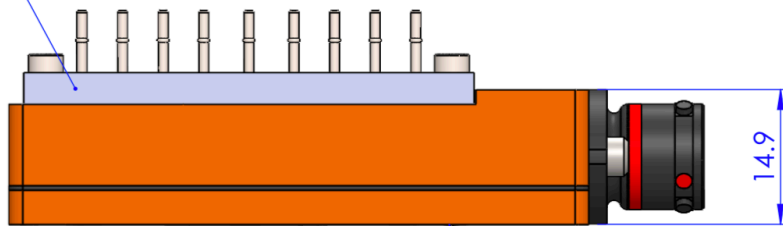
nanoCAT-LTR-64 Specifications	
Number of channels	64
Data output.	CAN and EtherCAT
System accuracy* (Range = 35 kPa / 5 psi)	± 0.1% Full Scale
System accuracy* (Range = 17 kPa / 2.5 psi)	± 0.2% Full Scale
System accuracy* (Range = 7 kPa / 1 psi)	± 0.5% Full Scale
System accuracy* (absolute measurement)	± 0.04% Full Scale
Resolution	16 bit or \pm 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)
Dimensions (width x depth x height in mm)	77 x 50.9 x 14.9 excluding tubulations
Weight (16 / 32 channel)	60g (est)
Enclosure sealing	IP67
Maximum acquisition Speed (measurements / channel / second).	200
Input supply	8-25 VDC
Power consumption	2VA Max (est)
System resolution	16 Bit
Operating temperature range	-40 to+90°C
Storage temperature range	-40 to+90°C
Maximum relative humidity	95% at 50°C (non-condensing)
EtherCAT	EtherCAT slave compliant with EtherCAT Technology Group (ETG) standards
CAN specification	2.0 B
Mating connectors	2 x Souriau 8STA0-06-9PN
Pneumatic connections	'O' ring manifold mount. 66x 1.0mm (0.040") bulged tubulations x 6.5mm long on a removable tubulation plate. Staright or angled (60° to horizontal) tubes available.
* Accuracy figure includes nonlinearity, hysteresis, non-repeatability and thermal gain error over the full operating temperature range.	



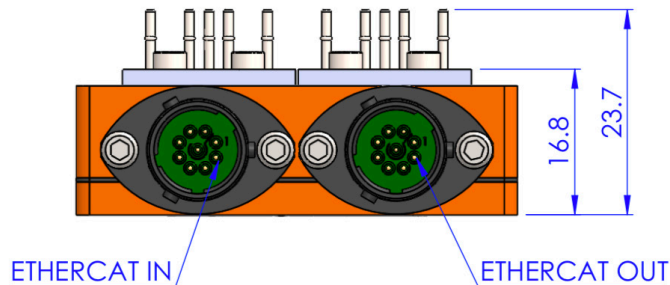
nanoCAT-LTR-64-LT-64 Dimensions



2 x REMOVABLE MANIFOLDS



- STATUS LEDs
- LINK / ACTIVITY IN
 - LINK / ACTIVITY OUT
 - STATUS
 - RUN
 - FUNC



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