

ETT 24 – TransientRecorder including measuring amplifier







T24 **Technical Data** *TransientRecorder including measuring amplifier*

Data Recording

RAM	40 MByte/channel (640 MByte RAM with 16 channels) optional: 80MByte/channel
Interface to PC	USB 3.0, USB 2.0, Gigabit Ethernet, (optional eSATA)
Recording media	Internal RAM, external PC hard disk, optional multiple internal hard disks

Data Transfer Rate

PC (with Gigabit LAN)	60 MByte/s
PC (with USB)	USB2.0: 35 MByte/s; USB3.0: 200MB/s

Input Characteristics

No. of channels per device	4, 8, 12, 16,, 32
Synchronisation of several devices	yes
Max. sample rate per channel	4 MSample/s/ch
Max. Bandwidth per channel	DC - 1.7MHz
Quantisation	24bit
External Quantisation Clock	yes
Impedance	1MΩ, 10pF
Connector	BNC, DIN or TwinBNC, DIN
Input Protection	± 17.5V @ range ± 250mV, ± 5V ± 175V @ range ± 10V, 50V ± 220V @ range ± 100V, 200V
Galvanic Isolation	± 200V
Range	\pm 250mV, 5V, 50V (optional \pm 200V)
Input dividers	1:10 (optional 1:100) internally differential compensated
Coupling	Single-Ended (AC/DC), Differential (AC/DC)
Dynamic range	122dB @ 5kHz Sample/s (gain 1) 112dB @ 125kHz Sample/s (gain 1) 94dB @ 4MHz Sample/s (gain 1)
Inter-channel phase difference	0°
Crosstalk	- 100dB or less (DC - 200kHz)
Filter	Analog: 1.7MHz low pass filter Digital: selectable

Output Characteristics

No. of channels per device	4, 8, 12, 16,, 64
Synchronisation of several devices	yes
Analog output: max. DAC rate	2MSample/s (internal oversampling @ 16MSs)
Max. Bandwidth per channel	DC - 150kHz
Quantisation	16bit
Oversampling	8x
Impedance	100Ω
Connector	BNC
Galvanic Isolation	no
Output range	± 5V
Coupling	DC
DC offset	digital
Dynamic range	TBD
Inter-channel phase difference	0°
Crosstalk	TBD
Signal Conditioning	
StrainGauge (optional)	Full-, Half-, Quarter-Bridge Sense, no Sense, Const. Voltage 0 10V Const. Current 0 50mA Shunt calibration
ICP	DC / AC
Current	± 0 … 50mA Single-Ended: AC / DC; Differential: DC
Charge	1mV/pC, 50mV/pC Range: ± 5nC, ± 100pC Highpass: 0.15Hz; 1.5Hz; 15Hz Auto charge Clear; manual Clear
TEDS (optional)	yes
Digital inputs (optional)	CAN, SPI, TTL, Rotary encoder \pm 30V
Error detection	ICP: cable short/break; Charge: limit, Signal Out-Of-Range StrainGauge: (Signal+Sense+Power) short and open detection

Operation Conditions

Power Supply	9 - 36VDC / 100 - 240VAC
Ambient Temperature	+10°C to +40°C (TBD)
Operation System	Windows XP / Vista / 7 / Linux and others



LTT 24 – One for all!

The multi-functional data acquisition device LTT24 combines the functionality of a Transient-Recorder with 24 bit ADC and 4MSample/s per channel with amplification functions for voltage, current, ICP, strain gauge, resistance, temperature, CAN bus.

Configuration according to your needs

Slow, fast and ultra-fast channels can be combined in one modular device.

You decide:

- If it is sufficient to measure with low sampling rates in the lower frequency range
- Or if you need additional capacity for measurements with higher bandwidths and higher sampling rates
- → Or if less channels are sufficient
- Or if you work multi-functionally and with high channel count.

Modular cabinets

- → 4, 8, 12, 16 or 32 slots,
- → Extendable at any time.

Modular options:

- → 1 64 analogue outputs,
- → 1 256 digital IOs,
- 1 4 internal SSD hard disks and battery for »stand-alone« or »time-shift view«.

Modular channels

- → Ultra-performance: 24 bit with 4 MSample/s per channel,
- unmatched accuracy on the market: 16 ENOB!!!
- unmatched flat bandwidth on the market: DC - 1,7 MHz!!!
- best common-mode rejection ratio (CMRR) on the market,
- best galvanic isolation: No-Noise DC/DC supply with 2 MHz clock,
- adequate sensor supply: Voltage, current, carrier frequency,
- Inputs for: Voltage, charge, ICP, strain gauge, current, LVDT, resistance, …,
- for measurement of rotary oscillation in the nanosecond range.

Slow channels

- → 24 bit with 2 kSample/s,
- 4 channels per slot,
- for temperature,
- pressure, etc,
- Digital channels,
- → CAN-Bus, SPI, Clock, Pulse.

Connectivity

- → Synchronisation interface for external hardware,
- → SyncE and IEEE1588: Nanosec. synchronisation via Gigabit Ethernet,
- → and Dual Gigabit Ethernet connection to PC.



LTT24 front panel with inputs for:

- → Strain gauge, ICP, charge, voltage, current,
- → CAN bus and thermo not shown.



LTT24 rear panel with:

Analogue outputs, Dual Gigabit Ethernet, digital IOs, synchronisation.

Software

- → LTTpro: Control and Visualisation Software,
- → LTT2API: Library for integration in customer applications,
- → Compatible with LabView, DasyLab, Matlab, etc..



What does LTT offer ...



LTT GmbH is worldwide represented by:

BPS Italien • Cassidian Frankreich • Combine Pakistan • EC Test Systems Polen • Index TM Korea • ISL China • Rainfe Technology China • Record Tech Indien • Tekno Tasarim Türkei • Toyo Japan • UG Finnland

About LTT

The headquarters of LTT GmbH with development, administration and sales are located in Würzburg, Germany.

The production is outsourced to quality certified companies - technosert electronic GmbH in Austria and Englert GmbH & Co. KG in Wertheim.

Interested?

If you wish more detailed information about the products of LTT GmbH, please visit us online at www.tasler.de or give us a phone call.

We are happy to advice you!





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