About us

Labortechnik Tasler GmbH with its headquarters in Würzburg, Germany, has been developing, producing and selling patented real-time data acquisition systems around the globe for over 20 years.

Through many years of cooperation with its renowned customers from a wide variety of sectors, such as **electric motors, the power industry, mechanical and plant engineering, research and development, aerospace, the automotive industry and the military,** Labortechnik Tasler GmbH has been able to gather relevant experience that has contributed to the development of the **LTTsmart.** The modular concept now makes it possible to assemble the devices individually with different function modules for each customer according to his individual requirements.

Labortechnik Tasler GmbH – fast, flexible and precise measurement technology

Michael Tasler
General Manager

Michael Tasler founded Labortechnik Tasler GmbH based on one of his patents concerning high performance real-time data acquisition systems.

He is a specialist in physics as well as in high performance analog and digital design. He graduated from the University Of Texas at Austin, USA.

WE MEASURE IT ALL

- FLEXIBLE
- FAST
- PRECISE

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LTTsmart

Technical Data

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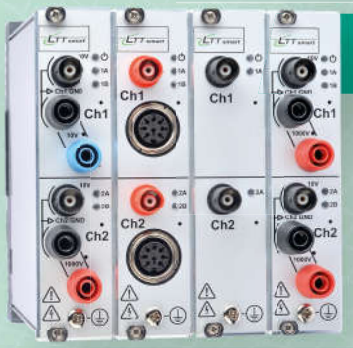
LTTsmart – Technical Data

2-channels per module: High precision data acquisition system incl. analog frontend

Technical Specifications – Optional Specifications marked with *

Specifications are subject to change without notice.



LTTsmart

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Available per Module

2-Channel high precision data acquisition system with 2 analog inputs:

- Synchronously sampling 2 MHz // 24 Bit ADC per channel (optional 4 MHz)
- ±500 mV, ±10 V, ±90 V*
- ±1000 Vrms*
- Extremely high precision: ±(0.015%·Signal + 0.015%·Range)
- ICP®/IEPE with 4 mA supply*
- Charge input*
- Pulse/Counter Inputs with 1.20 ns resolution*
- Strain-Gauge*
- 2.5 kV galvanic isolation

USB 3.0 Interface, Digital-I/O (3.3 V LVCMOS/LVTTL), LinkUp/LinkDown-Sync-Interface to cascade multiple devices

Size: ca. 146 x 31 x 140 mm³ (L x W x H) per module

Input Characteristics

	Range	Bandwidth 5 kHz	50 kHz	1 MHz
Dynamic Range	±1000 V	110 dB	104 dB	94 dB
	±90 V	113 dB	107 dB	96 dB
	±10 V	115 dB	109 dB	98 dB
	±500 m V	102 dB	94 dB	82 dB

	Range	effective bits	dB @ 125 kHz sampling rate
ENOB (THD+ noise)	±1000 V	typ 15.3 Bit	-95 dB
	±90 V	typ 15.5 Bit	-96 dB
	±10 V	typ 15.6 Bit	-97 dB
	±500 m V	typ 14.3 Bit	-89 dB

Input Characteristics

Max. Bandwidth	DC – 900 kHz (optional 1.7 MHz)
Filter	Analog: 900 kHz low-pass filter (optional 1.7 MHz) Digital: a variety of selectable filters
Inter-Channel Phase Difference	≤ 10 ns
Input Connectors	BNC, High Voltage Banana and/or DIN
Galvanic Isolation	2500 VDC
Volt Input Ranges	±500 mV, ±10 V, ±90 V*, ±1000 Vrms*
Volt Input Impedance	1MΩ_50pF, [10MΩ_5pF at ±1000 Vrms]*
Volt Input Couplings	single-ended (AC/DC) (AC available only at ±500 mV and ±10 V)

Signal Conditioning

ICP®/IEPE*	Constant current supply: 4 mA. Input coupling: AC and DC
Charge*	1 mV/pC, range: ±5 nC (optional up to ±500 nC) High-pass: 0.15 Hz auto charge clear; manual clear
Pulse/Counter Input*	Input signal: TTL Time resolution 1.20 ns (832 MHz)
Strain-Gauge*	Quarter (120 Ω, 350 Ω) / Half / Full Bridges Constant voltage supply: 0 ... 10 V

Operation Conditions

Power Supply	• 12-16 VDC (absolute max. rating 10-35 VDC) • 5 W typical per channel • external power supply: 100-240 VAC
Environmental Temperature	+10 °C to +30 °C
Operating System	Windows 7 / 8 / 10, Linux and others

Data Recording

RAM	64 MByte per channel 512 MByte RAM with 8 channels
Interface to PC	USB 3.0, USB 2.0
Recording Media	internal RAM, PC's hard disk

Data Transfer Rates

PC with USB	≥ 170 MByte/s (USB 3.0), 35 MByte/s (USB 2.0)

Number of Channels

max. No. of Devices	Any number of devices with up to 8 modules each (max. 16 channels per device)
Synchronization	Yes (max. delay between devices: ≤ 20 ns)
External Clock	1 input and 1 output with 3.3 V LVPECL
External Trigger	1 input and 1 output with 3.3 V LVCMOS/LVTTL
Digital in/out	8 inputs and 8 outputs with 3.3 V LVCMOS/LVTTL