

# Stand-Alone Recorder

Längere Aufzeichnungsdauer und flexiblere Messabschnitte !

**NEU ♦ NEW ♦ NEUF ♦ NOVEL ♦ NOVELLO**

► **16 Kanäle mit 100kHz Abtastfrequenz PC-unabhängig über einen Tag lang aufzeichnen!**

- Festplatte 160GB, optional auch 320GB
- Datenraten bis 19,6 Mbyte/s
- Summenabtastrate bis 9,8 MSample/s
- Burst mit 200Mbyte/s bzw. 100MSample/s
- Synchronisierung mehrerer Recorder
- Hohe Synchronisierungs-Genauigkeit (<10ns)
- LTTpro Software - bequeme Einstellung aller Parameter:
  - Bestimmen der Kanalanzahl
  - Trigger-Bedingungen
  - Aufzeichnungsdauer
- Bis zu 16 Einzelmessungen mit unterschiedlichen Parametern

► **LTT186 Transient Recorder**

- 1kSample/s bis 20MSample/s pro Kanal
- 16 Bit Auflösung ( $\leq 2,5$  MSample/s)
- Differenzielle Volt-Eingänge
- +/- 1 bis +/- 50V,
- optional +/-10V bis +/- 200V

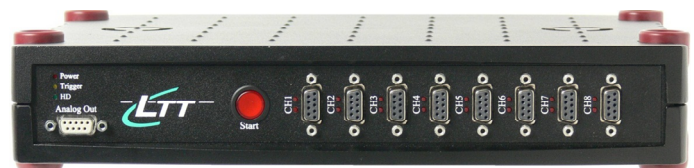
► **LTT182 SensorCorder**

- 31Sample/s bis 500kSample/s pro Kanal
- 16 Bit Auflösung
- Kombi-Eingangverstärker
- DMS ( $\frac{1}{4}$ -,  $\frac{1}{2}$ -, Vollbrücke)
- ICP
- Volt
- Galvanische Trennung

Die möglichen Aufzeichnungsdauern, Kanalanzahlen und Abtastfrequenzen zeigt die folgende Tabelle:



\*Aufzeichnungsdauer mit einer optionalen 320GB Festplatte berechnet. Mit der standard 160GB Festplatte ist es die halbe Zeit!



**LTT186**

8ch	7ch	6ch	5ch	4ch	3ch	2ch	1ch	Kanäle
1,0	1,4	1,6	1,8	2,1	3,1	4,2	8,3	MSample/s kSample/s
416kHz	556kHz	624kHz	716kHz	832kHz	1,3MHz	1,7MHz	3,3MHz	Bandbreite
5,1h	4,4h	4,6h	4,8h	5,1h	4,5h	5,1h	5,1h	Dauer *

**LTT182**

1ch	2ch	3ch	4ch	5ch	6ch	7ch	8ch	Kanäle
500,0	500,0	500,0	500,0	500,0	500,0	500,0	500,0	kSample/s
36kHz <sup>1</sup>	36kHz <sup>1</sup>	36kHz <sup>1</sup>	36kHz <sup>1</sup>	36kHz <sup>1</sup>	36kHz <sup>1</sup>	36kHz <sup>1</sup>	36kHz <sup>1</sup>	Bandbreite
85,3h	42,7h	28,4h	21,3h	17,1h	14,2h	12,2h	10,7h	Dauer *

16ch	16ch	16ch	16ch	16ch	16ch	16ch	16ch	Kanäle
24	25	30	35	40	50	104	520	kSample/s
9,6kHz	10kHz	12kHz	14kHz	16kHz	20kHz	41,6kHz	208kHz	Bandbreite
111,1h	106,7h	88,9h	76,2h	66,7h	53,3h	25,6h	5,1h	Dauer *

<sup>1</sup> Optional: Die Bandbreite des LTT182 SensorCorders kann auf DC-100kHz erweitert werden. Bitte bestellen Sie das Gerät in diesem Fall ohne galvanische Trennung der Kanäle!

LTT Tasler		Transientrecorder				SensorCorder			
LTT Tasler	Type	LTT 184/8	LTT 184/16	LTT 186/8	LTT 186/16	LTT 180/8	LTT 180/16	LTT 182/8	LTT 182/16
Recording Media	Recording Media	Memory	Memory	Hard Disk	Hard Disk	Memory	Memory	Hard Disk	Hard Disk
	Media Type	RAM		RAM + HDD		RAM		RAM + HDD	
	capacity	128 (optional 512MB)		160GB (optional 320GB)		128 (optional 512MB)		160GB (optional 320GB)	
	comment	Also recording on hard disk drive of connected computer is possible.							
Max. data transfer rate	Internal RAM	200MByte/s				16MByte/s			
	Internal HDD or Tape	-		19.6MByte/s		-		16MByte/s	
	PC (with SCSI)	17MByte/s				16MByte/s			
	PC (with USB)	11MByte/s				11MByte/s			
	comment	Transfer speed to computer hard disk depends on PC type, hard disk fragmentation, virus scanner software and ....							
Input characteristics	No. Of channels	8	16	8	16	8	16	8	16
	Max. No. of channels	4096				4096			
	Max. Bandwidth	DC - 6.5MHz (5ch, RAM) DC - 1 MHz (3ch, HDD) DC - 200kHz (16ch, HDD)				DC - 36kHz (16ch, HDD) (optional DC - 100kHz without galvanic isolator)			
	Quantisation	16-bit (400Hz - 1MHz); 12-bit (1.1 - 6.5MHz)				16-bit (400Hz - 500kHz);			
	External Quantisation Clock	YES; (Bandwidth = Clock / 2.5)				YES; (Bandwidth = Clock / 40)			
	Impedance	100kOhm (Optional 1MOhm, Input range 10V - 200V)				100kOhm			
	Connector	2x BNC per channel (single ended and differential)				Sub-D 9-pin			
	Input Protection	+/- 200V differential; +/- 100V single ended				+/-30V			
	Galvanic Isolation	-				+/- 200V (DC - 50kHz)			
Direct voltage Input	Range	+/- 1, 2, 5, 10, 20, 50 Vpk				+/- 0.125, 0.25, 0.5, 1, 2, 5, 10 Vpk			
	Coupling	DC / AC				DC / AC			
	DC offset	0%				+/- 250% of input range			
	Dynamic range	82dB (DC- 1MHz @ 16bit) 58dB (DC - 6.5MHz @ 12 bit)				72dB or better (0.1V - 10V)			
	Inter-channel phase difference	0.1° or less (DC - 20kHz) 0.5° or less (DC -100kHz)				1.1° or less (DC - 10kHz) 2.2° or less (DC -50kHz)			
	Crosstalk	-115dB or less (DC - 6.5MHz)				-90dB or less (DC - 200kHz)			
ICP Input	Range	-				+/- 0.125, 0.25, 0.5, 1, 2, 5, 10 Vpk			
	Power supply	-				18V / 0 - 10mA (in 0.5mA steps)			
	Dynamic range	-				72dB or better (0.1V - 10V)			
	Inter-channel phase difference	-				1.1° or less (DC - 10kHz) 2.2° or less (DC -50kHz)			
	Crosstalk	-				-90dB or less (DC - 200kHz)			
	Coupling	-				AC (Fc = 5Hz)			
Strain Gauge Input	Range	-				+/- 10, 20, 50, 100, 200, 500, 1000, 2000 mV			
	Bridge power supply	-							
	Constant Voltage	-				+/- 1, 2, 5, 10V			
	Constant Current	-				0- 10mA (in 0.5mA steps)			
	Bridge Type	-				Full, Half and Quarter-Bridge (with or without sense line)			
	Resistor	-				120 and 350 Ohm			
	Coupling	-				DC			
	Dynamic range	-				60dB or better (1 - 5mV) 66dB or better (10- 50mV) 72dB or better (100 - 500mV)			
	Inter-channel phase difference	-				1.1° or less (DC - 10kHz) 2.2° or less (DC -50kHz)			
Crosstalk	-				-90dB or less (DC - 200kHz)				
Auxiliary channels	Digital								
	No. Of channels	16				16			
	Max sample frequenz	20MHz (depends on analog sampling frequency)				500kHz (depends on analog sampling frequency)			
Trigger	No. of digital channel	8				1			
	Trigger on analog channels	Trigger on Level, Comparison, Region, Extrema in Region, Missing Event, Pre-Trigger				Trigger on Level, Comparison, Region, Extrema in Region, Missing Event, Pre-Trigger			
Mathe only on-line! not stand-alone!	Mathematik on analog channels	FFT, Filter, Smooth, dy/dt, dy²/dt², multiplication, addition, Histogram, Pulse width, Eff Value, Average, Integral				FFT, Filter, Smooth, dy/dt, dy²/dt², multiplication, addition, Histogram, Pulse width, Eff Value, Average, Integral			
	Save Mathe channels as additional analog channel	Yes				Yes			
Operation Conditions	Power Supply	9 - 36VDC / 100 - 240VAC; 60 - 80W consumption				9 - 18VDC / 100 - 240VAC; 80 - 120W consumption			
	Environmental Temperature	<b>Operation:</b> +10°C to +40°C ; <b>Storage:</b> -30°C to +75°C							
	PC Connection	SCSI-II-Interface, 8bit, 20MHz ULTRA; IEEE1394 400Mbit/s; USB 1.0; USB 2.0; Ethernet 10/100/1000							
	Operation System	Win2000; WinXP SP1; WinXP SP2; Win Vista; Win 7							
Dimensions	Front-End all systems:	Height: 63 mm,		Width: 325 mm,		Depth: 280 mm,		Weight: approx. 4.5 kg	
Dimensions	Power supply Front-End	Height: 44 mm,		Width: 75 mm,		Depth: 166 mm,		Weight: approx. 660 g	
Dimensions	19" Rack	Channels: 32,		Height: 3 HE,		Width: 500 mm,		Depth: 460 (490) mm,	
Dimensions	Power Supply for 19" Rack	11 - 13VDC / 100 - 240VAC; 120 - 160W consumption				11 - 13VDC / 100 - 240VAC; 160 - 240W consumption			
Version 2.0		Subject to change without notiz: 01.2011							