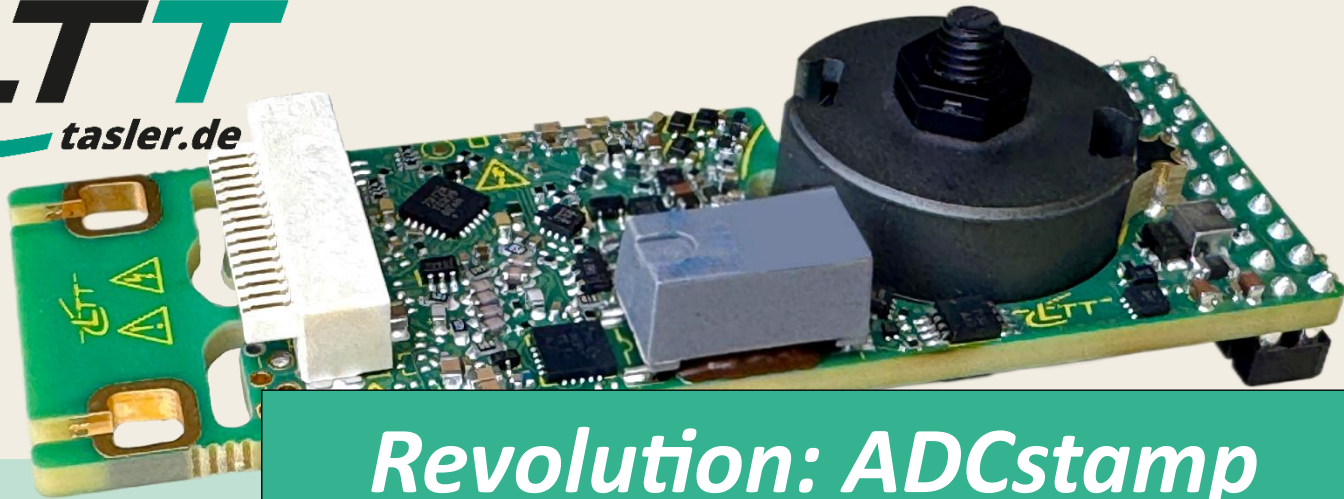




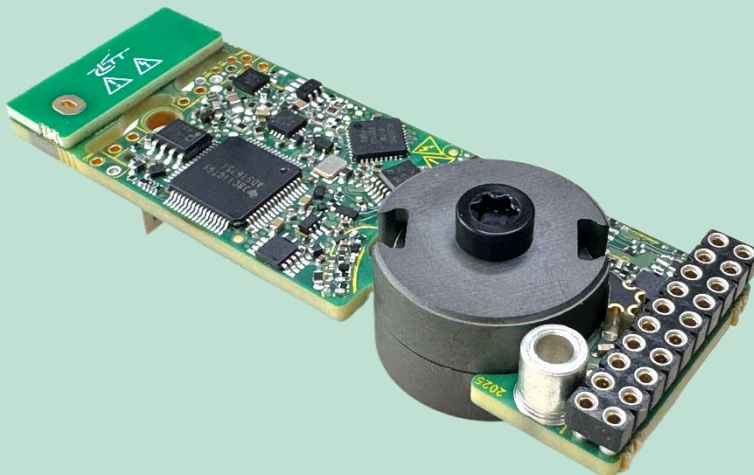
Revolution: ADCstamp

ADCstamp – Compact AD Converter Module for Seamless FPGA Integration

Engineered for precision. Designed for speed. Built for integration.

The **ADCstamp** is the ideal building block (**AD System-on-Module**) for developers who need to integrate high-speed **precision measurement channels**—such as for power analysis of electric motors—into existing or new FPGA/CPU designs, without having to deal with the complexities of analog and digital signal path design.

The **5 kV galvanic isolation** ensures safe operation in all high-voltage applications. Clear design guidelines, FPGA source code examples, and fully equipped starter kits enable commissioning within minutes.



Größenvergleich

In short: ADCstamp delivers outstanding precision, rapid response times, and reliable measurements — a revolutionary solution for science and engineering.

- **24 Bit** ADC with **4 MS/s** sampling rate
- Integrated **preamplifiers** for up to **±1.5 kV** input range
- Industry-leading **low noise** and **minimal distortion**
- **5 kV** reinforced galvanic isolation (1000V CAT II)
- **Integrated sensor excitation: 0 to 5 mA** (DAC adjustable)
- Complete **FPGA starter kits** available

ADCstamp® LTT1675A V3.0 2025:

Technical Specifications

Analog Input	Characteristics
Quantization	24 Bit
Max. sample rate per channel	4 MSample/s/ch
Max. Bandwidth per channel	DC – 1.7 MHz
Filter	Analog: 1.7 MHz low pass filter. Digital: selectable
Volt Input Ranges	$\pm 250 \text{ mV} \dots \pm 1500 \text{ V}$ depending on external resistor
Volt Input Impedance	external resistor: $10 \text{ k}\Omega \dots 10 \text{ M}\Omega$
Volt Input Couplings	- Single-Ended with 3 gains (selectable by software) - Differential-Ended with 1 fixed gain
Galvanic Isolation	$\pm 5000 \text{ V}$
Dynamic range Bandwidth	5 kHz = 114 dB 50 kHz = 114 dB 1 MHz = 96 dB
ENOB (THD + noise) effective Bits dB @ 125 kHz Sample Rate	typ 14.8 Bit -90 dB
IEPE (ICP®) (optional)	Constant Current Supply: $0 \dots 5 \text{ mA}$ Input Coupling: external AC or DC
Power Supply	$V_{\text{sup}} = 12 \text{ VDC} \pm 5\%$, 2 W typical $V_{\text{dd}} = 2.5 \text{ VDC} \dots 5.5 \text{ VDC}$, 0.3 W typical
Environmental Temperature	$+1 \text{ }^{\circ}\text{C}$ to $+50 \text{ }^{\circ}\text{C}$
Sample Clock Input	16 MHz ... 32 MHz
DCDC Clock Input	1 MHz ... 2 MHz (= 1/8 of Sample Clock)
Dimensions	25.4 (w) x 76.0 (l) x 15.6 (h) mm
Specifications are subject to change without notice	V3.0

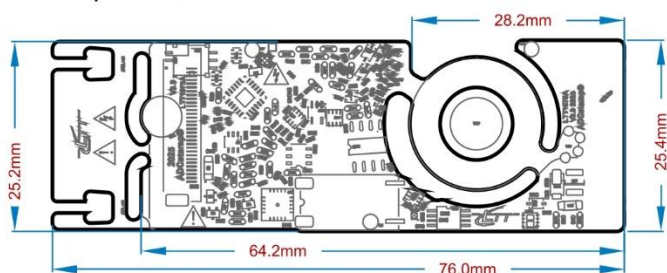
Top View:



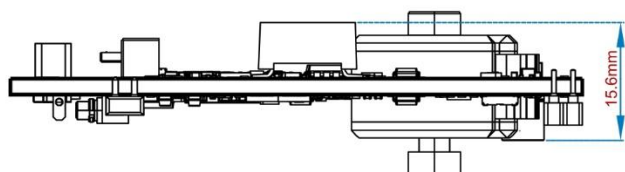
Bottom View:



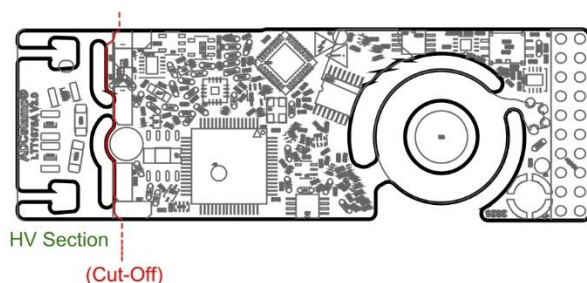
Top View:



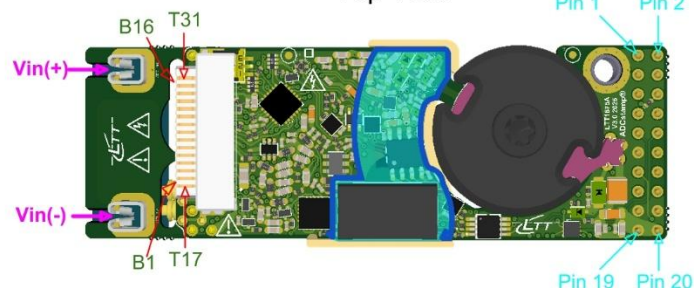
Side View:



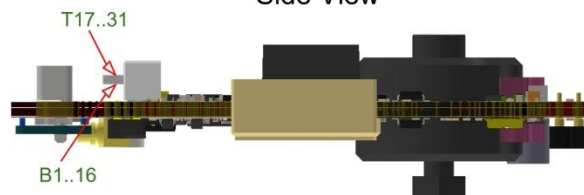
Bottom View:



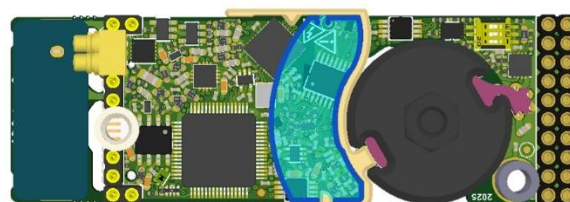
Top View



Side View



Bottom View

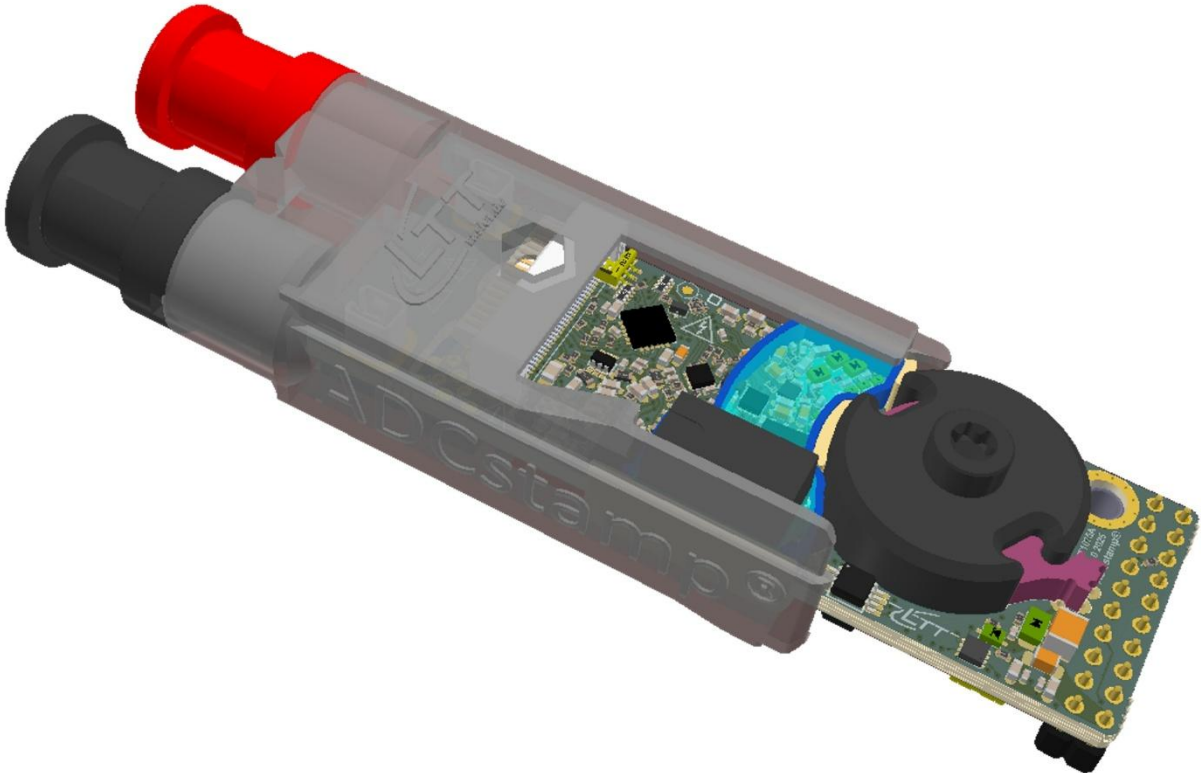


Primary Connector: Pinout

Description	Name	Pin	Top View	Pin	Name	Description
IO: max 400kHz, Lo<0.8V, 2V<Hi<Vdd	I2C_SDA	1		2	I2C_SCL	IN: max 400kHz, Lo<0.8V, 2V<Hi<Vdd
Connect to protective housing	Chassis	3		4 *	Vdd	Primary Digital Supply: 3.1V < Vdd < 3.5V
OUT: LVDS_P serial shift clk/2 ($\leq$ Vdd)	ADCsclk_P	5		6	ADCsclk_N	OUT: LVDS_N serial shift clk/2 ($\leq$ Vdd)
OUT: LVDS_P data ready ($\leq$ Vdd)	ADCdrdy_P	7		8	ADCdrdy_N	OUT: LVDS_N data ready ($\leq$ Vdd)
OUT: LVDS_P serial data out ($\leq$ Vdd)	ADCdout_P	9		10	ADCdout_N	OUT: LVDS_N serial data out ($\leq$ Vdd)
Primary GND level (for Vsup and DigIO)	GNDprim	11		12	DCDCclk	IN: Lo<0.4V, 0.8V<Hi<5.5V, SampleClk/8
OUT: CMOS digital input @ isolated side	Digital_In	13		14	nADCstart	IN: ADCstart of ADS1675 ($\leq$ Vdd)
IN: LVDS_P SampleClk $\leq$ 32MHz ($\leq$ Vdd)	SampleClk_P	15		16	SampleClk_N	IN: LVDS_N SampleClk $\leq$ 32MHz ($\leq$ Vdd)
Primary GND level (for Vsup, Vcc, Vdd)	GNDprim	17		18	GNDprim	Primary GND level (for Vsup, Vcc, Vdd)
Primary Supply Voltage: 12VDC +/- 5%	12 Vsup	19		20	12 Vsup	Primary Supply Voltage: 12VDC +/- 5%

Connector 2.54mm grid: 2 x 10 contacts. WPro 254-020-3-50-00 (mates with Samtec MTLW-110-05-G-D-160)

High Voltage Assembly with HV-Insulation:



WE **MEASURE** IT ALL

● **FLEXIBLE**

● **FAST**

● **PRECISE**



Labortechnik Tasler GmbH

Friedrich-Bergius-Ring 15
97076 Würzburg
Germany

kontakt@tasler.de
+49 931 359 610
www.tasler.de