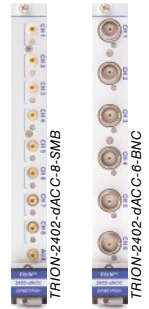


## TRION-2402-dACC

- **Sampling:**
- **Input types:**
  
- **Additional feature:**

## Differential multi-function input module

24 bit; 204.8 kS/s per channel  
 Voltage measurement from  $\pm 30$  mV to  $\pm 70$  V<sub>DC</sub> ( $46.7$  V<sub>RMS</sub> AC)  
 IEPE  
 Resistance  
 Current (using external shunt)  
 AUX socket



TRION-dACC specifications					
Input channels	8 using SMB sockets (TRION-2402-dACC-8-SMB) 6 using BNC sockets (TRION-2402-dACC-6-BNC)				
AUX socket (SMB version)	Selectable: Camera trigger, external trigger, CAL-port				
Sampling rate	204.8 kS/s per channel				
Resolution	24 bit				
Rated input voltage (max.)	70 V <sub>DC</sub> (46.7 V <sub>RMS</sub> )				
Input ranges					
Voltage	$\pm 30, \pm 100, \pm 300$ mV, $\pm 1, \pm 3$ V, $\pm 10$ V, $\pm 30$ V, $\pm 100$ V				
IEPE®	$\pm 100, 300$ mV, 1 V, 3 V, 10 V				
Resistance	10, 30, 100, 300 $\Omega$ , 1, 3, 10, 30, 100, 300, 1000 k $\Omega$				
Current	Depending on external Shunt				
Voltage input accuracy	$\pm 0.02$ % of reading $\pm 0.02$ % of range $\pm 200$ $\mu$ V				
Gain drift	typical 10 ppm/°C max. 20 ppm/°C				
Offset drift	typical 0.3 $\mu$ V/°C + 10 ppm of range, max 15 $\mu$ V/°C + 20 ppm of range/°C				
linearity	typical 0.01 %				
Input impedance					
Range $\leq 10$ V	10 M $\Omega$				
Range $> 10$ V	2 M $\Omega$				
Input bias current	$< 1$ nA				
Input configuration	Single ended or differential (programmable)				
Input coupling	DC, AC (0.16 Hz, 0.5 Hz, 3.4 Hz, 10 Hz)				
Sensor fault detection for IEPE®	short circuit and open sensor detection with LED indication				
Excitation current	0.1 to 24 mA <sub>DC</sub> (programmable, 16 Bit DAC, 2 Ranges)				
Accuracy	0.05% $\pm 2$ $\mu$ A				
Drift	15 ppm/°C				
Compliance voltage	23 V				
Output impedance	$> 10$ M $\Omega$				
Supported sensors	IEPE® (up to 24 mA excitation) Resistance Resistance Temperature Detection: Pt100, Pt200, Pt500, Pt1000, Pt2000				
Counter Channels	2 Counter channels, linked to analog input Channel 1 and Channel 2				
Counter modes	Event counting; Periodic; Frequency; Pulsewidth; Duty cycle				
Trigger Level	Trigger and retrigger level freely programmable within analog input range				
Counter input bandwidth	1 MHz				
Typical SNR	Range	100 mV	1 V	10 V	100 V
100 S/s $\leq$ fs $\leq$ 1 kS/s		97 dB	111 dB	112 dB	112 dB
10 kS/s $<$ fs $\leq$ 102.4 kS/s		87 dB	104 dB	107 dB	104 dB
102.4 kS/s $<$ f $\leq$ 200 kS/s		80 dB	81 dB	81 dB	81 dB
Spurious free dynamic range range		10 mV	100 mV	1 V	10 V
100 S/s $\leq$ fs $\leq$ 1 kS/s		124 dB	139 dB	140 dB	139 dB
10 kS/s $<$ fs $\leq$ 102.4 kS/s		118 dB	134 dB	134 dB	134 dB
102.4 kS/s $<$ f $\leq$ 200 kS/s		116 dB <sup>1)</sup> / 110 dB	131 dB <sup>1)</sup> / 112 dB	132 dB <sup>1)</sup> / 110 dB	131 dB <sup>1)</sup> / 112 dB
Typical CMRR	$\leq 10$ V Range	100 dB @ 50 Hz	100 dB @ 1 kHz		
	$> 10$ to 200 V Range	90 dB @ 50 Hz	70 dB @ 1 kHz		
Analog anti aliasing filter	2 <sup>nd</sup> order Bessel, automatically set by sample rate				
Sample rate $\leq$ 1kS/s	2.5 kHz (-3 dB), 1.5 kHz (-1 dB)				
Sample rate $\leq$ 10kS/s	25 kHz (-3 dB), 15 kHz (-1 dB)				
Sample rate $>$ 10kS/s	250 kHz (-3 dB), 150 kHz (-1 dB)				
Bandwidth (-3 dB digital filter)					
1 kS/s $\leq$ fs $\leq$ 51.2 kS/s	0.494 fs				
51.2 kS/s $<$ fs $\leq$ 102.4 kS/s	0.49 fs				
102.4 kS/s $<$ fs $\leq$ 204.8 kS/s	0.38 fs				
Crosstalk fin 1 kHz [10 kHz]	120 dB [105 dB]				
Channel to channel phase mismatch	$< 60$ nsec between channels using the same range				
Common mode voltage	$\pm 200$ V <sub>DC</sub> (input range $>$ 10 V), $\pm 12$ V <sub>DC</sub> (input range $\leq$ 10 V)				

→ continued on next page ...

<sup>1)</sup> For safety reasons maximum allowed voltage: 70 V<sub>DC</sub> (46.7 V<sub>RMS</sub> AC)

Over voltage protection	200 V peak input to GND
Supported TEDS chips	DS2406, DS2430A, DS2431, DS2432, DS2433
Power consumption <sup>2)</sup>	
Voltage mode; no excitation	6 W
IEPE® mode 4 mA	6.5 W
IEPE® mode 16 mA	9.5 W
IEPE® mode 24 mA	11.4 W
Weight	Appr. 210 g (SMB version), appr.270 g (BNC version)
<sup>1)</sup> below 0.22 fs	
<sup>2)</sup> Consider maximum power supply of your DEWE2 chassis.	

### Cables for TRION-2402-dACC modules

TRION cables				
	Connector	Termination	Length	TRION modules
TRION-CBL-SMOE-05-00	SMB	open end	5 m	TRION-x-dACC-x-SMB
TRION-CBL-SMBN-01-00	SMB	BNC cable socket	1 m	TRION-x-dACC-x-SMB

