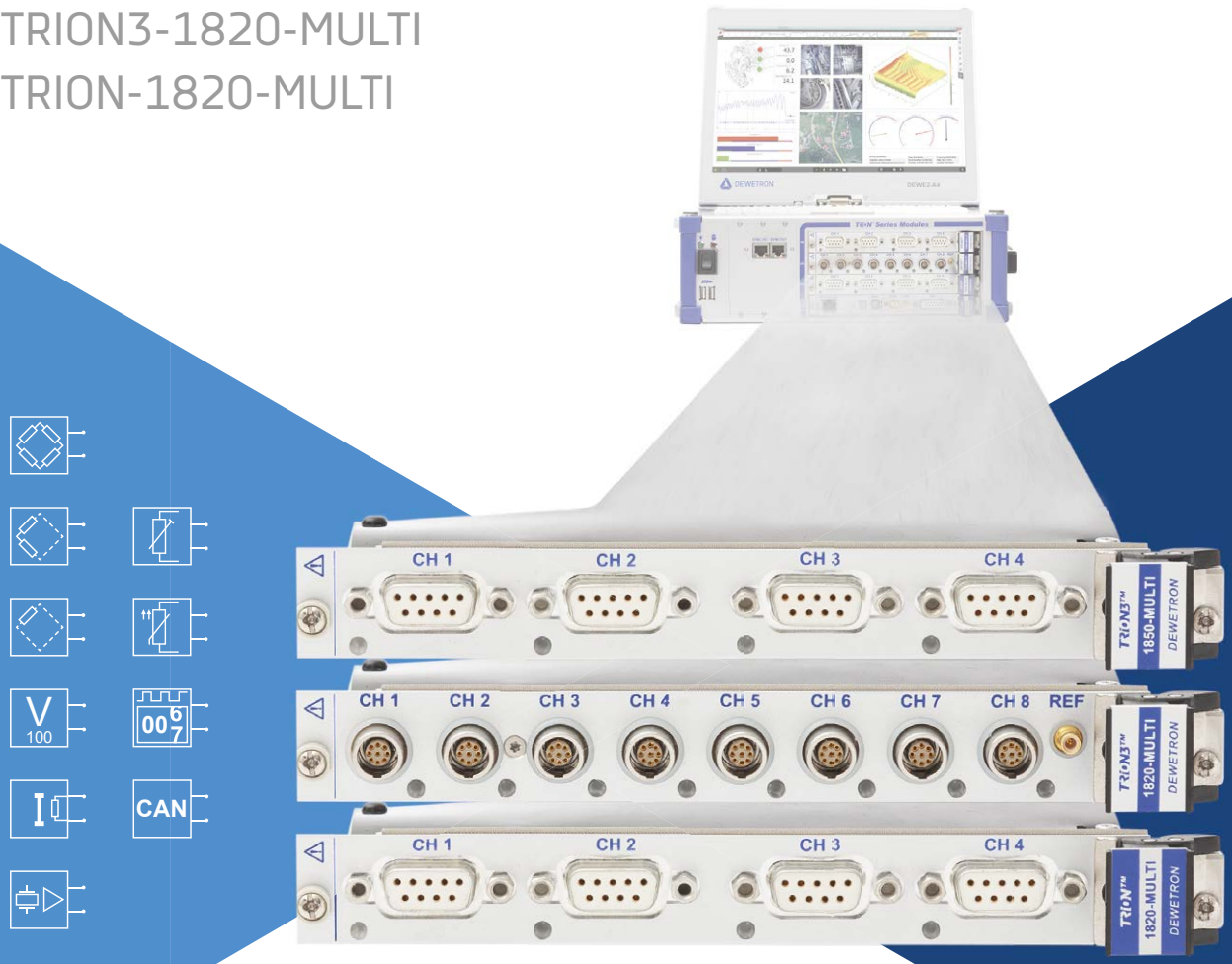
DEWETRON

MULTIFUNCTIONAL HIGHSPEED MODULES

5 MS	2 MHz	140 dB
Sample rate	Bandwidth	Dynamic

TRION3-1850-MULTI
TRION3-1820-MULTI
TRION-1820-MULTI



THE MEASURABLE DIFFERENCE.

HIGHSPEED ISOLATED & UNIVERSAL

ISOLATED HIGHSPEED DATA ACQUISITION FOR EVERY SENSOR & EVERY APPLICATION

Looking for a future-proof solution which offers the flexibility for tomorrow with no drawbacks?
Then the TRION-18xx-MULTI series is the best product for you.

It can primarily be used, where precision, speed and dynamic is needed, like mechanical structure analysis, vibration and shock testing as well as any other measurement task.

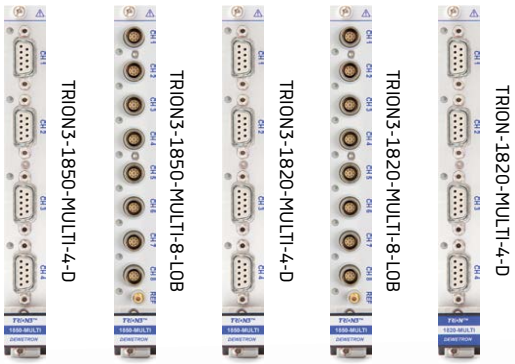
Compatible with our brand new DEWE3-series to achieve the highest performance of 5 MS/s or with DEWE2 series for highspeed applications with a limited number of inputs.

10+ measurement modes for almost every sensor and application:
> 9 native modes: bridge, voltage, current, IEPE, resistance, potentiometer, temperature (RTD), counter and CAN
> MSI compatibility for charge, thermocouple and LVDT input

The most user friendly data acquisition software OXYGEN will lead you to very quick and reliable measurement results.

5 MODULE TYPES

Choose one of the 5 different modules to maximize channel density, practicability and speed.
The TRION-1820-MULTI-4-D can be used in every DEWE2 and DEWE3 chassis, all other models require the new DEWE3-series, which unleashes the highest performance even at high channel count.



CAN
CAN
Highspeed CAN2.0

Voltage
0.1 mV to 100 V

IEPE
Vibration
Microphone
Excitation 2 to 20 mA

Modular Smart Interfaces
Charge
Thermocouple
LVDT, RVDT

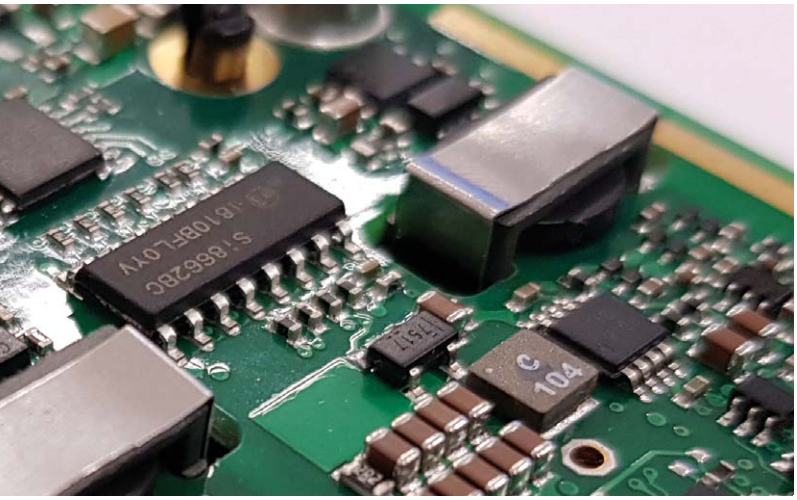
Bridge
Full, half, quarter
120 / 350 / 1000 Ω

RTD
Pt100, Pt1000, ...

Current
±30 mA

Counter

Resistance
10 Ω to
30 kΩ



ISOLATED HIGHSPEED INPUTS

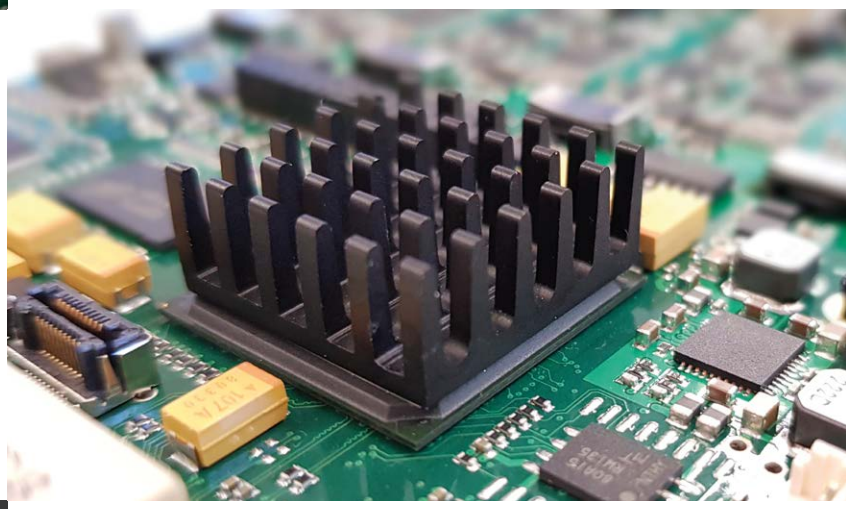
5 MS /s/ch

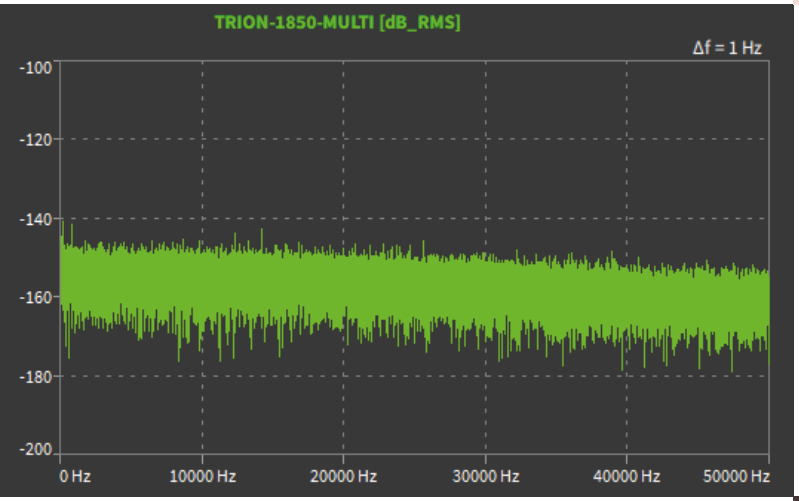
2 MHz Bandwidth

The TRION-18xx-MULTI modules
are 10x faster than any other similar modules on the market.
> Up to 5 MS/s simultaneous sample rate
> 2 MHz analog bandwidth
> Continuous data streaming to application and disk
> Channel to channel, channel to ground, both isolated (350 V)
> Compatible with DEWE2 (2 MS/s) and DEWE3 (5 MS/s)

ONBOARD FILTERING AND SIGNAL PROCESSING

To provide excellent signal to noise ratio and aliasing free data,
we equipped the module with:
> Analog anti-aliasing filter
> Precise lowpass filter in DSP with Bessel and Butterworth characteristic up to 8th order with feely programmable cutoff frequency
> AC-coupling programmable (0.16 Hz to 100 Hz)
> Linearization of RTD and thermocouple sensors





ULTRA-LOW NOISE AND DISTORTION

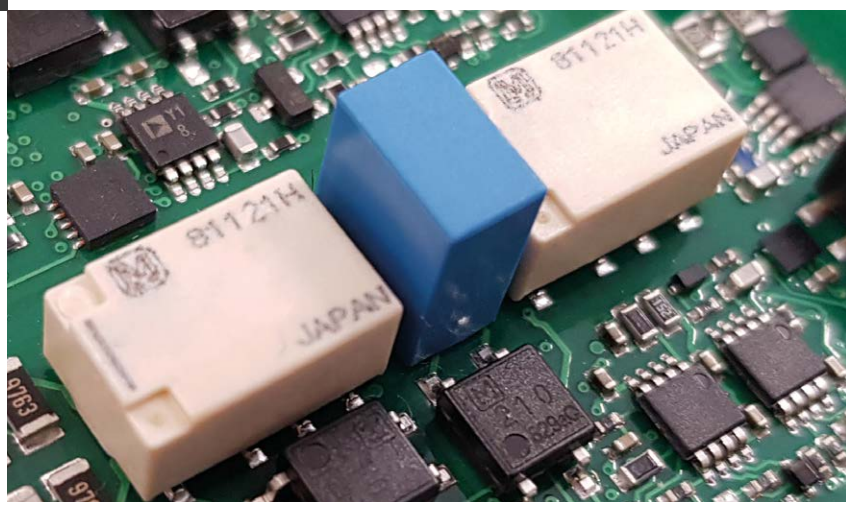
-108 dB THD

140 dB Dynamic

Analog circuit design and AD-conversion
at a glance. Better performance than any
other 24-bit high-speed measurement system.
> Outstanding dynamic range (140 dB)
> Highest accuracy also for AC
> Market leading number of effective bits
> Best solution for analysis of dynamic signals in mechanical structure analysis
> THD -108 dB at 1 kHz

POWERFUL EXCITATION

Voltage and current controlled sensor excitation for almost
every sensor type. There is enough power to supply also high
demand sensors:
> 0 to 24 V with up to 100 mA (max. 0.5 W)
> 0.1 to 60 mA with up to 24 V (>20 mA: 10 V)
> Highest accuracy of 0.02%
> No power sharing between individual inputs



GENERAL SPECIFICATIONS

INPUT CHANNELS

4 ch DSUB connector	TRION-1820-MULTI-4-D	2 MS/s @ 24-bit
	TRION3-1820-MULTI-4-D	2 MS/s @ 24-bit
	TRION3-1850-MULTI-4-D	5 MS/s @ 18-bit, 2 MS/s @ 24-bit
8 ch 0B LEMO connector	TRION3-1820-MULTI-8-L0B	2 MS/s @ 24-bit
	TRION3-1850-MULTI-8-L0B	5 MS/s @ 18-bit, 2 MS/s @ 24-bit

INPUT TYPES	RANGES	SUPPORTED SENSORS
Voltage	±0.1 mV to ±100 V freely programmable	-
IEPE®	±100 mV to ±10 V freely programmable	IEPE® sensors
Bridge	1 to 1000 mV/V	4-, 5-, 6-wire full bridge; 3-, 4-, 5-wire ½ bridge; 2-, 3-, 4-wire ¼ bridge; 120 / 350 / 1000 Ω
Resistance	10 Ω to 30 kΩ	Potentiometer, resistance temperature detection: Pt100, Pt200, Pt300, Pt500, Pt2000 (2-, 3-, 4-wire)
Current	±30 mA	4 to 20 mA sensors; loop powered sensors
CAN	-	CAN 2.0
MSI	MSI-BR-CH-x: 500 to 50000 pC MSI-BR-TH-x: various TC ranges MSI-BR-LVDT	LVDT, RVDT, charge output and thermocouple sensors
Voltage input accuracy ≤10 V	DC 0.1 Hz to 10 kHz 10 kHz to 50 kHz 50 kHz to 100 kHz	±0.02 % of reading, ±0.02 % of range ±20 µV ±0.02 % of reading, ± 0.02 % of range ±20 µV ±0.1 % of reading, ± 0.02 % of range ±20 µV ±0.5 % of reading, ± 0.02 % of range ±20 µV
Input impedance	Differential (100 MΩ or 1 MΩ), Single ended (50 MΩ)	
Input coupling	DC / AC (highpass filter 0.16 Hz to 100 Hz freely programmable)	
Spurious free dynamic range (10 V range)	1 kS/s to 200 kS/s: 140 dB	

SCALABLE INSTRUMENTS

Choose from different chassis for different channel count.

Up to 8 channels

Up to 32 channels

≥ 32 channels

DEWETRON

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ABOUT DEWETRON

DEWETRON is an Austrian manufacturer of precision Test & Measurement Systems designed to help our customers make the world more predictable, efficient and safe. Our strengths lie in customized solutions that are immediately ready for use while also being quickly adaptable to the changing needs of the test environment and sophisticated technology of the Energy, Automotive, Transportation and Aerospace industries.
More than 30 years of experience and innovation have awarded DEWETRON the trust and respect of the global market.

There are more than 25,000 DEWETRON measurement systems and over 400,000 measurement channels in use in well-known companies worldwide. Choosing DEWETRON means, having a partner by your side who accompanies you every step of the way.
DEWETRON employs over 120 people in 25 countries and is part of the TKH Group, a global corporation, that specializes in the development and supply of innovative solutions worldwide. DEWETRON quality is certified in compliance with ISO9001, ISO14001 and ISO17025.