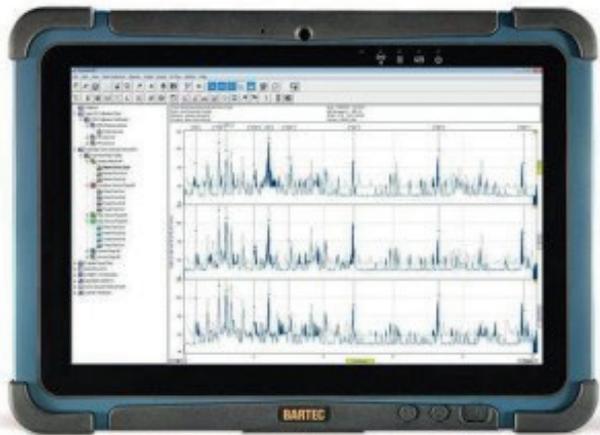


Portable vibration monitoring system for Hazardous areas



DP-2H Data Acquisition Module - 4 channel simultaneous data collection

4 simultaneous sampled, fully phase matched, ICP programmable .TRIO™ recognizes that computer technology is rapidly changing. Its distributed system configuration allows the tablet PC component to be replaced or upgraded for a small fraction of the cost of replacing a traditional vibration data collector. It communicates with the controller tablet via bluetooth.

Friendly user interface

The TRIO™ line of data acquisition products includes the powerful, Windows OS industrial tablet computers. TRIO uses a robust Bluetooth® connection and includes a solid state hard drive, bright sunlight readable touch screen and Wi-Fi access allowing TRIO to communicate with your desktop or networked PCs and servers. TRIO's user interface provides you more capabilities, better ease of use, and allows you to bring your other Windows PDM and Office productivity applications into the field.

Lower Cost and Flexibility of Ownership

TRIO™ recognizes that computer technology is rapidly changing. Its distributed system configuration allows the tablet PC component to be replaced or upgraded for a small fraction of the cost of replacing a traditional vibration data collector.

Ergonomy, reliability and safety above all

There is no safer vibration data collector on the market. TRIO's ergonomic design allows more efficient and safer use of the data collector around dangerous and difficult to access machinery. Machines can be tested from safe and secure distances from rotating machine locations using the integral Bluetooth® communication. Its modular design helps keep technicians hands-free and untethered from the machine for improved safety.

TRIO HA10 with StandardALERT™: Portable vibration monitoring system with Triaxial accelerometer - for Hazardous areas

Limitless solution for Industrial applications!

- HAZLOC-Rated for Class 1, Division 2, Group A, B, C, D, T4 A
- Spectrum and Time Waveform analysis (up to 25 600 lines)
- Automated peak search algorithm: harmonics, normalisation and side bands, forcing frequencies
- Envelope analysis
- Orbits, filtered orbits analysis
- Bode plots
- Nyquist diagram
- Demod Spectrum, Impact demod
- Cepstrum analysis
- FFT window functions: Hanning, Hamming, Rectangular, Flattop
- Run-up – Coast-down: Spectral waterfall, Bode-Peak & Phase, Peak Hold
- Simultaneous data acquisition
- Time synchronous sampling
- Speed measuring on channel 4. (or other process parameter)
- Unique measuring range: 0,5 Hz – 40 000 Hz
- It is modular so you are able to upgrade the system (if you would like to buy a new controller tablet for example)
- Triaxial sensor, sensibility: 100 mV/g
- StandardAlert™ analyst software with User friendly interface
- 10" touch screen is readable even in strong sunlight



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Specifications*

HAZLOC COMPLIANCE SPECIFICATIONS

Controller:

- Ex protection type
- ATEX II 3G Ex ic IIA/IIC T5 Gc,
- ATEX II 3D Ex ic IIIB T90 °C Dc IP 54»» (IIA when using hand strap)
- IECEx: Ex ic IIA/IIC T5 Gc, Ex ic IIIB T90 °C Dc IP 54
- »» (IIA when using hand strap)
- UL Class I Div. 2 Groups A, B, C, D T4 A

Data Processor:

- Class 1, Division 2, Groups A, B, C, D, T6
- Conforms to UL STD 61010-1 & ISA STD 1212.01
- Certified to CSA STD C22.2 Nos. 61010-1 & 213

Triaxial Accelerometer:

- CSA: Ex ic IIC T4 Class I, Div.2, Groups A, B, C, D
- CSA: AEx ic IIC T4 Class I, Div.2, Groups A, B, C, D
- ATEX: Ex ic IIC T4 Gc, Ex nA IIC T4 Gc

SYSTEM OVERVIEW

- Triaxial vibration data collector
- Industrial Windows 7 Professional tablet PC controller
- Wireless, modular-designed data acquisition unit (TRIO DP-2H)
- Optional handheld laser tachometer (non-HAZLOC rated)
- Flexible carrying options
- HA10 includes embedded ExpertALERT (no host software required)
- HA10 includes embedded ALERT™ onboard analysis software (requires hosted ExpertALERT, ExpertALERT Cloud-subscription, or StandardALERT)
- Sybase® 12 SQL database engine
- Survey File Transfer Exchange or optional ALERT replication for synchronization over multiple devices or ALERT systems
- Battery life up to six hours on the controller, 13 hours with extended option
- Ergonomic design for efficient and safer use over traditional data collectors
- 4-plane machine in-place balancing and advanced analysis options available

USER INTERFACE / DURABLE TABLET CONTROLLER

Physical

- Size: 10.7" x 7.76" x 0.75" (271.8mm x 197.2mm x 19mm)
- Weight: 2.6 lbs (1.5 kg)

Environmental

- Operating Temperature (non-Hazardous): -20C to +60C;
- Operating Temperature (Hazardous areas): -20C to +50C
- Storage Temperature: -30C to +70C
- Humidity: 30% ~ 90% (non-condensing)

Durability

- MIL-STD-810G (516.6, IV), Protection class IEC 60529
- IP65 rated; water, dust, water protection

Processor/Operating System

- Intel® quad-core BayTrail-M 1.8 GHz Processor
- 8 GB SODIMM DDR3L-1600 System Memory
- 128 GB MLC Solid State Drive (SSD), mSATA
- Genuine Windows® 7 Professional (64-bit)

Battery1

- Lithium-polymer battery: 5300 mAh capacity
- Battery capacity: up to 6 hours
- Optional Extended-life battery: 10600 mAh capacity
- Battery capacity: up to 13 hours
- Charging: 100-240V, 50-60Hz, DC 19V

Communication

- Wireless LAN IEEE802.11ac a/b/g, n
- Integrated Bluetooth® 4.0

* Specifications are subject to change without notice

(1) Battery life varies by configuration, application, features utilized, and operating conditions. Maximum battery life decreases with time and use. Battery life estimated by average use.

Under protective cover - for use only in safe area:

- 1 x Micro HDMI
- 1 x 30 pin Combo connection (Giga-LAN or RS232)
- 1 x USB 3.0
- 1 x Audio Combo connection (Mic in/Line Out)
- 1 x Power Jack (DC)
- 1 x Micro SD Slot

Keys:

- 1 x power, 1 x home, 2 x programmable function keys, 2 x volume keys

Cameras:

- Rear 5 MP camera + LED flash, Front 2.0 MP
- 10.1" Wide (LED backlit, 1920x1200)

Display:

- Bonded and Touch, 10.1", 1920 x 1200 pixels

TRIO DATA ACQUISITION / PROCESSOR(DP-2H)

Inputs

- 4 simultaneous sampled, fully phase matched, ICP programmable
- Other Coupling: AC (for proximity probe connections)
- AC Input Voltage Range: +/- 10V
- AC Bandwidth: 0.5Hz to 40 kHz
- DC Bias/Gap Measurement: +/- 25V range for ICP bias voltage check and proximity probe gap measurement
- Measurements: Acceleration, velocity (by hw integration), bearing demodulation (accelerometers), and displacement (proximity probes)
- Gain Ranges: Gain steps 1, 2, 4, 10, 20, and 50
- Digital trigger input: External trigger, tachometer speed, ordered data (by phase-lock-loop)

Processing

AC Measurements

- ADC: 24-bit sigma-delta, simultaneous on four AC channel inputs, better than 104 dB dynamic range
- Sampling Rates: 64Hz to 102.4kHz
- Bandwidth Ranges: 0.5Hz-25Hz, 0.5Hz-40kHz, protected by anti-alias filters
- Data Block Lengths: 64 to 400,000 samples
- Spectral Lines: Up to 25,600
- Noise Floor: Less than 0.2 micro-volts per root Hz from 0.5 to 1000kHz

DC Measurements

- ADC: 16-bit multiplexed for bias voltage, process, and probe gap measurements, 0 - 10kHz Bandwidth

Analysis Capabilities

- Dynamic Analysis: Overall, Spectra, Waveform, Phase and Speed
- Cross-channel: Cross-power, Transform Function, Coherence, Phase and Magnitude
- Demodulation Function: Digital amplitude demodulator and Impact Demodulation for low speed detection
- Averaging: RMS, Exponential, Peak Hold, Order Tracking, Synchronous Time, and Negative Averaging
- Number of averages: 1-1000
- FFT Window Function: Hanning, Hamming, Rectangular, Flattop

Communication with TRIO Tablet Controller

- Wireless: Bluetooth v2.0 with EDR (1.5Mbps max)
- Wired: USB user port (includes data stream and remote power to DP)

Power

- Charging rate: 0.5A from USB PC input,
- 1.0A from USB wall power adapter (8 hrs)
- Battery life: 10 hours, normal use

Physical

- Dimensions: 157mm x 92mm x 46mm,
- Weight: 450g
- Operating Temperature: -10C to +60C
- Sealing: IP-65; polycarbonate and nylon
- Compliance: CE, ETL Listed
- Humidity: MIL-STD-810G

