

# TRIO® H8-SERIES



HX8 HAZLOC Diagnostic Data Collector / Expert Analyzer

HA8 HAZLOC Vibration Data Collector / Field Analyzer



- ✓ HAZLOC
- ✓ LONG-LIFE
- ✓ LIGHTWEIGHT

## HAZLOC TRIO® H8-Series is right size for a long day.

The Hazardous Location environment has met its match! The TRIO H8 provides the **best-in-class battery life** to get through a long day in the harshest plant environments while maintaining a light and rugged, ergonomic style.

The 8" tablet is designed to fit comfortably in one hand! The **TRIO H8 is less than 2 lbs. and less than 1" thick**, with a concave, non-slip case that makes it easy to grip. The brilliant 8.1" capacitive-touchscreen is incredibly rugged with minimal glare and has four advanced touch modes for rain, gloves, pen, and digitizer operation.

With **Windows® 10 Enterprise** installed, you are ready to connect the TRIO H8-Series to your network or operate as a stand-alone device, supporting your productivity applications and multiple language options.

TRIO is **WATCHMAN™** Portal-enabled and ready to connect to the hosted, WATCHMAN Data Center for unparalleled program visibility and infrastructure.

### FEATURES INCLUDE

- 8.1" LCD Capacitive Touchscreen with digitizer stylus pen, rain-mode or glove-mode operation.
- 10-hour standard battery, plus optional 10-hour SnapBack add-on battery packs.
- Powerful Intel® Quad-core Atom™, 1.6 GHz Processor, 4GB LP DDR3 RAM, and 128 GB SSD for the ultimate performance.
- Modular Bluetooth® integration with TRIO DP-2H data acquisition hardware for simple and safe in-field vibration data collection.
- **Optional Total TRIO®** database hosting, included diagnostic software and feature upgrades, analytical second opinions, plus 3-years all-inclusive service and support included.

# TRIO® H8-SERIES

Vibration Data Collector // Field Analyzer

## SYSTEM OVERVIEW

- Triaxial vibration data collector
- Industrial Windows 10 Enterprise 64-bit (CBB) tablet PC controller
- Wireless, modular-designed data acquisition unit (DP-2H)
- Optional handheld laser tachometer
- Safe, flexible carrying options
- HX8 includes embedded ExpertALERT™ (term license)
- HA8 includes embedded ViewALERT™ onboard analysis software (requires ExpertALERT, StandardALERT™, or WATCHMAN™ Reliability Portal)
- Survey File Transfer Exchange or optional ALERT replication or WATCHMAN Sync Utility for synchronization over multiple devices or ALERT systems
- 4-plane machine in-place balancing and advanced analysis options available

## USER INTERFACE / DURABLE TABLET CONTROLLER

### Physical / Environmental / Durability

- Size: 8.93" x 5.94" x 0.94" (227mm x 151mm x 24mm)
- Weight: 1.94 lbs (0.88 kg)
- Operating: -21C to +50C; Storage: -40C to +71C
- Humidity: 95% RH, non-condensing
- Rugged per MIL-STD-810G
- IP65, IEC 60529 rated; water, sand, and dust protection
- ANSI/ISA 12.12.01

### Processor/Operating System

- Intel® Atom™ Quad-core x7-Z8750 1.6 GHz Processor
- 4 GB LPDDR3 system memory, 128 GB Solid State Drive (SSD)
- Genuine Windows 10 Professional CBB (64-bit)
- TPM v2.0 data security; NIST BIOS compliant

### Battery

- Lithium-ion battery:
  - Standard battery: 7.4V, 4200 mAh capacity
  - SnapBack 2<sup>nd</sup> battery Life: 14.4V, 2100 mAh

### Communication

- Wireless-AC 7265, 802.11 ac
- Integrated Bluetooth v4.0
- Optional 10/100/1000 base-T ethernet (expansion slot)

### Inputs / Outputs

- 8.1" Capacitive touchscreen, 1280x800 resolution
  - IPS TFT LCD HD, 600 NITS, LumiBond® 2.0 sunlight readable
  - Plus Digitizer Pen, Rain Mode, Glove Mode
- RJ45 10/100.1000 LAN
- USB 3.0 port
- Micro-HDMI
- DC power input port
- Speaker, audio / microphone jack
- 6 button keypad (power, volume up, volume down, home, P1, P2)
- Rear-facing 8.0 MP built-in camera with autofocus
- On-screen QWERTY soft keyboard

## TRIO DATA ACQUISITION / PROCESSOR (DP-2H)

### Inputs

4 simultaneous sampled, fully phase matched, ICP programmable  
Other Coupling: AC (for proximity probe connection)  
AC Input Voltage Range:  $\pm 10V$   
AC Bandwidth: 0.5Hz to 40kHz  
DC Bias/Gap Measurement:  $\pm 25V$  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, 5, 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: 0.5–25Hz, 0.5–40 kHz, 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  $\mu$ -volts per root Hz from 0.5-1000 kHz

#### DC Measurements

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

### Analysis Capabilities

Dynamic Analysis: Overall, Spectra, Waveform, Phase and Speed  
Cross-Channel: Cross-power, Transfer 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

### Communications with Host Tablet PC/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 (4 hrs), 1.0A from USB wall adapter  
Battery Life: 8 hours between charges (continuous collection)

### Physical / Environmental / Durability

Dimensions: 6.18" x 3.62" x 1.81" (157mm x 92mm x 46mm)  
Weight: 1.0 lb (450 grams)  
Carrying options - Belt worn holster or shoulder worn soft pack  
Operating Temperature: -10C to +60C  
IP-65 rated; water, sand, and dust protection  
4' drop per MIL-STD-810G  
0 ~ 90% humidity per MIL-STD-810G  
Compliance: CE, ETL Listed, Class 1, Division 2, Group A, B, C, D, T6

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