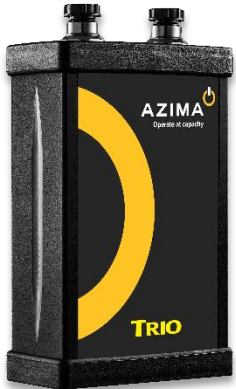


# TOTAL TRIO®



## All-inclusive Vibration Analysis Program



- ✓ Cloud Hosting
- ✓ Diagnostic Software
- ✓ Advanced Hardware
- ✓ Web Reporting
- ✓ 3-year Warranties
- ✓ Second Opinions

## The best of Azima products and services with lowest upfront and renewal costs.

Total TRIO is a **vibration data collection system**, not mere parts and pieces. It includes everything you need to manage your own vibration program at scale.

The heart of Total TRIO is the **WATCHMAN Data Center**. Your master database is hosted and managed by Azima's dedicated IT staff in this highly secure and thoroughly robust cloud environment.

Your vibration program will always be operational with Total TRIO. The program includes the TRIO 8-Series data collector with **3-years of warranty**, priority repair with 2-week guarantee and loaner options.

**ExpertALERT-Cloud** is included for setup, analysis, and reporting. This powerful automated diagnostic software is available at no charge and also available for desktop installation or embedded on your TRIO Controller.

Keep your program fresh and **renewed in 3-year cycles**. As your tablet ages, it is easy to renew your entire program with a new TRIO Controller at significantly less costs than traditional programs.

### FEATURES INCLUDE

- The latest TRIO® Data Collection System. Includes standard TRIO CA8 Controller, DP-2 Acquisition hardware, Triaxial Accelerometer and accessories.
- 3-year Service and Support Agreement on your hardware, software, and cloud hosting with priority repair and loaner options if needed.
- 3-year user license to ExpertALERT-Cloud. Term license options available for Controller or desktop.
- Database hosting with synchronization software to communicate with TRIO and desktop systems.
- Access to analytical consultation with Azima's expert staff for second opinion diagnostics on tough calls.
- Unlimited access to WATCHMAN Reliability Portal for the delivery of reports and business metrics.
- No cost software updates and feature upgrades.
- No cost access to Azima's Resource Center and web-based training to get your up and running

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# TOTAL TRIO® Specifications

Vibration Data Collector // Field Analyzer - Complete Vibration Analysis Program

## PROGRAM OVERVIEW

- CA8 Triaxial vibration data collector system, CA10 optional
- 3-year Service and Support Agreement for hardware, software
- 3-year database hosting in WATCHMAN Data Center
- 3-year term use license of ExpertALERT-Cloud, desktop or embedded term-use licenses optional
- ALERT software updates and feature upgrades during term
- WATCHMAN Sync Utility for synchronization to TRIO and optional desktop
- Guarantee 2-week repair or hardware loaner
- 5 Second Opinion Analysis Tickets, valid for 1 year
- Unlimited access to WATCHMAN Data Center
- 5 free live webinar training sessions
- Unlimited access to Azima Resource Center
- Simple program renewals with new TRIO Controller every 3 years

## CA8 USER INTERFACE / DURABLE TABLET CONTROLLER

### Physical / Environmental / Durability

- Size: 8.8" x 5.7" x 0.9" (225mm x 147mm x 24mm)
- Weight: 2.18 lbs (990 grams)
- Operating: -20C to +60C; Storage: -40C to +70C
- Humidity: 0 ~ 90% (nc), Spec to MIL-STD-810G, method 507.5
- Altitude: 15,000 ft, MIL-STD-810G, method 500.5, procedure I
- 26 drops to 4', MIL-STD-810G, method 516.6, procedure IV
- IP65, IEC 60529 rated; water, sand, and dust protection

### Processor/Operating System

- Intel® N3710 2.40 GHz Pentium® Processor
- 4 GB DDR3L system memory, 128 GB Solid State Drive (SSD)
- Genuine Windows 10 Enterprise CBB (64-bit)
- TPM v1.2 data security

### Battery

- Hot-swappable lithium-ion battery:
  - Standard Life: 5200 mAh capacity (39.52Wh), 7.6V
  - Extended Life: 10350 mAh (74.52Wh), 7.2V

### Communication

- Wireless LAN 802.11 ac, a/b/g/n 2.4 GHz and 5 GHz
- Integrated Bluetooth v4.2 LE

### Inputs / Outputs

- Capacitive touchscreen, 1280x800 resolution
  - Plus Active Pen, Rain Mode, Glove Mode
- 2 USB Host 3.0 Type A ports
- 1 Micro HDMI
- 1 micro SDXC card slot
- 1 micro SIM
- Expansion Port for LAN, COM, USB
- Speaker, audio / microphone jack
- 6 button keypad (power, mode, menu, home, F1, F2)
- Rear-facing 8.0 MP built-in camera with autofocus and LED flash
- Front Facing 2 megapixel camera
- On-screen QWERTY soft keyboard

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

### 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

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