

# TRIO® 8-SERIES



CX8 Diagnostic Data Collector / Expert Analyzer

CA8 Vibration Data Collector / Field Analyzer



- ✓ SAFE
- ✓ SIMPLE
- ✓ SECURE

## TRIO® 8-Series is the perfect fit for your program.

The **8-inch, Capacitive-touch with strengthened glass** CX8 and CA8 TRIO Vibration Data Collectors combines powerful computing with ultimate reliability.

Its compact size makes it the perfect companion to your TRIO system. Although **only 0.9" thick and just over 2 pounds**, the TRIO 8-Series can still withstand harsh handling and tough industrial environments. The 8-Series is IP65-rated and meets stringent MIL-STD-810G standards for protection against dust, water, vibration, drops, extreme temperatures and varying altitudes.

With **Windows® 10 Enterprise** installed, you are ready to connect the TRIO 8-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.

When safety and performance are important, the experts turn to Azima's TRIO data collection devices.

### FEATURES INCLUDE

- 8" Capacitive Touchscreen with chemically strengthen glass supporting an active stylus pen, rain-mode or glove-mode operation.
- Get a full day of work-life with a hot swappable, 10350 mAh extended life battery.
- Powerful Intel® Pentium N3710, 2.40 GHz Processor, 4GB RAM, and 128 GB SSD for the ultimate performance.
- Modular Bluetooth® integration with TRIO DP-2 data acquisition hardware for simple and safe in-field vibration data collection.
- **Total TRIO®** database hosting, diagnostic software and feature upgrades, analytical second opinions, plus 3-years all-inclusive

# TRIO® 8-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-2)
- Optional handheld laser tachometer
- Safe, flexible carrying options
- CX8 includes embedded ExpertALERT™ (no host software required)
- CA8 includes embedded ViewALERT™ onboard analysis software (requires hosted 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: 8.8" 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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