

# TRIO™ 10-SERIES

CX10 DIAGNOSTIC DATA COLLECTOR / EXPERT ANALYZER  
CA10 VIBRATION DATA COLLECTOR / FIELD ANALYZER



The experts choice...  
built for safety, durability  
and performance.

**TRIO™ CX10 and CA10 provide a rugged 10" tablet that is up to the demands of harsh industrial environments.**

The TRIO CX10 and CA10 vibration data collectors and diagnostic instruments are lightweight at just 2.9 pounds and just 1.2 inches thick but are rugged enough for your IP-65 rated environments.

The CX10 and CA10 are designed for the demands of the field and ready to perform. Dependable large swappable battery, powerful dual-core processor, and brilliant 10" touchscreen, this TRIO is built for your work.

## FEATURES INCLUDE

- MaxView™ 10.1" resistive single touch LED screen with automatic backlighting
- Lightweight with high performance. Weighing only 2.9 pounds (1.3kg) the 10-series still offers a single, hot-swappable six-hour standard battery or optional 12-hour extended battery
- Fast, powerful Intel® Atom™ N2600, 1.86 GHz, dual-core processor for fast performance and power management
- TRIO's Bluetooth® modular integration with the TRIO DP-1 acquisition device for the safest in-field operation
- 5 megapixel camera with LED flash gives users the ability to document their findings in great detail
- Multiple USB ports, including a waterproof USB, along with network connection, audio headset jack, VGA port, and an RS-232 port makes this device extremely versatile

The rugged TRIO CX10 and CA10 data collectors have an IP-65 environmental rating and the stringent MIL-STD-810G standards for protection against dust, water, vibration, drops, extreme temperatures, and varying altitudes.

Loaded with **Genuine Windows® 7 Ultimate**, this controller can be connected to your network or operate as a stand-alone instrument and it supports multiple foreign language options.



**10.1" LED DISPLAY OFFERS A CLEAR VIEW OF MACHINERY DATA IN THE PLANT AND IN DIRECT SUNLIGHT.**

TRIO is portal-enabled. The CX10 and CA10 are ready to be connected to the **Azima DLI WATCHMAN Reliability Portal™** for the best enterprise visibility for your condition based maintenance program.

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

For more information on TRIO™ please visit [www.AzimaDLI.com](http://www.AzimaDLI.com)

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## SPECIFICATIONS\*

### SYSTEM OVERVIEW

- Triaxial vibration data collector
- Industrial Windows® 7 Ultimate tablet PC controller
- Wireless, modular-designed data acquisition unit (DP-1)
- Optional handheld laser tachometer
- Safe, flexible carrying options
- CX10 includes embedded ExpertALERT™ (no host software required)
- CA10 includes embedded ALERT™ onboard analysis software (requires hosted ExpertALERT, StandardALERT™, or WATCHMAN Reliability Portal™)
- Survey File Transfer Exchange or optional ALERT replication 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

- Size: 10.8" x 6.7" x 1.2" (275mm x 177mm x 32mm)
- Weight: 2.9 lbs (1.3 kg)

#### Environmental

- Operating: -20C to +60C; Storage: -40C to +60C
- Humidity: Spec to MIL-STD-810G, method 507.5
- Altitude: 15,000 feet at 23C

#### Durability

- MIL-STD-810G (516.6, IV) drop spec to 4'
- IP65 rated; water, dust, water protection
- SSD storage

#### Processor/Operating System

- Intel® Atom™ N2600 dual-core processor (1.86 GHz)
- 4 GB DDR3 system memory
- 128 GB Solid State Drive (SSD), SATA 2.0 at 3.0Gb/s
- Genuine Windows® 7 Ultimate (32-bit)

#### Battery<sup>1</sup>

- Hot-swappable lithium-ion battery: 5300 mAh capacity
  - Battery capacity: up to 6 hours
- Optional extended-life battery: 10,600 mAh capacity
  - Battery capacity: up to 12 hours
- 80W charging adapter (100-240V, 2.5A, 50-60Hz)

#### Communication

- Wireless LAN 802.11 (b/g/n)
- Integrated Bluetooth® 4.0

#### Inputs / Outputs

- Resistive single-touch screen
- Stylus input
- 2 USB ports: 1 waterproof 2.0, 1 standard 2.0
- 1 waterproof 9-pin RS-232 port
- 1 waterproof VGA video out
- 1 microSD card
- 1 RJ-45 10/100/1000 LAN
- Waterproof power jack
- Speaker, audio / microphone jack
- 4+1 navigation / directional keys, 3 user-programmable buttons
- Rear-facing 5.0 megapixel built-in camera with LED flash
- On-screen QWERTY soft keyboard
- 10.1" wide (LED backlit, 1366x768) Display

### TRIO DATA ACQUISITION / PROCESSOR (DP-1)

#### Inputs

- 4 simultaneous sampled, fully phase matched, ICP programmable
- Other Coupling - AC (for proximity probe connection)
- AC Input Voltage Range -  $\pm 5V$
- 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 h/w integration), bearing demodulation (all from accelerometers), and displacement (from 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 - 0.5Hz–25Hz to 0.5Hz–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 & 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), backward compatible to Bluetooth v1
- Interface Port - USB user port (includes data stream and remote power to DP-1)

#### Power

- Charging rate - 0.5A from USB PC input (4 hrs)
- Battery Life<sup>1</sup> - 8 hours between charges

#### Physical

- Dimensions - 15cm (6.0") x 9cm (3.5") x 4cm (1.5") approx Weight - 450g
- Operating Temperature - -10°C to +60°C (14°F to +140°F)
- Sealing - IP-65, 4' drop, 95% humidity per MIL-STD-810G
- Compliance - CE, RoHS
- Carrying options - Belt worn holster or shoulder worn soft pack

\*Specifications are subject to change without notice

<sup>1</sup> 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.