

# TRIO™ 7/6-SERIES

CX7 DIAGNOSTIC DATA COLLECTOR / EXPERT ANALYZER  
CA6 VIBRATION DATA COLLECTOR / FIELD ANALYZER



The most portable and comfortable controller we've ever made.

**TRIO™ CX7 and CA6 provide a rugged 7" tablet that is very portable, comfortable to wear and safe in your industrial environment.**

The TRIO CX7 and CA6 vibration data collectors and diagnostic instruments are lightweight at just 2.4 pounds and just 1.6 inches thick but are rugged enough for your IP-65 rated environments.

The CX7 and CA6 are designed for the person who spends a good portion of their day in the plant. With multiple carrying options, including a pouch that can be worn on the hip, this TRIO is comfortable to use all day and always conveniently located at your fingertips.

## FEATURES INCLUDE

- 7" widescreen TFT LCD, MaxView™ sunlight readable resistive touch display
- Dual hot-swappable six-hour standard battery or optional 12-hour extended battery for all-day power
- Fast, powerful Intel Atom N2600, 1.6 GHz, Dual-core processor with 4GB RAM and 128GB SSHD for exceptional performance
- TRIO's Bluetooth® modular integration with the TRIO DP-1 acquisition device for the safest in-field operation
- Feature loaded with 5 megapixel camera, two USB ports (one waterproof, one standard), network connection, audio jacks and RS-232 port

The rugged TRIO CX7 and CA6 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.



THE SMALL 7" TABLET CAN BE CARRIED ON THE SHOULDER, TUCKED INTO ITS COURIER BAG OR COMFORTABLY WORN ON A BELT.

TRIO is portal-enabled. The CX7 and CA6 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 the 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
- Flexible carrying options
- CX7 includes embedded ExpertALERT™ (no host software required)
- CA6 includes embedded ALERT™ onboard analysis software (requires hosted ExpertALERT, StandardALERT™, or WATCHMAN Reliability Portal™)
- 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, 12 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: 5.56" x 9.5 x 1.57" (144mm x 242mm x 40mm)
- Weight: 2.42 lbs (1.1 kg)

#### Environmental

- Operating: -23C to +60C; Storage: -40C to +70C
- Humidity: Spec to MIL-STD-810G

#### Durability

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

#### Processor/Operating System

- Intel® N2600 1.6 GHz, Dual-Core, ATOM processor
- 4 GB DDR3 System Memory
- 128 GB Solid State Drive (SSD), SATA II with recovery partition)
- Genuine Windows® 7 Ultimate (32-bit)

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

- Hot-swappable Dual Lithium-Ion battery: 2600 mAh each capacity
  - Battery capacity: up to 6 hours
- Optional Extended-life battery: 5600 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 RJ-45 10/100/1000 LAN
- Power jack
- Speaker, Audio Out
- Microphone jack
- 4+1 Navigation / Directional keys, 3 user-programmable buttons
- Rear-facing 5.0 megapixel built-in camera with LED light
- On-screen QWERTY soft keyboard
- 7" Widescreen (LED backlit, 1024x600) 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<sup>1</sup> - 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 - 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.