TRIO® C10-SERIES

CX10 Diagnostic Data Collector / Expert Analyzer
CA10 Vibration Data Collector / Field Analyzer

TRIO® C10-Series puts performance in the hands of analysts.

The TRIO C10 features a durable and bright 10.1-inch, HD projected capacitive touchscreen with active stylus and rain and glove modes of use. The new TRIO CX10 and CA10 Vibration Data Collectors / Field Analyzers are perfect for field professionals who need a powerful, full-screen platform in the plant.

Don’t let the large screen fool you, this device is still slim and light! The TRIO C10 is only 1.2” thick and just under 3 pounds, but can still withstand harsh handling and tough industrial environments. TRIO C10 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 10-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

- 10.1” LED Capacitive Touchscreen with active stylus pen, rain-mode or glove-mode operation.
- Get a full day of work-life with optional hot-swappable, 10600 mAh extended life battery.
- Powerful Intel® Quad-core N2930, 1.83 GHz Processor, 4GB DDR3 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.
- Optional Total TRIO® database hosting, included diagnostic software and feature upgrades, analytical second opinions, plus 3-years all-inclusive service and support included.
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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
- CX10 includes embedded ExpertALERT™ (term license)
- CA10 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: 10.8" x 6.7" x 1.2" (275mm x 171mm x 32mm)
- Weight: 2.9 lbs (1.3 kg)
- Operating: -20C to +60C; Storage: -40C to +70C
- Humidity: Spec to MIL-STD-810G, method 507.5, procedure II
- Altitude: 15,000 ft, IEC 60529 rated; water, sand, and dust protection
- 26 drops from 4", MIL-STD-810G, method 506.5, procedure IV
- IP65, IEC 60529 rated; water, sand, and dust protection

**Battery**
- Hot-swappable lithium-ion battery:
  - Standard Life: 5300 mAh capacity (39.32Wh)
  - Extended Life: 10600 mAh (78.44Wh)

**Communication**
- Wireless LAN 802.11ac, a/b/g/n 2.4 GHz and 5 GHz
- Integrated Bluetooth v4.0 LE / v2.1

**Inputs / Outputs**
- Capacitive touchscreen, 1920x1200 resolution
  - Plus Active Pen, Rain Mode, Glove Mode
- RJ45 10/100/1000 LAN
- USB 3.0 port
- USB 2.0 IP65-rated port
- 9-pin serial IP65-rated RS-232 port
- IP65-rated VGA port
- IP65-rated DC power input port
- Speaker, audio / microphone jack
- 6 button keypad (power, menu, touch lock, home, F1, F2)
- Rear-facing 5.0 MP built-in camera with autofocus and LED flash
- On-screen QWERTY soft keyboard

**Inputs**
- 4 simultaneous sampled, fully phase matched, ICP programmable
- Other Coupling: AC (for proximity probe connection)
- AC Input Voltage Range: ±10V
- AC Bandwidth: 0.5Hz to 40kHz
- DC Bias/Gap Measurement: ±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 μV 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, optional HAZLOC