

™ CX-7 SPECIFICATIONS



SYSTEM OVERVIEW

- Triaxial vibration data collector / machine analyzer
- Ergonomic design allows more efficient and safer use than traditional data collectors
- Industrial Windows® 7 Ultimate tablet PC controller
- Wireless, belt worn data acquisition unit (DP-1)
- Handheld laser tachometer
- Flexible carrying options including utility belt or shoulder-worn soft case
- Battery life up to 12 hours (with optional extended use batteries)
- CX-7 includes embedded ExpertALERT™, a full-featured automated diagnostic and vibration analysis software
- DOES NOT REQUIRE A HOST software system though integrates with ExpertALERT, StandardALERT™ and the WATCHMAN Reliability Portal™
- Sybase 12 SQL database onboard allows full PdM database to be mobile on unit
- Database replication option allows multiple units and networked host systems to automatically share data collected, analysis and routes
- 4 plane machine in-place balancing and advanced analysis software options available
- Remote operation using Windows Remote Desktop from networked PC

INCLUDED ACCESSORIES

- Triaxial Accelerometer w/ 6' coiled cable
- Ball driver
- Select carrying option; Casual Fit, Shoulder-worn soft pack, or Utility Belt
- Hard Transit Case
- 4 GB USB thumb drive
- USB communications & power cable
- Battery chargers (handheld controller and data processing units)

OPTIONAL ACCESSORIES

- Handheld laser tachometer
- TRIO Shoulder-worn Soft Case
- TRIO Belt Components
 - Controller holster, Handheld tachometer holster, Tool pouch
- 12V vehicle charger
- ALERT Real Time Analyzer (RTA) software
- Balance Kit – Includes ALERT Multiplane Balance software, laser tachometer and digital scale
- Database replication software
- Extended life Li-Polymer Battery Pack batteries (5200mAh x 2)
- Four-channel, male BNC adapter cable



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SPECIFICATIONS

USER INTERFACE (CX-7)

Physical

- Size - 5.56" (144 mm) x 9.5" (242 mm) x 1.57" (40 mm)
- Weight - 1.1 kg (2.42 lb)

Environment

- Operating - 9.4 °F to 140 °F (-23 °C to 60 °C)
- Storage - -40 °F to 158 °F (-40 °C to 70 °C)
- Drop - 4ft drop, free to concrete. 26 drops from 4 feet (1.22 m) MIL-STD-810G, Method 516.5, procedure IV
- Vibration - MIL-STD-810G, method 514.5, procedures I & II
- Sealing - IP65, MIL-STD-810G

Processor/Memory/Operating System

- Intel Ultra Low Power Atom Z530 1.6 GHz processor (w/ US15W Chipset)
- 2 GB DDR2 RAM
- 64 GB SSD solid state hard drive
- Microsoft Windows® 7 Ultimate operating system
- Display - 7" widescreen, 1024x600 resolution, TFT LCD, MaxView™ sunlight readable resistive touchscreen

Battery

- Hot-swappable dual Li-Polymer battery pack, 2600 mAh each, support minimum 6 hours operation
- 5200 mAh extended capacity batteries are available

Connections

- 2 x USB 2.0 port (one fully waterproof, even when the latch is open)
- 1 x 9-pin serial RS-232 port (fully waterproof, even when the latch is open)
- 1x Ethernet LAN
- 1 x DC power port
- Docking connector (Contact Pin Type)
- Audio out
- 1 x microphone

Wireless Communication

- Wireless LAN 802.11 b/g/n
- PAN - Integrated Bluetooth v.2.0 + EDR Compliant
- Integrated GPS Mediatek, WAAS/EGNOS capable
- 2 Megapixel camera + LED light
- Video recording

DATA 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 12,800
- Noise floor - Less than 0.2 micro-volts per root Hz from 0.5 to 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 (1) - cross-power, transfer function, Coherence, phase and magnitude
- Demodulation function - digital amplitude demodulator and digital moment/min-max 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 PC/Controller

- Wireless - Bluetooth v2.0 with EDR (1.5Mbps max), backward compatible to Bluetooth v1
- Wired 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), 1.0 A from USB mains power adapter (2 hrs)
- Battery Life - 12 hours between charges

Physical

- Dimensions - 15cm (6.0") x 9cm (3.5") x 4cm (1.5")
- Weight - 450g
- Operating temperature - -10°C to +60°C (14°F to +140°F)
- Sealing - IP-65 (Dust tight, protected from water jet)
- Compliance - CE, RoHS
- Carrying options - belt worn holster or shoulder worn soft pack
- Overall RMS amplitude detection from 10 Hz to 1 kHz

Specifications are subject to change without notice



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