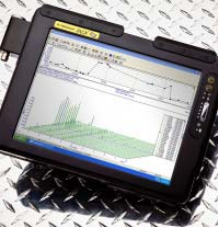
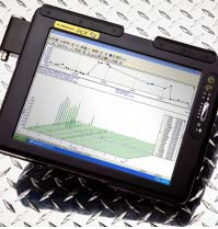


Vibration Data Collector Competitive Analysis – December 2009

	DLI Watchman® <i>DCX</i>	DLI Watchman® DCA-60	DLI Watchman® DCA-31B SKF CMXA 70	CSI-2130	SKF CMXA 80	Pruftechnik VibXpert	SPM Leonova	Commtest vb8
Feature								

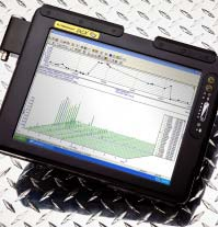
Max simultaneous dynamic inputs	4	4	2	2	1	2	2	4
Real time rate	20.5 KHz (4 CH Simultaneous)	20.5 KHz (4 CH Simultaneous)	40 KHz	19 KHz	??	??	??	??
Real time display	Tri-Axial	Tri-Axial	Single Axis	Single Axis	Single Axis	None	None	None
Maximum resolution (lines)	25,600 (x 4)	25,600 (x 4)	12,800	6,400	25,600	??	6,400	12,800
Waterfall plots	Yes	Yes	No	Yes	No	Yes	No	Yes
Time synchronous averaging	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Order normalized data	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Filtered orbits	Yes	Yes	Optional	Yes	Yes	Yes	No	No
Bode plots	Yes	Yes	No	Yes	No	No	No	No
Nyquist plots	No	No	No	Yes	No	No	No	No
Run-up / coastdown	Yes	Yes	No	Yes	No	Yes	No	Yes
Bearing fault detection	BearingALERT™ automated diagnostics Demodulation 6 band-pass filters Cepstrum (4) Bearing fault frequency overlays	Demodulation 6 band-pass filters Cepstrum (4) Bearing fault frequency overlays	Demodulation 5 band-pass filters	Demodulation 600Hz HP filter (PeakVue)	Demodulation 5 band-pass filters	Demodulation Cepstrum Bearing fault frequency overlays	Demodulation Shock Pulse Method	Demodulation 20 band-pass filters
No. channels @ maximum FFT frequency	Four Channels (Simultaneous) @16 KHz	Four Channels (Simultaneous) @16 KHz	Single Channel @ 40 KHz (two channel option)	Single Channel @ 80 KHz (two channel option)	80 KHz	??	Single Channel @ 20 KHz (two channel option)	40 KHz
Dynamic range	>90 dB	>90 dB	> 90 dB	> 90 dB	> 90 dB	??	??	> 95 dB
Window types	Hanning, Hamming, Flat Top, Uniform	Hanning, Hamming, Flat Top, Uniform	Hanning, Hamming, Rectangular	Hanning, Uniform	Hanning, Hamming, Rectangular	Hanning, Hamming, Flat top, Uniform	Rectangle, Hanning, Hamming, Flat Top	Hanning, Rectangular
Tri-axial support	Simultaneous	Simultaneous	Multiplexed	Multiplexed	Simultaneous	No	Multiplexed	Simultaneous
Low frequency capability	0.2Hz	0.2Hz	0.16 Hz	0.2 Hz	0.5 Hz	??	??	?? - No setting for high-pass filter
Embedded rule-based diagnostics	Yes	No	No	No	No	No	No	No
Point ID	Route , Barcode Optional	Route , Barcode Optional	Route , Barcode Optional	Route	Route	Route	Route, Optional RFID	Route
Sealing	IP-65	IP-65	IP-65	IP-65	IP-65	IP-64	??	IP-65

Vibration Data Collector Competitive Analysis – December 2009

	DLI Watchman® <i>DCX</i>	DLI Watchman® DCA-60	DLI Watchman® DCA-31B SKF CMXA 70	CSI-2130	SKF CMXA 80	Pruftechnik VibXpert	SPM Leonova	Commtest vb8
Feature								

Data storage	System: 1 GByte RAM Data: 80 Gbytes (shock mounted hard drive - system and data memory)	System: 1 GByte RAM Data: 80 Gbytes (shock mounted hard drive - system and data memory)	4 Mbytes internal RAM 1 GB Flash memory card	System: 16 Mbytes internal RAM Data: 32 Mbytes internal RAM Data: PCMCIA card	System: 128 Mbytes internal RAM Data: 128 MB internal Flash	Data: PCMCIA card Data : Compact Flash NO internal storage	System: 64 MB RAM Data: 32 MB Flash memory	Data: 1 GB internal
Ext. memory card	4 GB USB	4 GB USB	PCMCIA, SDRAM	PCMCIA	Up to 4 GB SDRAM	Compact Flash	No	No
Microprocessor(s)	Intel Core Duo CPU 1.2 GHz and TI DSP 40MHz	Intel Core Duo CPU 1.2 GHz and TI DSP 40MHz	Xscale PXA255 at 400 MHz, Motorola DSP	??	Xscale PXA255 at 400 MHz, Motorola DSP	??	StromARM 206 MHz	General Purpose and DSP
Operating system	Windows® XP Tablet	Windows® XP Tablet	Windows® CE	Proprietary	Windows® CE	Linux Embedded	Windows® CE	Proprietary
Physical size (H x W x D)	8.25 x 11 x 1.6	8.25 x 11 x 1.6	8.0 x 5 x 2	8 x 10.25 x 1.9	8.7 x 8.7 x 2.8	??	11.2 x 4 x 2.5	9.9 x 5.8 x 2.4
Weight	5.3 lbs	5.3 lbs	1.5 lbs	4.5 lbs	3.4 lbs	??	1.5 lbs	4.4 lbs
Operating temperature	-20-60 °C	-20-60 °C	0 - 60°C	-10 - 45°C	-10 - 60°C	??	0 - 50 °C	0 - 50 °C
Display	10.4" SVGA 800 x 600 Color Active Matrix	10.4" SVGA 800 x 600 Color Active Matrix	1/8 VGA 240 x 160 Monochrome	4.47" VGA 640 x 480 Color TFT	6.4" TFT VGA	½ VGA 480 x 320 Monochrome	4.0" ¼ VGA 240 x 320 Monochrome	4.9" 480x320 Monochrome
Power	4 hours typical (v.3.0 APM compliant) 8 hours with quick-swap battery packs (included)	4 hours typical (v.3.0 APM compliant) 8 hours with quick-swap battery packs (included)	8 hours	8 hours	8 hours	8 hours	8 hours	6 hours - backlight on, 9 hours – no backlight
Standard application programs	Data Collection Software Off-Route Data Collection ExpertALERT™	Data Collection Software Off-Route Data Collection	Data Collection Software Off-Survey Data Collection	Data Collection Software Off-Route Data Collection	Data Collection Software Off-Route Data Collection	Data Collection Software Off-Survey Data Collection	Data Collection Software Off-Survey Data Collection	Data Collection Software Off-Survey Data Collection Two-plane balancing
Optional application programs	Four-plane balancing ME-Scope ALERT RTA Advanced Analysis Software ALERT Database Replication	Four-plane balancing ME-Scope ALERT RTA Advanced Analysis Software ALERT Database Replication	Two-plane balancing, Run up/Coast down, Bump Test, Data Recorder, Check to Conformance, Frequency Response Function	Transient Analysis Balancing Laser Alignment MotorView®	Two-plane balancing, Run up/Coast down, Bump Test, Data Recorder, Check to Conformance, Frequency Response Function	Two-plane balancing	Four Run-Single Plane Balancing (no trial) Two-plane balancing SPM Spectrum Lubrication Analysis EVAM vibration analysis Long time recording	
Host Software System Required	NO	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Vibration Data Collector Competitive Analysis – December 2009

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Feature								

External Communications	USB to PC Ethernet to Network	USB to PC Ethernet to Network	USB, Serial to Host	USB, Ethernet, Serial to Host	USB	USB, Ethernet, Serial to Host	Serial, USB to Host	USB, Ethernet
Data Load / Unload	N/A Database Replication - DCX contains complete ALERT database.	N/A Database Replication - DCX contains complete ALERT database.	Route file	Route file	Route file	Route file	Route file	Route file
Communications Speed	100 Megabit per second Ethernet or USB 2.0 Connection	100 Megabit per second Ethernet or USB 2.0 Connection	115K Baud Serial USB available	12 Megabits per second USB or Ethernet Connection	USB	12 Megabits per second USB or Ethernet Connection	115K Baud 12 Megabits per second USB	USB
Printing	USB, or network Windows® compatible printers	USB, or network Windows® compatible printers	Serial Printer	Serial Printer	USB Printers	??	No	USB Printers
User programmable	Yes – Third-party Windows® applications can be loaded	Yes – Third-party Windows® applications can be loaded	No	No	No	No	No	No
Comments	Complete condition monitoring system / database	Can replicate with complete condition monitoring database	Diagnostics Instruments DC460 sold by DLI, SKF and Entek	Newer version of 2120 platform, includes color screen, more freq. ranges	Diagnostics Instruments 4- channel version of DC460 with larger screen		SPM has a program to lease product based on number of measurements	