SPRITE™ i400

4+4 Channel Data Acquisition Hardware

Wireless and battery-powered puts SPRITE in more remote locations.

The WATCHMAN™ Online System is a custom, permanently installed vibration condition-based monitoring system to automatically test your high-value assets. With SPRITE™ data acquisition hardware and ExpertALERT™ automated diagnostic software, you have access to actionable information to keep your production up and running.

Each SPRITE device is accessed over a local area network to deliver setup information, collection commands, and transmit vibration and process data. Practically an unlimited number of SPRITE devices can be used simultaneously and managed through the WATCHMAN Online System throughout your plant giving you near real-time access to the health of your machines. It can also integrate with portable TRIO, walk-around data collection to give you a robust maintenance program.

SPRITE is a custom engineered solution designed and installed by Azima DLI certified SPRITE experts.

WATCHMAN Online Systems™ Components:

SOFTWARE COMPONENTS

There are two key software components that make WATCHMAN Online Systems effective for monitoring your assets.

- ExpertALERT™ – Diagnostic software that analyzes machine vibration data, maintains historical records, and reports the findings to your team
- ALERT Online Engine™ manages the data collection and communication on the network with configuration utilities

HARDWARE COMPONENTS

- SPRITE™ i400 – 4 + 4 channel acquisition device is a wireless network device which can acquire 4 simultaneous channels of vibration data plus 4 additional multiplexed DC signals for process parameters. Powered either from a 10-30V DC supply or internal batteries. On battery power, acquisition is managed by the software to maximize battery life. 1 year life estimated with once per 12 hour data acquisition.

OTHER REQUIRED COMPONENTS

- Single or triaxial sensors per machine location, wired directly to the SPRITE i400 data acquisition device
- Wireless 802.11 standard network connection
- System Server (physical or virtual) to host software and database

OPTIONAL COMPONENTS

- Server internet access for virtual database hosting
- OPC client software (scalar information)
- Can be combined with SPRITE i400, SPRITE i800 and TRIO Portable data acquisition devices

WATCHMAN
Online Systems™

WATCHMAN Online Systems is a permanently installed vibration data acquisition system which incorporates data acquisition devices installed close to machines of interest and then communicates to a WATCHMAN Online Systems server through a standard network infrastructure.

TECHNICAL SPECIFICATIONS

Dynamic Inputs (Channels 1-4):

No of Channels:	4
Ranges: +/- 5V	
ICP Interface:	2.4 mA @ 20Vdc
Other Coupling:	AC, configurable per channel
Measurements Integration:	Acceleration, displacement, demodulation, velocity via software
Anti-Alias Filter:	Compound analog and digital filter
Bias/Gap Measurement	+/- 25V range for ICP bias voltage and eddy probe gap measurement
Amplitude Accuracy:	+/-2% typical passband
Demodulation Function:	Azima DLI's proprietary Impact Demod

DC Inputs (Channels 5-8):

No of Channels:	4
Ranges:	4-20mA Input: 100 ohm load, jumper selectable

Trigger:

2 (one analog/digital, one digital)

5V to 24V digital pulse, or analog in range +/- 20V

Processing:

ADC:	24 bit simultaneous on channels 1-4, 16 bit multiplexed on channels 5-8
Sampling Rate:	64Hz to 102.4kHz (channels 1-4)
Bandwidth Ranges:	0.5Hz-25Hz to 0.5Hz-40kHz
Block Lengths:	256 to 32768
Spectral lines:	Up to 12,800

Mechanical:

Glass reinforced polyester, NEMA 4, IP66

Dimensions:	22 cm (8.5") x 12cm (4.6") x 9 cm (3.5")
Weight:	1.4kg (3 lbs)

Environmental:

Temperature:	-20 C to +70 C
Compliance:	CE, RoHS

Power:

Input Power:	Battery or DC power (10 to 36Vdc)
Battery Type:	Two x lithium 3.6V 'C' cell type LSH 20
Battery Monitor:	Internal battery monitor and critical battery shutdown
Isolation:	1500V from DC power input

Communications:

Network:	802.11 b/g/n WiFi compatible
Addressing:	Static IP or DHCP
Speed:	Up to 54 Mbits/sec
Encryption:	WEP, WPA/WPA2, PSK (TKIP, AES)
Wake-up Mode:	programmable from one minute to one day via software interface

Minimum Server Requirements:

Microsoft® Server 2008 or Server 2012 (English/US-Native Operating System)

Physical server or virtual machine (VM)

Free disk space:	100GB
Processors:	2 CPU, 1.8 GHz minimum
RAM:	4GB minimum

Microsoft Message Queuing enabled

Microsoft .NET framework 4.5.1

Note: Technical Specifications are subject to change.

EXPERIENCE THE POWER OF WATCHMAN ONLINE SYSTEMS™
AZIMAGLOBAL.COM

Azima's WATCHMAN Solutions™ ensure plants receive results, not mere data. With online systems, it is important your data is managed properly. WATCHMAN Online Systems brings all data together into a centrally hosted data center and applies automated routines to identify anomalies to be further diagnosed and reported. Eliminate false alarms by putting rulebase intelligence and domain expertise into your WATCHMAN Online Systems.

Operate at capacity™