

VESDA®

The Next Generation of VESDA Aspirating Smoke Detection Technology



 **xtralis®**

www.xtralis.com/vesda-e



VESDA-E Aspirating Smoke Detection (ASD)

VESDA-E – The next generation of VESDA aspirating smoke detectors

Since pioneering Aspirating Smoke Detection (ASD) technology nearly 30 years ago, VESDA has been recognized as the best in the world, protecting personnel, irreplaceable assets and mission critical infrastructure in the world's most iconic locations.

VESDA-E is the next-generation of VESDA, featuring multiple innovative capabilities that dramatically improve the VESDA experience:

- VESDA Smoke+, offers increased sensitivity – up to 15 times greater than VESDA VLP, at least three times better dust rejection, up to twice the longevity while maintaining consistent sensitivity over time and up to 8% less power consumption per unit area
- VESDA Flex, future proof expandability for maximum flexibility using, StaX Hardware expansion modules that easily bolt onto the VESDA-E detector to add additional capabilities
- VESDA Point Addressability, provides situational awareness to improve response time, efficiency and effectiveness through pin-point addressability for up to 40 locations
- VESDA Connect, provides extensive connectivity options including Ethernet, WiFi, USB, VESDAnet and relays, to reduce installation, commissioning, monitoring and maintenance costs
- VESDA TCO, reduces the Total Cost of Ownership (TCO) through Capex value, Opex savings, Plug'n'Play installation, design-less pipe and microbore tube networks, vast monitoring options and backwards compatibility. With VESDA-E you can reduce TCO by up to 15% for non-addressable products and up to 60% for the point addressable products

VESDA-E is the most advanced, reliable, and flexible ASD system ever produced.

How VESDA-E VEU/VEP works

Air is continually drawn from the protected area through the air sampling pipe network and into the detector by a high efficiency aspirator. The air sampling pipe network can contain up to four pipes.

The air from each sampling pipe passes through a flow sensor and then a sample of the air is drawn into the Flair detection chamber via the sampling module, after first passing through the filter.

An additional filter provides clean air to protect the optical surfaces inside the detection chamber from contamination.

The Flair™ detection chamber uses the equivalent of 330,000 sensors and sophisticated algorithms for smoke detection and particle type characterisation. If the detected smoke is higher than the set alarm thresholds it is reported as an Alert, Action, Fire1 or Fire2 alarm condition. Air is exhausted from the detector and may be vented back into the protected zone. Alarms can be signaled via Relays and VESDAnet. Ethernet and WiFi can be used for configuration and secondary monitoring, and a USB interface is provided for initial setup. A series of LEDs display Alarm, Trouble, Disable and detector power on status. A button allows the user to Reset or Disable the detector. In addition, an optional 3.5" LCD display shows the detector status, including smoke level and a smoke level bar graph, alarm thresholds, trouble status, % airflow level, normalization status and filter life used.

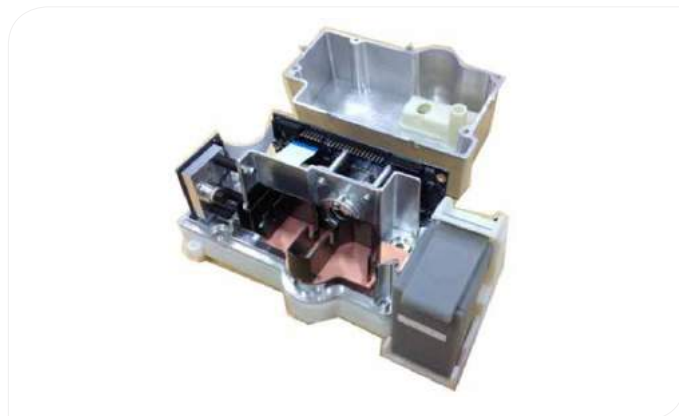




The Six Reasons for **VESDA-E**

1 **VESDA Smoke+**

VESDA Smoke+ capitalizes on the patented Flair Detection Technology centered in the VESDA-E detection chamber used in VEU and VEP. The Flair Detection Technology offers increased sensitivity – up to 15 times greater than VESDA VLP, at least three times better dust rejection, up to twice the longevity while maintaining consistent sensitivity over time.



The Smoke+ capability focuses on improving key aspects related to smoke detection including:

1. **Detection Performance**

- Vastly better sensitivity
- Faster response time

2. **Detection Reliability**

- Operating temperature stability
- Minimizing nuisance alarms

3. **Consistent Performance Over Time**

- During long term exposure to dust

4. **Efficiency of Operation**

- Power Consumption per unit area

2 **VESDA Flex**

VESDA Flex provides future-proof expandability for maximum flexibility using:

- StaX Hardware expansion modules integrate with the VESDA-E VEU and VEP detectors provide additional capabilities including integrated Power Supply, and Auto Pipe Clean





3 VESDA Point Addressability

VESDA Point Addressability provides situational awareness to improve response time, efficiency and effectiveness through pin-point addressability for up to 40 locations. VESDA-E VEA provides reliable early warning with minimum nuisance alarms, centralised maintenance with built-in blow back capability, and full system integrity check. Refer to the Xtralis website for full VESDA-E VEA details.



4 VESDA Connect

VESDA Connect provides flexible networking and programming capabilities that reduce installation, commissioning, monitoring and maintenance costs through extensive connectivity options and remote diagnostics tools including Ethernet, WiFi, USB, VESDAnet and Relays.



5 VESDA TCO

VESDA TCO provides a lifetime of value, reliability and protection.

VESDA-E improves CapEx value through higher sensitivity and longer pipe runs resulting in greater coverage area for VEU and VEP detectors and through flexible microbore tube network for VEA. It also reduces OpEx costs due to accessible and centralised maintenance, field replaceable components and full system integrity monitoring for VEA. Plug and play features improve the installation experience and reduce its cost via:

- AutoConfig capability
- Firmware upgrade using only a USB key
- Instant monitoring via Wi-Fi
- Mounting template
- Mounting bracket
- Ample wiring space
- Design-less pipe networks for simple designs for VEU and VEP
- Flexible VEA installation with pre-engineered microbore tubes and push-fit connections

VESDA-E can also provide vast monitoring options including:

- VSM4
- Remotes
- VESDAnet
- iVESDA

For current VESDA users, VESDA-E offers backward compatibility with the relevant VESDA product line – with VESDA-E you can reduce Total Cost of Ownership by up to 15% for VEU and VEP and up to 60% for VEA





VESDA-E Product Range

Detectors

VESDA-E VEU



The VESDA-E VEU is the premium detector in the VESDA-E Range. It provides ultra-wide alarm sensitivity range from 0.001% - 20.0% obs/m (0.0003 to 6.25% obs/ft) and up to 80 Class A holes; extending detector coverage by at least 40% in high airflow environments. VEU also provides 400 m (1,312 ft) and 800 m (2,625 ft) of linear and branched pipe networks respectively, increasing coverage by up to 80% in high ceiling applications while allowing for convenient detector mounting for ease of access and maintenance. VEU has area coverage of up to 6,500 m² (69,965 sq. ft)*. VEU standard features include StaX support together with Ethernet, WiFi, USB and VESDAnet capabilities.



VEU-A00

VEU-A10

VESDA-E VEP



The VESDA-E VEP series of aspirating smoke detectors extend the reach of the VESDA-E platform to a wide range of applications. VEP sensitivity range is from 0.005-20%/m (0.0016-6.25%/ft) and provides up to 40 Class A holes. VEP is equipped with a powerful aspirator that provides a total of 130 m (427 ft) in the one pipe model and 560 m (1,837 ft) in the four pipe model. VEP also provides StaX support together with Ethernet, WiFi, USB and VESDAnet capabilities.



VEP-A00-P

VEP-A10-P

VEP-A00-1P

VESDA-E VEA



VESDA-E VEA is the first addressable aspirating smoke detector (ASD) for standard addressable detection applications with non-intrusive servicing and interruption free operation and significantly lower maintenance time. VEA provides pinpoint addressability by using a network of microbore tubes connected to sampling points located in the protected area. VEA provides superior detection with inbuilt filters and self cleaning, allowing assured detection with minimum false alarms.



VEA-040-A00

VEA-040-A10

The VEA detector supports up to 40 sampling points. True supervision of tube network and sampling points allows centralized automated test and maintenance to provide end to end system integrity monitoring, reducing maintenance time by up to 90% while lowering TCO by up to 60%. Refer to the Xtralis website for full VESDA-E VEA details.

StaX**

Power Supply Unit (PSU)

The PSU StaX is an integrated power supply providing operating power including battery backup for VESDA-E detectors. It provides 24 volt operating power as well as a battery charger function that supervises and maintains the standby batteries.



Automated Pipe Cleaning

The Automated Pipe Cleaning StaX improves performance and minimizes maintenance costs in dusty environments. During pipe cleaning, it forces an air pressure wave to travel out along the pipe network. This changes the pressure within the pipe to be above atmospheric pressure so that air flows out of the pipe carrying built-up dust and lint with it.



* System design and regulatory requirements may restrict the monitoring area to a lesser amount

** Please contact your local regional office for availability.



Connectivity

VESDA Ethernet

Enables connectivity with Xtralis VSC and VSM4.



VESDA Wi-Fi



Enables connectivity with hand-held iOS and Android devices for unprecedented ease of maintenance and monitoring.



VESDA USB

The USB port allows direct connection to a PC for configuration and maintenance. Being host-mode, it also allows firmware upgrade by inserting a USB key and pushing the relevant button on the detector.



VESDAnet & Relays

Connect up to 200 VESDA-E devices on a single loop. Each VESDA-E detector provides up to 7 relays.

- VESDAnet provides primary reporting, centralized configuration, control, maintenance and monitoring
- Relays allow connection to Fire Alarm Control Panels (FACP) and Building Management Systems (BMS) and other security systems



VESDA Accessories

VESDA Pipes and Microbore Tubes

A key element in the performance of a VESDA ASD system is the network of sampling pipes and microbore tubes that actively transports air from a protected area to the detector. Xtralis offers an extensive range of pipes, tubes and fittings to suit all application needs.

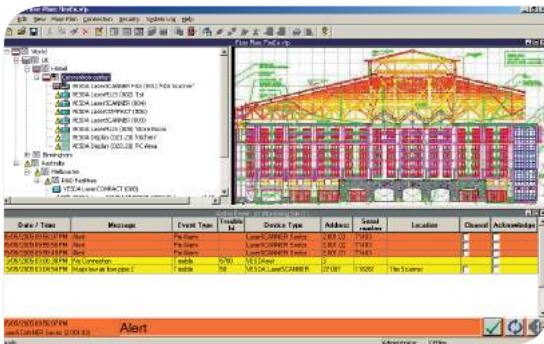




VESDA-E Software

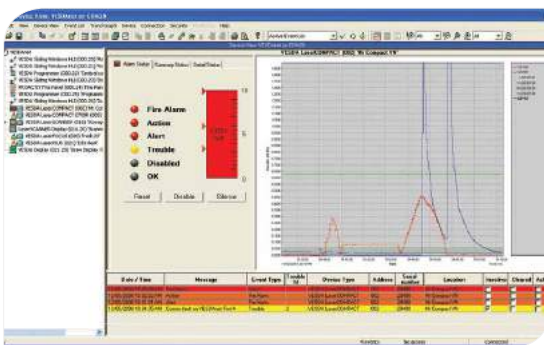
VSM

A software package that allows the user to monitor, configure and control a VESDA system from a central location via a VESDAnet communication loop, Ethernet or WiFi.



VSC

A software package that can be used to configure, install, commission and maintain the entire range of VESDA ASDs. The software provides high-level programming flexibility through its on-line and off-line configuration capabilities.



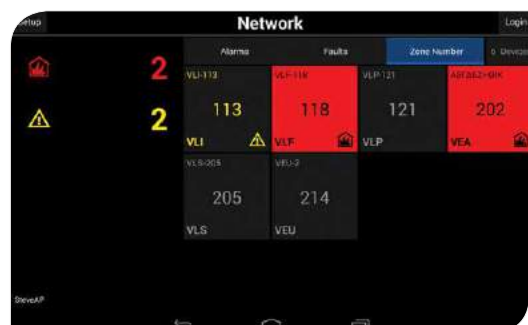
ASPIRE

A Windows-based application that aids the specification and design of pipe networks for VESDA and VESDA-E air sampling smoke detectors. It provides the designer with tools to speed the design process and ensure optimum network performance and installation quality. ASPIRE also makes implementation of the design easy. With automatic generation of lists of all the components required for the project and an Installation Data Pack, the installer will have all the information they need at their fingertips.



iVESDA

iVESDA is a downloadable application that can be installed on Android and iOS handheld devices to monitor and maintain VESDA-E systems with unprecedented ease. iVESDA is also compatible with existing VESDA detectors residing on the same VESDAnet as VESDA-E. iVESDA provides detailed alarm, fault and other status information such as smoke trends, airflow, filter life, as well as viewing of important configuration parameters such as pipes in use and smoke alarm thresholds.



| Features | VEU | VEP-1 | VEP-4 | VEA |
|---|---|---|---|--|
| Worldwide Approvals | UL, ULC, FM, ActiveFire, VdS, CE, EN, CPR | UL, ULC, FM, ActiveFire, VdS, CE, EN, CPR | UL, ULC, FM, ActiveFire, VdS, CE, EN, CPR | UL, ULC, CSFM ActiveFire, VdS, CE, EN, CPR |
| Hazardous Area Approval FM Class 1, Div 2, Groups A, B, C, D) | No | Pending | Pending | N/A |
| Min Fire 1 Threshold | 0.001% obs/m (0.0003% obs/ft) | 0.01% obs/m (0.0031% obs/ft) | 0.01% obs/m (0.0031% obs/ft) | Sampling hole sensitivity 1.6% obs/m (0.5% obs/ft) |
| Detection Range | 0.001 - 20.0% obs/m (0.0003 - 6.25% obs/ft) | 0.005 - 20% obs/m (0.0016% - 6.25% obs/ft) | 0.005 - 20% obs/m (0.0016% - 6.25% obs/ft) | 0.020 - 16% obs/m (0.0063 - 5.0% obs/ft) |
| No. of Inlets | 4 pipes | 1 pipe | 4 pipes | 40 micro-bore tubes |
| Two Stage Filtration | Yes | Yes | Yes | Yes |
| Area Coverage | 6,500 m ² (69,965 sq. ft)* | 1,000 m ² (10,760 sq. ft) | 2,000 m ² (21,520 sq. ft) | 3,345 m ² (36,005 sq. ft) across 40 sampling holes* |
| Pipe Length (Linear) | 400 m (1,312 ft) | 100 m (328 ft) | 280 m (919 ft) | 40 x 100 m (40 x 328 ft) |
| Pipe Length (Branched) | 800 m (2,625 ft) | 130 m (427 ft) | 560 m (1,837 ft) | N/A |
| Addressability | No | No | No | Up to 40 sampling points |
| Total Number of Alarm Thresholds | 4 (Day/Night) | 4 (Day/Night) | 4 (Day/Night) | 4 (Day/Night) |
| Relay Outputs | 7 | 7 | 7 | 7 (expandable up to 47) |
| On-board Memory (Max. Events) | 20,000 | 20,000 | 20,000 | 20,000 |
| Flow Sensing Per Inlet | Yes | Yes | Yes | Yes |
| IP Rating | IP40 | IP40 | IP40 | IP40 |
| AutoLearn™ (Smoke/Flow) | AutoLearn Smoke™ AutoLearn Flow™ | AutoLearn Smoke™ AutoLearn Flow™ | AutoLearn Smoke™ AutoLearn Flow™ | N/A |
| EN54-20 Max. no of Holes (Class A / B / C) | 80 / 80 / 100 | 30 / 40 / 45 | 40 / 80 / 100 | 40 |
| Bar Graph/Indicator LED | LEDs or 3.5" Color Touch Screen | LEDs | LEDs or 3.5" Color Touch Screen | LEDs or 3.5" Color Touch Screen |
| Programming Tools - On-board Programming module - Handheld Programmer - PC Software (VSC, VSM) | USB/Ethernet/WiFi connection to PC using VSC/VSM4 | USB/Ethernet/WiFi connection to PC using VSC/VSM4 | USB/Ethernet/WiFi connection to PC using VSC/VSM4 | USB/Ethernet/WiFi connection to PC using VSC/VSM4 |
| StaX Expandability** | Auto Pipe Clean StaX PSU StaX | PSU StaX | Auto Pipe Clean StaX PSU StaX | VEA 40-Relay Local StaX |

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About Xtralis

Xtralis® is the leading global provider of converged solutions for the early detection and remote visual verification of fire, gas and perimeter threats.

Our technologies prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised. We protect high-value and irreplaceable assets belonging to the world's top governments and businesses. Our brands include the VESDA-E – the next generation of aspirating smoke detection technology; VESDA – the world's No.1 very early warning aspirating smoke detection (ASD) systems; ICAM™ for flexible ASD; ECO™ – Gas detection & environmental monitoring modules for VESDA & ICAM systems; and, OSID™ – easy to use smoke detection for open areas.

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