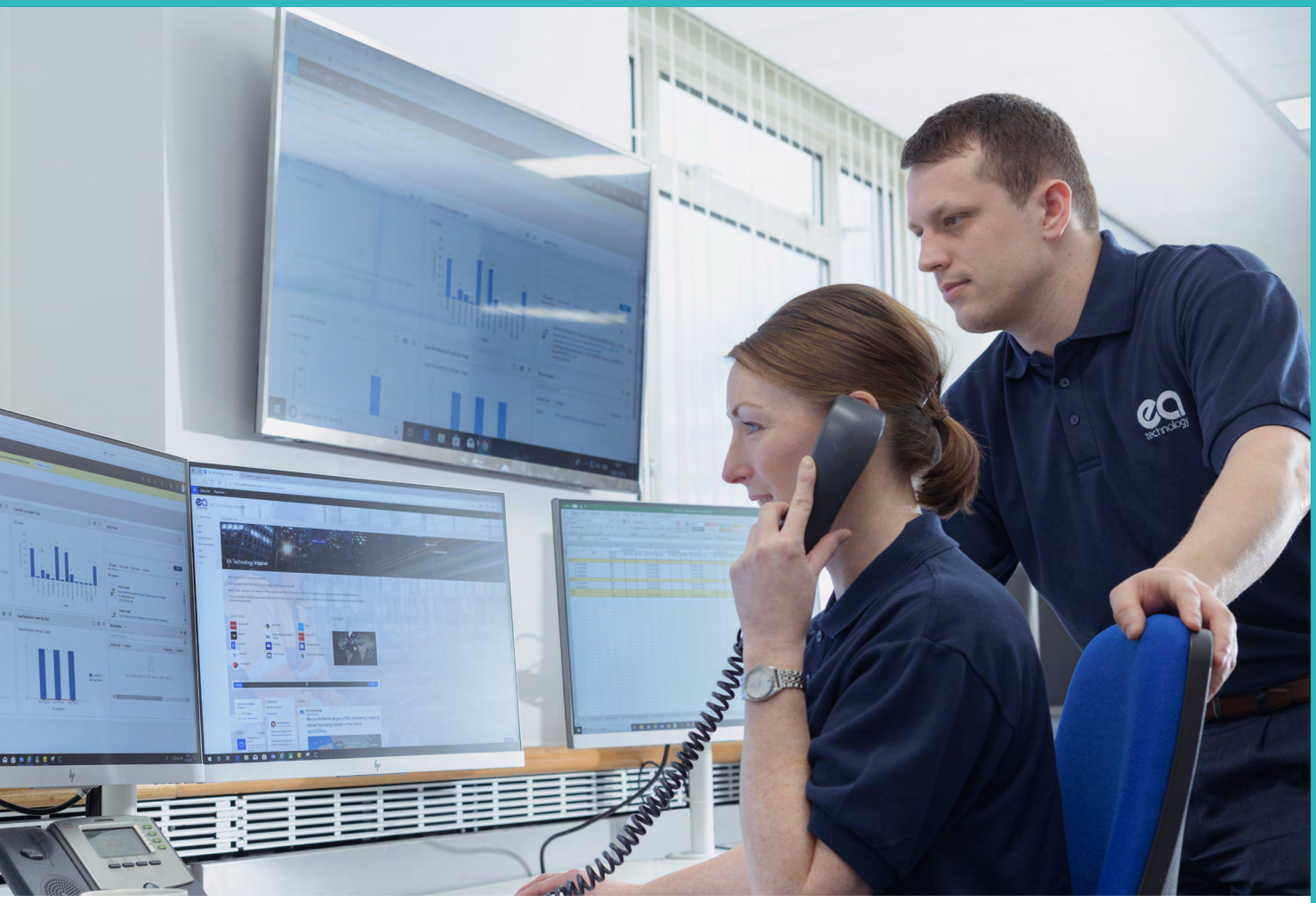


Astute HV Monitoring® protects your facilities from costly and catastrophic shutdowns

Astute HV Monitoring®

Our Astute HV Monitoring® service continually looks for issues within switchgear and cables. In particular Partial Discharge (PD), which is an early indicator of degradation, enabling users to take proactive action and avoid costly shutdowns.

www.eatechnology.com.au

Product Brochure

Our **Astute HV Monitoring®** service is an **IAM Innovation** award winning service because it delivers financial, performance and risk reducing benefits in asset management.

Understanding the real-time condition of your switchgear assets offers piece of mind financially, operationally and in terms of staff safety. Having the comfort that a dedicated expert is available to help you understand the risks associated with any issues is priceless.

Our service monitors your switchgear and cables and reports any significant changes in PD activity that may result in failure or damage to the equipment. Our experts will then report to you any issues that occur and provide advice on the best course of action. The Astute HV Monitoring® service is designed to offer the combined benefits of permanent monitoring of assets, expert analysis and reporting under one simple commercial arrangement.

Our clients benefit from significant cost savings due to the increased availability of plant and a reduction in unplanned failures and the associated cost.

The **Astute HV Monitoring®** service offers you:

- A detailed condition benchmarking exercise
- Fully installed state of the art monitoring equipment
- One-month commencement programme
- Constant 24/7, 365 days a year monitoring
- Alarms for abnormal PD detections
- Feed condition data into reports and to the company management
- Access and advice from world leading experts

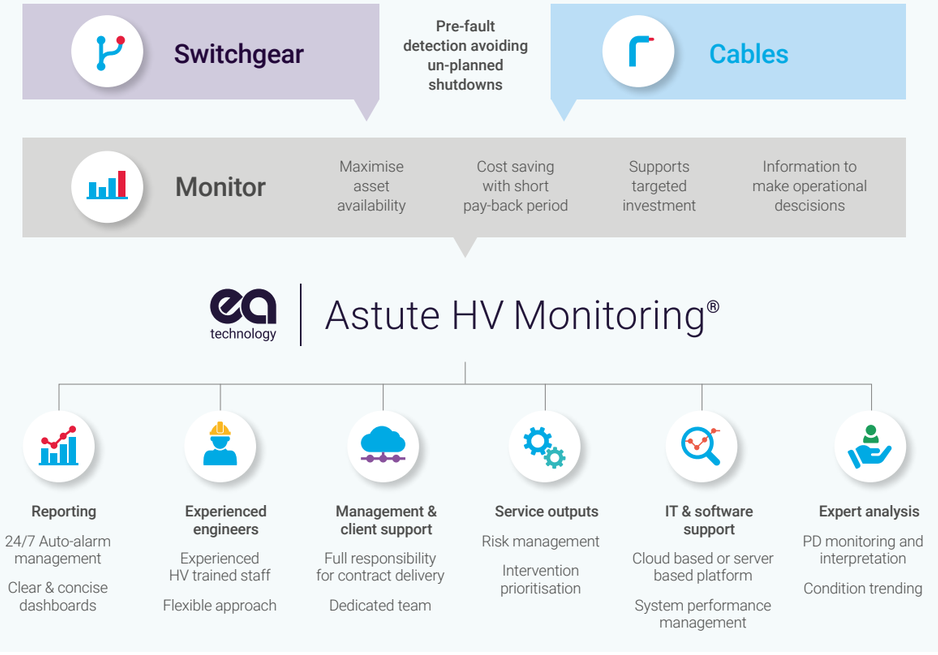
Benefits to you:

- A reduction in costly disruptions to production
- Increased plant availability
- Fewer customer issues
- A reduction in on-costs
- Reduced overtime
- Reduction of personnel to an HV environment
- An increase in asset life
- A decrease in client performance penalties

Astute HV Monitoring®

HFCT cable monitoring

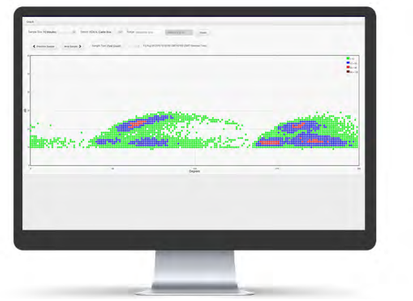
Astute HV Monitoring® integrated system



Astute HV Monitoring® is part of the Award Winning **UltraTEV®** range.

It is a fully integrated, modular system that collects data on the condition of HV assets through a cohort of specialised sensors. This scalable system consists of multiple multi-sensor nodes connected to a central processing hub for monitoring and alerts.

The Astute® hub manages the data from up to 300 sensor channels simultaneously without mulitplexing and securely manages the processing and communication of the data to a central Astute server for full analysis. The monitor, depending on configuration, can detect all types of partial discharge activity from within HV switchgear and cables, providing early identification of asset deterioration thus allowing developing faults to be addressed before they lead to failure. The monitor is completely non-intrusive and requires no outage to install and no disruption to normal operation.



Phase resolved partial discharge graph

Trend analysis graphs

Technical Specification

TEV	
Measurement Range	0 – 60 dBmV
Pass Band	3 to 80 MHz
Pulse Polarity	Positive or negative
Resolution	1dB
Accuracy	±1dB
Precedence Resolution	1ns
Number of Channels	2 per node

CABLE PD MEASUREMENT	
Measurement Type	Single-Phase or Three-Phase
Sensor	3 x HFCT
Measurement Range	5pC to 144,000pC (with HFCT1-F50)
Gain Ranges	4 (Auto-ranging)
Phase Reference	Automatic from Hub power supply
Precedence Resolution	25ns
Sampling Rate	160MHz
Pass Band	3kHz to 41MHz
Accuracy	±1 dB

POWER SUPPLY INPUT	
Voltage	100-240V AC (nominal)
Frequency	50-60 Hz (nominal)
Maximum Combined Power	370W
Fusing	2x Anti-surge (T) 5A Double Pole Fusing 1x Fast (F) 100mA

ULTRASONIC	
Measurement Range	-7 dBµV to 68dBµV
Resolution	1dB
Accuracy	±1dB
Transducer Sensitivity	-65 dB (0dB = 1volt/ µbar rms SPL)
Transducer Centre Frequency	40 kHz
Transducer Diameter	16mm
Number of Channels	2 per node

ENVIRONMENTAL	
Operating Temperature	0 – 50 degrees C
Humidity	0 – 90% RH non-condensing

Astute HV Monitoring® Accessories

External temperature & humidity sensor

TEV sensor

Noise screening antenna

Airborne ultrasonic microphone

Ultrasonic Contact Sensor

High frequency current transformer

For more information please call us on +61 (0) 7 3256 0534 or email us at **au.sales@eatechnology.com**