

POWERINSIGHT

by Advanced Energy™

Bringing Actionable Intelligence and Insights to Your Critical Power Delivery Systems

Data-driven decision making enabled by the Industrial Internet of Things (IIoT) is becoming an integral part of the manufacturing industry. However, without proper management and contextualization to your process, the data provides little meaning until it is translated into digestible, actionable information.

PowerInsight by Advanced Energy™ transforms the data recorded by your power delivery systems into useable insights, through rich data sets and advanced analytics, that you can apply to your process to maximize performance, cut costs, and improve yield. Designed to complement your existing systems, the focused power delivery diagnostics can enable higher level big data analytics and AI solutions. Unlock AE's decades of domain expertise and service experience to make data-driven decisions in your process.

Features and Benefits



Yield Improvements

Reduce process defects with power delivery optimization using comprehensive diagnostics and long-term trend analytics



Increased Uptime

Reduce unplanned downtime with health monitoring and predictive maintenance



Comprehensive Power Delivery Data

Access rich power delivery data not typically available via existing tool interfaces



Platform Designed for Advanced Analytics

Leverage advanced visualization and analytics techniques with an intuitive, easy to use platform



Ease of Installation

Connect reliably and quickly with minimal production impact using OEM developed interfaces






Collaborative Solution

Combine performance data with AE's 30+ years of power delivery domain expertise, vast service history, and data science resources for innovative solutions

Data Capabilities

Access comprehensive data sets from AE products and apply a range of visualization and analytics capabilities that can evolve with your needs for actionable insights and data-driven decisions.

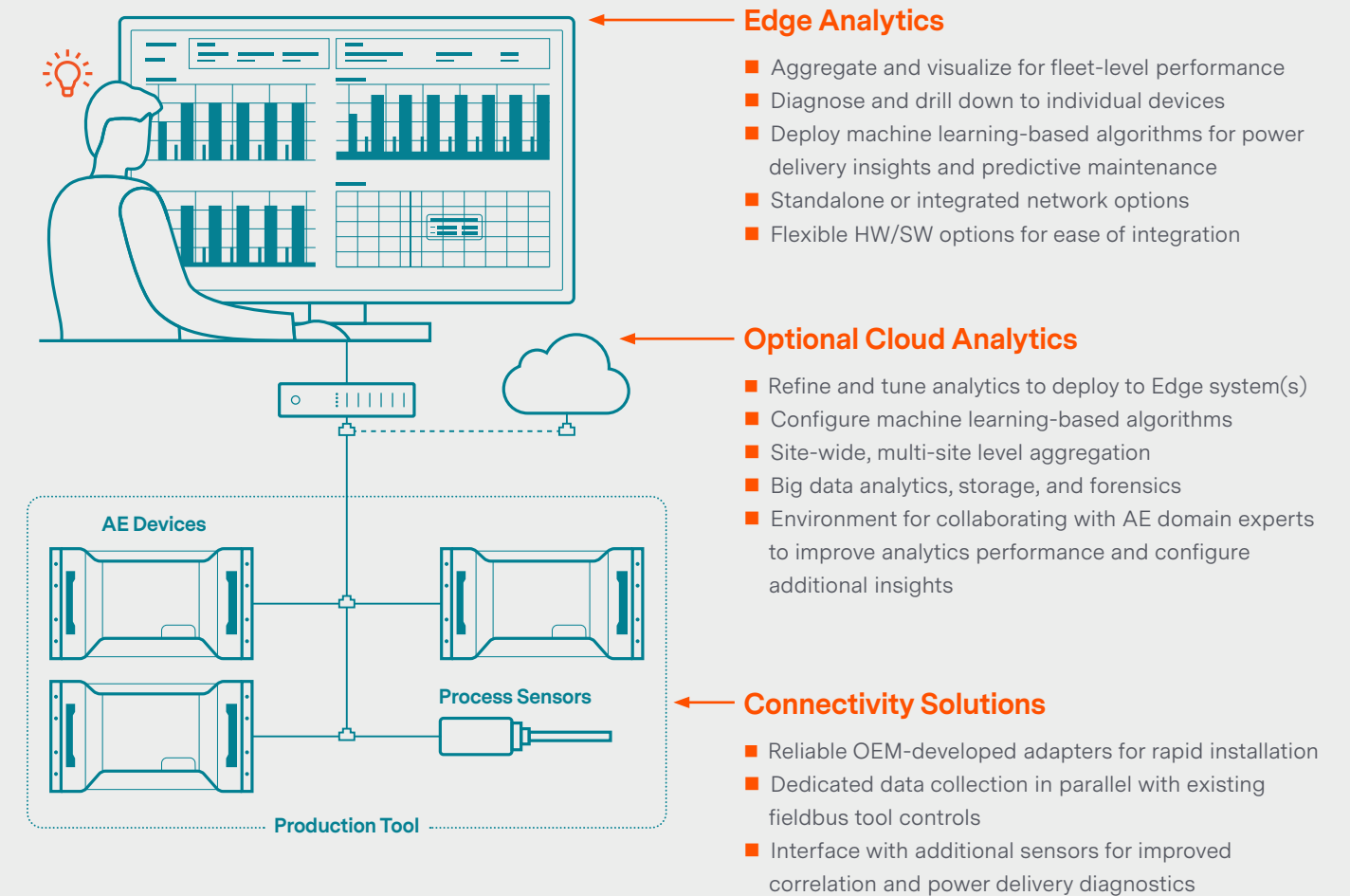
 <p>Basic Data and Visualization</p> <ul style="list-style-type: none"> Conduct rapid diagnostics Utilize flexible visualization environment Create user-specific dashboards 	 <p>Enriched Data and Diagnostics</p> <ul style="list-style-type: none"> Transform raw data into meaningful insights leveraging modern data science techniques Automate event correlation for rapid root cause analysis Access a growing library of analytics tools 	 <p>Predictive and Prescriptive Insights</p> <ul style="list-style-type: none"> Use predictive analytics to drive maintenance cycles and reduce downtime Inform decisions for system configuration with prescriptive analytics Detect anomalies in power delivery with advanced machine learning techniques
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Customer Use Case Examples

- Diagnose and tune dual magnetron PVD applications with comprehensive data visualization and forensics
- Improve yield with PVD arc event diagnostics and informed fault detection and classification
- Lower cost of ownership with predictive analytics on remote plasma source (RPS) maintenance cycles

PowerInsight by Advanced Energy™ Setup

Flexible deployment options with on-premise only or hybrid cloud solution.



Edge Analytics

- Aggregate and visualize for fleet-level performance
- Diagnose and drill down to individual devices
- Deploy machine learning-based algorithms for power delivery insights and predictive maintenance
- Standalone or integrated network options
- Flexible HW/SW options for ease of integration

Optional Cloud Analytics

- Refine and tune analytics to deploy to Edge system(s)
- Configure machine learning-based algorithms
- Site-wide, multi-site level aggregation
- Big data analytics, storage, and forensics
- Environment for collaborating with AE domain experts to improve analytics performance and configure additional insights

Connectivity Solutions

- Reliable OEM-developed adapters for rapid installation
- Dedicated data collection in parallel with existing fieldbus tool controls
- Interface with additional sensors for improved correlation and power delivery diagnostics

Four Steps to PowerInsight by Advanced Energy™

1

Define

Identify key issues and areas of interest for system improvement or optimization

Define AE equipment and third-party devices for data collection and verify port availability

2

Connect

Complete on-site system installation and configuration

Configure and customize user dashboards and system grouping

3

Use and Benefit

Diagnose yield issues and reduce unplanned downtime

Improve system performance and power delivery configuration

4

Collaborate

Collaborate with Advanced Energy on more advanced diagnostics and predictive analytics to drive actionable intelligence in the production environment



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

AE's power solutions enable customer innovation in complex semiconductor and industrial thin film plasma manufacturing processes, demanding high and low voltage applications, and temperature-critical thermal processes.

With deep applications know-how and responsive service and support across the globe, AE builds collaborative partnerships to meet rapid technological developments, propel growth for its customers and power the future of technology.

PRECISION | POWER | PERFORMANCE

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