ABB Ability™ Genix Datalyzer
Cloud based analyzer fleet monitoring solution
Measurement made easy

ABB Ability™ Genix Datalyzer is cloud-based analyzer fleet monitoring solution which takes the guess work out of analyzer monitoring.

What it is:
• Enterprise grade, comprehensive, yet modular cloud-based analyzer fleet monitoring application
• Helps in driving business outcomes seamlessly from an asset to fleet
• Helps assure 24/7 emissions compliance and equipment monitoring

How it works:
• Multiple analyzers are connected to an Edge device (MicroPC) which sends out the data to the cloud
• Automates contextual integration of operations, IT and engineering data

What it delivers:
• Unlocks the value of product and process data and displays the same in easy-to-understand parameters
• Actionable insights and analytical applications, straight out of the box
• Self-service analytics which empowers business users
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Analyzer monitoring made easy
Six dimensions of asset monitoring

Regulatory compliance
Non-compliance has never been more expensive, in terms of both fines and threat of shutdown. Increased regulations result in increased compliance costs, requiring 24/7 monitoring of pollutant gases.

Asset availability
The failure of a single part of an analyzer can cause cascaded damage in the system. End-users need to ensure maximum uptime of the analyzers by regular monitoring of key parameters.

Asset quality & accuracy
Regulatory aspect for emissions monitoring has laid back the emphasis on keeping asset quality high. Even if an end user follows preventive maintenance methodology it has its own disadvantages.

Resource availability
Retirements and other departures erode “institutional knowledge” on analyzers. Staff changes challenge’s ability to standardize maintenance practices across multiple sites.

Scheduled maintenance
Maintenance may be required at convenient and less convenient times. If a major event is not preempted with the help of condition monitoring or predictive maintenance solutions, it can be difficult to do maintenance during inconvenient times.

Safety & cybersecurity
Safety of the personnel and of the data & systems is getting more critical with time with various data breaches in major companies.
Genix Datalyzer
Key features

Data access made easy
The solution has been designed in a way that it moves from corporate level to site level to plant level and finally to a particular analyzer. As each user has specific roles and responsibilities, the access rights are tailored accordingly and provided based on the focus areas.

Types of access rights:
• Corporate
• Site
• Maintenance manager
• Maintenance engineer
• Operations manager
• Environmental manager

Role based access provides the customer with flexibility to provide right data access to the right user, which keeps the data in safe hands. To ensure the solution is cyber secure it undergoes applicable robustness and security tests, which include port scanning, network flooding, vulnerability scanning and protocol fuzzing.

Maintenance made easy
The solution comes with a report generation feature wherein users can generate standard reports in PDF or Excel.

The report covers detailed information about the analyzer comprising a summary of health status, emissions data and system diagnostics data etc.

Additionally, configurable reports (PDF and Excel) can be created from the platform based on the date range you choose- especially useful for root cause analysis or troubleshooting.

This helps to schedule maintenance and spare parts replacements. Easy data access and event based notification provides with flexibility of managing resource availability.
Genix Datalyzer
Key features

QAL3 report made easy
A key regulatory feature is the QAL3 reporting and assessment function. This requires companies to maintain and demonstrate the required quality of the measurement results during the normal operation of the analyzer management system by checking that the zero and span characteristics are consistent with those determined during QAL1.

The standard requires suitable equipment (QAL1) to be set-up correctly (QAL2) and maintain correct operation (QAL3). As per, emission legislation EN 14181 guidelines, customers must perform the QAL3 validation using any, or, a combination of CUSUM, SHEWART and EWMA charts. This solution provides an automated chart for any interval up to one year. Users can also generate reports in PDF and Excel format for analysis documentation or for submission.

The above feature addresses the regulatory requirement of an emission monitoring solution.

Value added insights made easy
For compliance, efficiency and performance, the value begins with real-time data and the ability to monitor asset health and performance, process, and safety, etc.

ABB’s Genix Datalyzer achieves this by featuring capabilities such as analysis of analyzer health data, and live system diagnostics data. Historical data trend analysis is also available for as far back as five years.

The solution comes with the benefit of providing added insights such as health score of analyzer, correlation plots etc.

The health score can be used to benchmark an analyzer against another one or to troubleshoot if the health score trend of a particular analyzer is down.

The above feature helps to maintain and even optimize asset availability, quality and accuracy.
Analyzer system
Analytical insights

**Fleet overview**
- GIS data & location of each analyzer in site
- Number of total online & offline analyzers
- Heat map showing performance of installed base
- Top 5 analyzers with most process alarms in last 24 hours

**Plant view**
- Health score analysis
- Analyzer availability indication
- Process measurements
- Historical trends

**Analyzer view**
- Constructional parameters
- System diagnostics
- Parameter correlation chart
- KPI display
- Asset parameter trends
- Enhanced visualization using heat maps and charts
Genix Datalyzer
Network architecture

Multiple analyzers are connected to an edge device (MicroPC) which sends out the data to cloud.

The application is deployed in 2 MicroPCs (Windows and Linux), which is depicted above along with required networking. The MicroPC has two Ethernet ports (LAN 1 and LAN 2) and it will be connected to the analyzer network and SIM network, to fetch the data from the analyzer and display in the application. All software components in the MicroPC comes pre-configured specific to the analyzer instance. The MicroPC also has one internal GSM Modem with a SIM card and act as the main channel for communication via Internet.

Cybersecurity:
- Achilles Level2 certified
- Extensively tested for security vulnerabilities and certified safe
- Has built in TPM chip
- Device is hardened to prevent any unintended access/use

Automates contextual integration of Operations data-IT data Engineering data.
User personas
Access levels

Customer

- Corporate level | Operations / Environment specialist
- Site level | Site manager
- Plant level | Environment manager
- Plant level | Maintenance manager
- Plant level | Operations manager

ABB

- Service engineer | Country
- Operations engineer | Admin
- Plant level | Maintenance engineer
## Genix Datalyzer Technical data overview

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>Edge</td>
<td>CPU: Intel® Celeron® Quad Core J1900, 2GHz</td>
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<tr>
<td></td>
<td>8 GB RAM</td>
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<tr>
<td></td>
<td>128 GB</td>
</tr>
<tr>
<td></td>
<td>2 ethernet Port</td>
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<tr>
<td></td>
<td>4G connectivity</td>
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<tr>
<td>Accessories during commissioning of Edge</td>
<td>Keyboard, mouse, monitor, mini DP to VGA / HDMI Adapter</td>
</tr>
<tr>
<td>Additional accessories</td>
<td>24 volt Powesupply unit (5-10 amps), LAN cables, SIM Card for 4g connectivity</td>
</tr>
<tr>
<td>Number of tags per analyzer</td>
<td>300 - 400</td>
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<td>Protocols supported</td>
<td>OPC DA, OPC UA</td>
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<td>Remote patch update</td>
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<td>Edge management from cloud</td>
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<td>Operating system</td>
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### Flexible licensing options

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<tr>
<th>Features</th>
<th>Standard</th>
<th>Enhanced</th>
<th>Premium</th>
<th>Corporate</th>
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<tbody>
<tr>
<td>Manage your analyzer fleet on cloud</td>
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<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Check health score, correlation charts, process and product parameters overview dashboard</td>
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<td>●</td>
<td>●</td>
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<tr>
<td>Role based access</td>
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<td>QAL3 assessment and reporting feature</td>
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<td>Automated reports</td>
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<td>SMS for major events</td>
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<td>Consolidated dashboard at corporate level</td>
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<table>
<thead>
<tr>
<th>Users</th>
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<th>Unlimited users</th>
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<tr>
<td>Analyzers</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>On Request</td>
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Notes
ABB Measurement & Analytics

For your local ABB contact, visit:
www.abb.com/contacts

For more product information, visit:
www.abb.com/measurement