
MONITORING SOLUTION FOR UPS, PDU AND POWER CONDITIONING

ABB Ability™ SmartTracker

Comprehensive 24/7 Cloud-based monitoring for power protection equipment



- Powerful Cloud-based platform
- Performance monitoring of multiple installations and clear information of energy efficiency improvement opportunities
- The "plug and play" devices make installation quick and easy

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With 24/7 monitoring, ABB Ability™ SmartTracker helps customers in every area of business avoid costly downtime due to surges, power outages, or other power events.

Operational risk is lifted from your shoulders and delegated to ABB so you can concentrate on your primary business: running a successful and profitable enterprise.

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ABB Ability™ SmartTracker

Comprehensive 24/7 Cloud-based monitoring for power protection equipment

As a market leader in power protection equipment, ABB has a solution for every situation to ensure continuous supply of high quality power to mission critical equipment and processes.

Now, with ABB Ability™ SmartTracker, ABB can give you complete peace of mind that your uninterruptible power supplies (UPSs), power conditioning systems (PCSs), or power distribution units (PDUs) are delivering the top performance for which it was designed.

ABB Ability™ SmartTracker oversees site performance, analyzes collected data, predicts equipment condition trajectories and recommends corrective actions to avoid problems. As well as implementing an effective maintenance strategy, ABB Ability™ SmartTracker also ensures equipment runs as efficiently as possible, saving energy and reducing greenhouse emissions.



Best-in-class field support as expert by your side



Cloud-based platform

24/7

Full access to information anytime



Fulfills stringent cyber security requirements



Equipment runs as efficiently as possible, reducing CO₂ emissions



Understanding your power protection devices

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01 With an intuitive web app interface via smartphone, tablet or PC, ABB Ability™ SmartTracker makes it simple to oversee site performance and supervise the electrical system.

An expert by your side

With SmartTracker, ABB can monitor your power protection equipment 24/7. You can relax as ABB promptly picks up any alarms or situations that might need attention. Nothing will be missed. It is like having an expert by your side, day and night.

SmartTracker is a powerful Cloud-based monitoring platform that uses the ABB Ability™ Cloud solution, which already benefits many other ABB clients, such as the world's biggest banks, retailers and sport event organizers. In the Cloud, hardware and software are abstracted from the client's location, improving performance, reliability and security.

ABB Ability™ SmartTracker's platform has been designed from the ground up with cyber security in mind. ABB's world-class cyber security protocols are applied in SmartTracker, protecting connections, login processes, and password and user management.

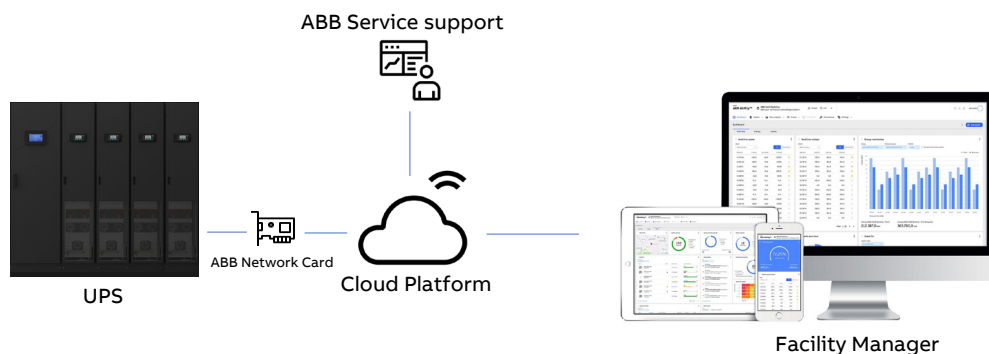
Features and highlights

The solution is scalable and new assets can be added or reconfigured with a minimum of fuss.

With ABB Ability™ SmartTracker the user can monitor voltages, currents, frequencies and other important device life signs. Monitored parameters include:

- Battery temperature
- Earth leakage current
- Fan speed variation
- Capacitor and fan health index
- Condensing humidity
- Output voltage behavior
- Output power changes
- Load warning
- Internal heat sink temperature
- Input voltage statistics
- Output current variation
- Ambient temperature

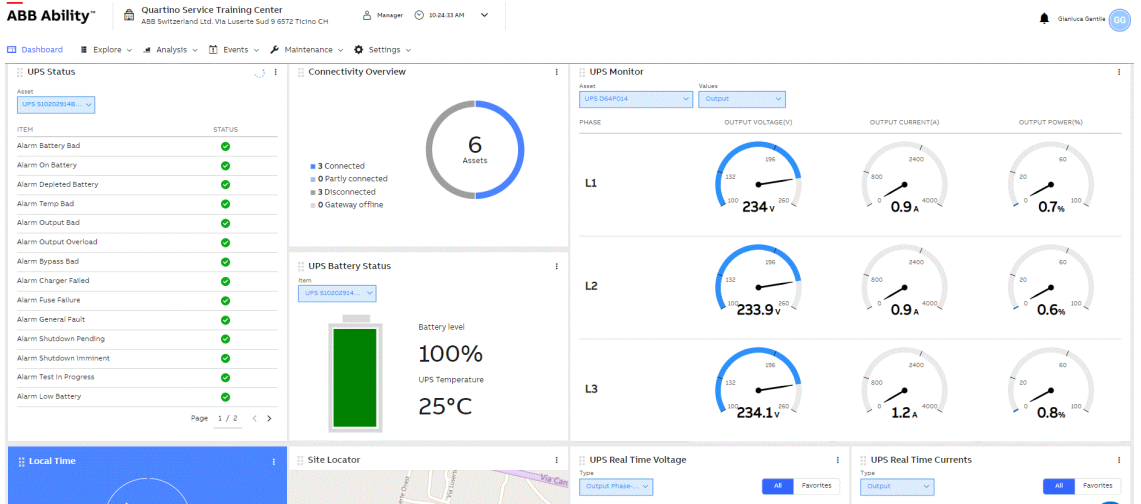
Parameters are monitored and used by the predictive algorithms to provide a comprehensive overview of the health of the power protection equipment and a prognosis of future performance and maintenance needs. Predictability is a key-word for ABB Ability™ SmartTracker.



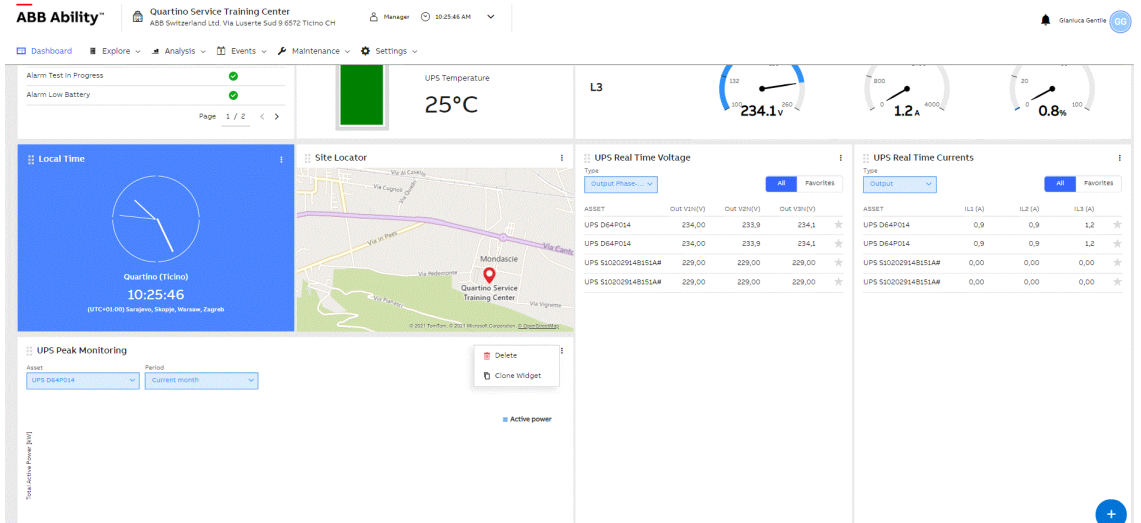
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01 Example one of asset status dashboard

02 Example two of asset status dashboard



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Analysis and prediction

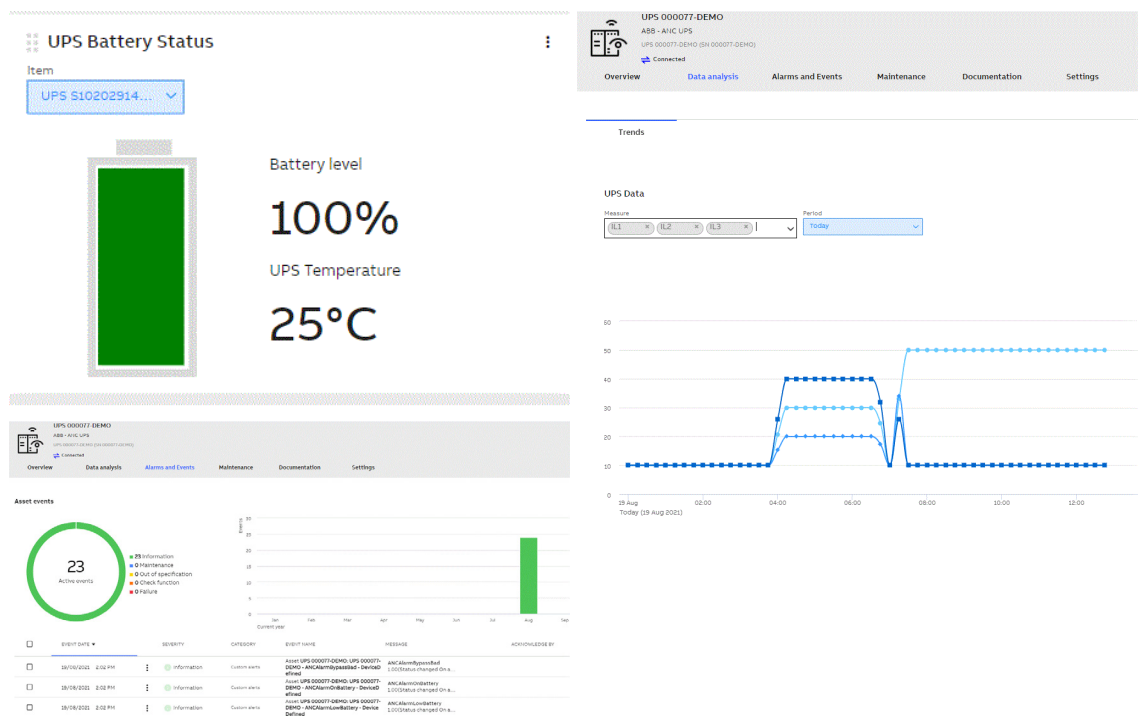
SmartTracker offers outstanding predictability features and leads into a new era in UPS, PCS and PDU services, going far beyond classic remote monitoring available on the market. Data collection in the Cloud enables a range of services that improve the performance of the power protection equipment and reduce costs for the customer:

— 01 SmartTracker widgets to give a better understanding of the UPS, PDU and Power Conditioning system at first sight

- **Predictability:** Sophisticated algorithms constantly analyze the data collected by the SmartTracker Cloud platform to predict potential failures and notify the users and service team. With this warning, measures can be taken to mitigate the incipient problem – or even avoid it altogether – thus reducing downtime and avoiding expensive repairs.
- **Asset management:** A user-friendly graphic interface gives an insight into the state of devices and historical data. Unit service history, warranty and so on, are just one click away. The visualization also indicates trends so that the user/ABB can take pre-emptive action if necessary – or of course, merely feel content that the system is operating as intended and will continue to do so.
- **Accessibility:** Data can be accessed from anywhere at any time by properly accredited users.

- **Performance:** The availability of detailed asset information enables equipment to be set up or tuned to deliver the best possible performance.
- **Communication:** Data sharing and instant communications via the Cloud platform simplifies customer/ABB interaction, leading to a speedy resolution of any issues or queries.
- **Safety:** Updates for cyber security, the power protection equipment itself, or safety features are also instantly available.

Analysis and prediction will help you optimize operations, extend the lifetime of your assets and reduce capex and opex costs.



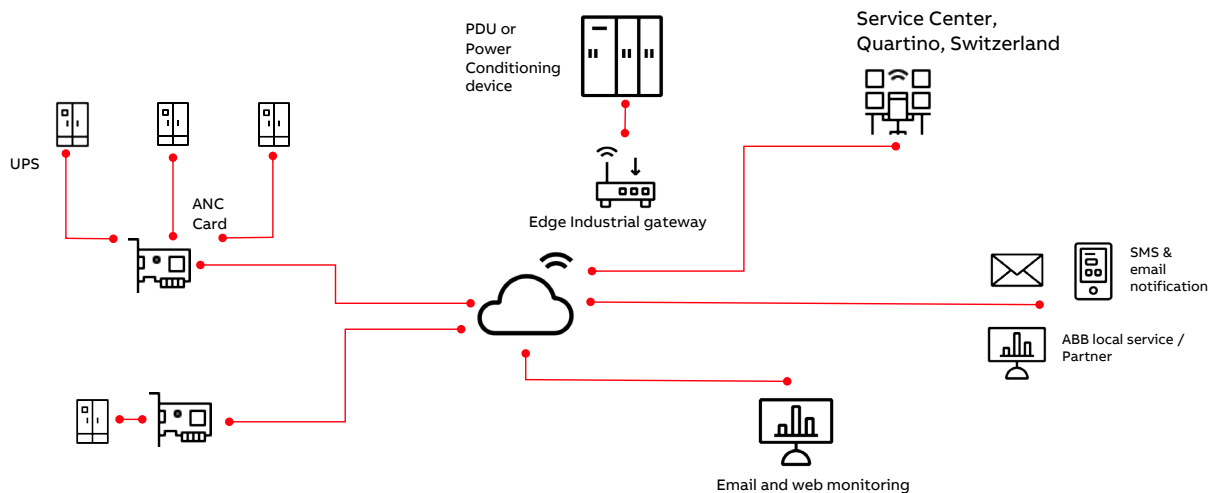
A secure, proprietary monitoring solution

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01 ABB Ability™
SmartTracker example
architecture

The design philosophy of ABB Ability™ SmartTracker places great emphasis on reliability and security. For this reason, SmartTracker was developed by ABB itself. Internal development further ensured the integrity of the cyber security aspects and allowed our team to tailor a solution that precisely suits the power protection product world.

And product support in the field is simplified as ABB retains all the expertise, right down to the very last detail. The use of the ABB Ability™ Cloud infrastructure further ensures the integrity of SmartTracker.

In addition, product upgrades or improvements can be made by ABB without reliance on third-party suppliers, where there could be delays, misunderstandings, or compatibility problems.



Connectivity solutions

Integrated and plug-and-play architecture

ABB Ability™ SmartTracker does not require engineering, helping users avoid the cost and time-consuming setup of an energy and asset management system involving many components. For the UPS product range, just the ABB network card has to be implemented into the UPS. For the power conditioning and power distribution products this simply involves mounting an Ability™ Edge Industrial gateway module.

01 ABB ANC
Network Card

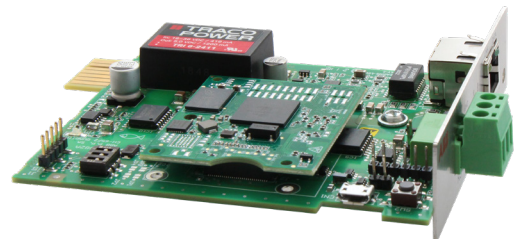
ABB ANC Network Card

For the UPS product range, the only additional hardware needed to implement ABB Ability™ SmartTracker is ABB's proprietary, plug-and-play ABB ANC Network Card.

The ABB ANC Network Card connects the user's power protection infrastructure to the ABB Cloud infrastructure where ABB Ability™ SmartTracker resides and does its work. The card's interface allows the user to monitor their power protection equipment via ABB Ability™ SmartTracker at anytime from anywhere. The ABB ANC Network Card's hardware and software meet the most stringent ABB cyber security requirements and are designed to guarantee the highest robustness against cyber-attacks.

Key features of the ABB ANC Network Card

- Secure boot feature with dedicated TPM 2.0 (ISO/IEC 11889) sensor. TPM is an internationally recognized standard that is applied to the dedicated cryptoprocessor on the card. This secure microcontroller has integrated cryptographic keys that ensure the security of the hardware.
- Access via browser HMI or network.
- Supported protocols: Modbus TCP/IP, http, Modbus RS485, SNMP V2 and V3, SMTP and Remote Syslog.
- Individual UPS module visualization of up to 30 modules.
- Multilanguage localization (English, French, Spanish, German, Italian).
- Designed and dedicated to work with ABB Ability.
- Available local HMI connection.
- Easy to configure and provision through intuitive wizard.



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Because the ABB ANC Network Card features proprietary ABB technology and is produced by ABB, ABB has full control of updates and software enhancements. Any supply issues due to third parties are eliminated. ABB can provide in-house support for card troubleshooting. The card is designed to work with older UPS models (former GE, in version Legacy (L)).

The ABB ANC Network Card is a connectivity platform that simplifies ABB's offering since just one card fits all ABB three-phase power protection products, making inventory management, updates and installed base management much more straightforward.

ABB's Edge Industrial gateway

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01 ABB Ability™ Edge Industrial gateway

The ABB Ability™ Edge Industrial gateway module is a dedicated connectivity solution for products such as ABB's PDUs and Power Conditioning devices ensuring communication with ABB Ability SmartTracker. The ABB Ability™ Edge Industrial gateway module can be mounted on DIN rail to collect data throughout the system.

When connected to the ABB Ability™ SmartTracker, the Edge gateway plays an important role to keep device data available and consistent in the cloud platform. If Internet connectivity is disrupted, data can be easily stored onboard the gateway, and transferred to the cloud when connectivity is restored.

The Edge gateway gathers data from field devices as well as environmental parameters when specific sensors are used and feeds the data to the ABB Ability™ platform. ABB Ability™ Edge Industrial gateway is able to run an on-premise version of the ABB Ability™ SmartTracker solution, with local data collection and viewing possibilities via a web server hosted on the gateway itself, or to connect to the cloud version of this vertical.



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SmartTracker – the only power protection monitoring tool you will ever need

ABB Ability™ SmartTracker is a market-leading monitoring tool for UPSs, PCSs and PDUs. With an intuitive web app interface accessible via smartphone, tablet, or PC, SmartTracker uses ABB's Cloud solution to deliver a cost-efficient, plug-and-play platform with add-on and premium services.

ABB Ability™ SmartTracker delivers:

- A dedicated solution for power protection equipment
- A general view of assets
- Vital data and life signs
- Programmable automatic and periodic reporting
- Data analytics and historical data
- 24/7 remote monitoring by ABB experts
- Advanced data and notifications for user and service team monitoring devices
- Full Cloud capability and associated world-class ABB cyber security
- Predictability with advanced algorithms
- Ease of use through ABB proprietary network card and Edge Industrial gateway
- Widgets and a graphical interface designed to give a better understanding of UPS/PCS/PDU condition at first sight

With SmartTracker, ABB (both the local presence and the factories) supervise the customer's asset 24/7 and will proactively call (or e-mail or text) the customer if there is an alarm or anomaly. Connectivity is via a dedicated ABB network card that can handle large data sets.

With 24/7 monitoring, ABB Ability™ SmartTracker helps customers in every area of business – such as healthcare, industry, data centers, financial institutions, or transportation – avoid costly downtime due to surges, power outages, or other power events. SmartTracker brings you complete peace of mind by constantly analyzing data from your power protection equipment to optimize energy use and predict any upcoming issues or maintenance requirements. Operational risk is lifted from your shoulders and delegated to ABB so you can concentrate on your primary business: running a successful and profitable enterprise.

Compatibility table (connectivity module)

	ABB ANC Network Card	Edge Industrial gateway
MegaFlex DPA IEC	Yes	
DPA 500 IEC/UL	Yes	
DPA 250 S4 IEC	Yes	
DPA UPScale ST/RI IEC	Yes	
PowerLine DPA IEC	Yes	
SG Series IEC/UL	Yes	
PowerWave 33 IEC	Yes	
TLE Series IEC/UL	Yes	
MegaFlex UL	Yes	
SitePro IEC/UL	Yes	
LP Series 33 IEC/UL	Yes	
PCS100 AVC-20		Yes
PCS100 AVC-40		Yes
HiPerGuard MV UPS		Yes
Cyberex PDU		Yes
TruFit PDU		Yes



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