Railway Passenger Station Solutions

ABB Electrification

Your trusted technology partner for smarter solutions

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Additional information
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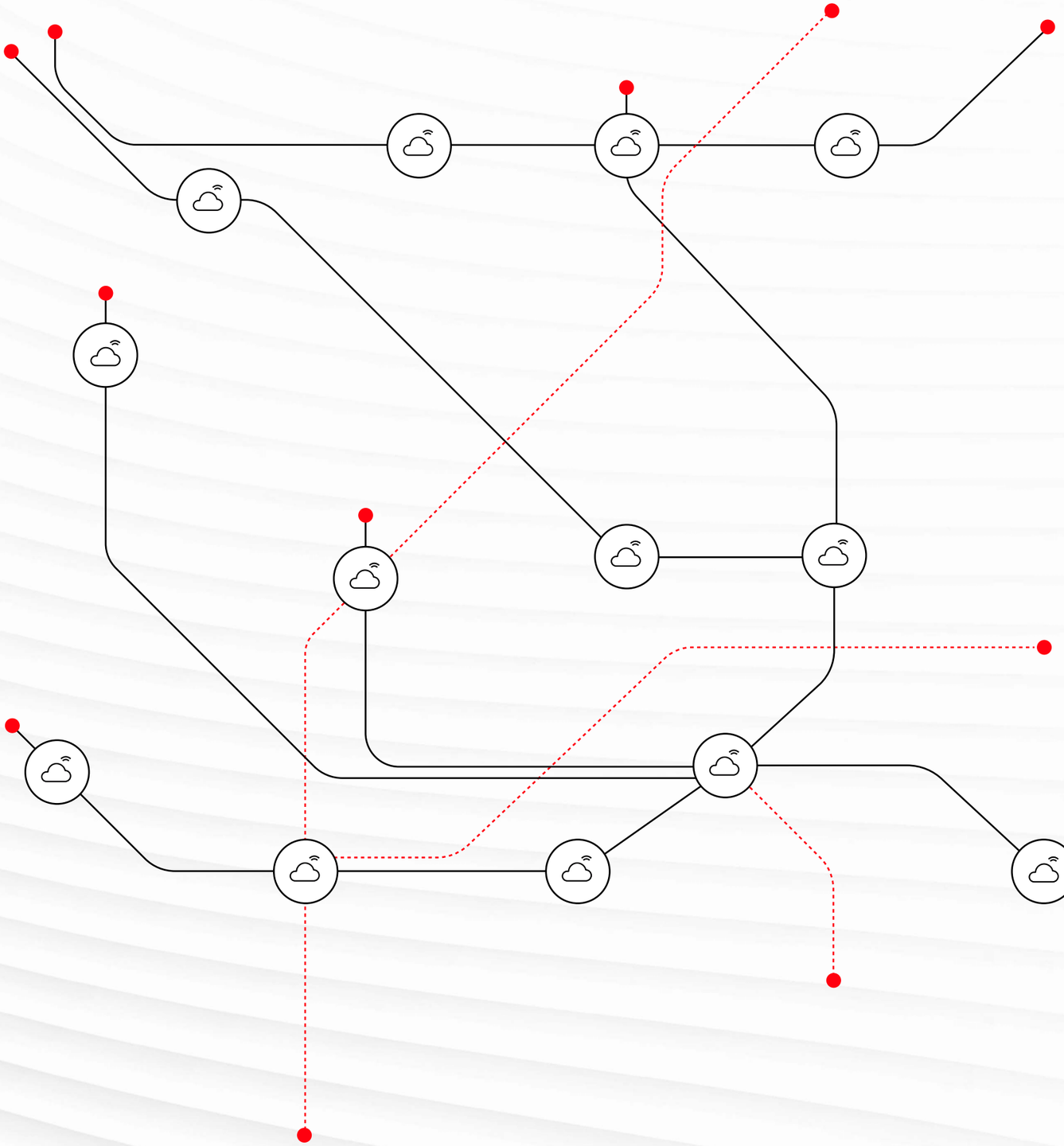


Contents

Meet the future of passenger stations

From power supply to building automation, ticketing to HVAC, passenger stations are a multimodal hub, working to ensure a safe, efficient, and comfortable journey for everyone that passes through their doors.

But it’s no secret - the challenges are becoming more complex. Due to growing urbanization, passenger numbers are increasing and so is demand for absolute efficiency. Meeting that need is made even more challenging by stricter sustainability targets, aging infrastructure, and the need to ensure the highest levels of safety for people, assets, and passengers.

As a global leader in integrated and collaborative digital solutions, ABB understands the complexities you’re facing. We build on our deep domain expertise across metro, railway and electric vehicle charging to bring power distribution, automation, and software solutions together under one flexible platform.

Whatever the size and scope of your operation, as your trusted partner in digital innovation, ABB’s expertise and experience is focused on helping you create value with safe, smart and sustainable solutions.

Your trusted technology partner

A partnership with ABB is more than just a collaboration. It's the understanding that wherever your station is on its digital journey, we've got the flexibility, insight, and solutions to support your business needs right now.

WHAT DO WE OFFER?

Expertise

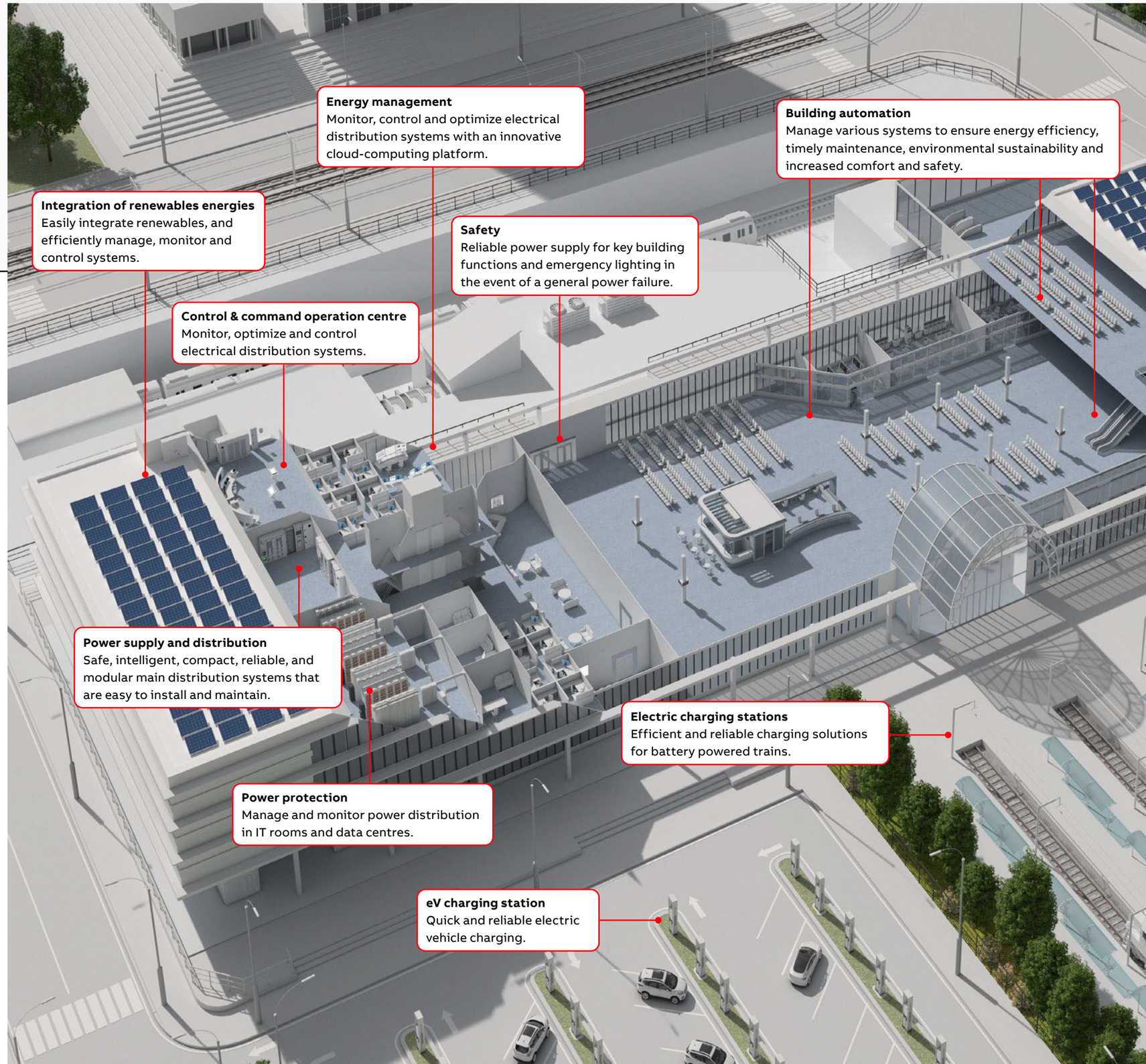
With 130 years of experience, ABB brings deep domain knowledge across transportation rail and infrastructure. From passenger stations through to rolling stock, electrification, control & signaling and tunnels, ABB has the expertise to help.

Breadth

Founded on innovation, our broad portfolio of solutions helps railways automate, optimize and future-proof to reach new heights in performance and drive sustainable progress. And with our global footprint, ABB can help you find solutions to today's and tomorrow's challenges, wherever you are.

Flexibility

Whether you're looking to integrate a modular or full-service solution, we've got you covered. We know needs change and that's why we offer a flexible suite of products and solutions that evolve with you, backed by support from our team, so you can digitize at your own pace.

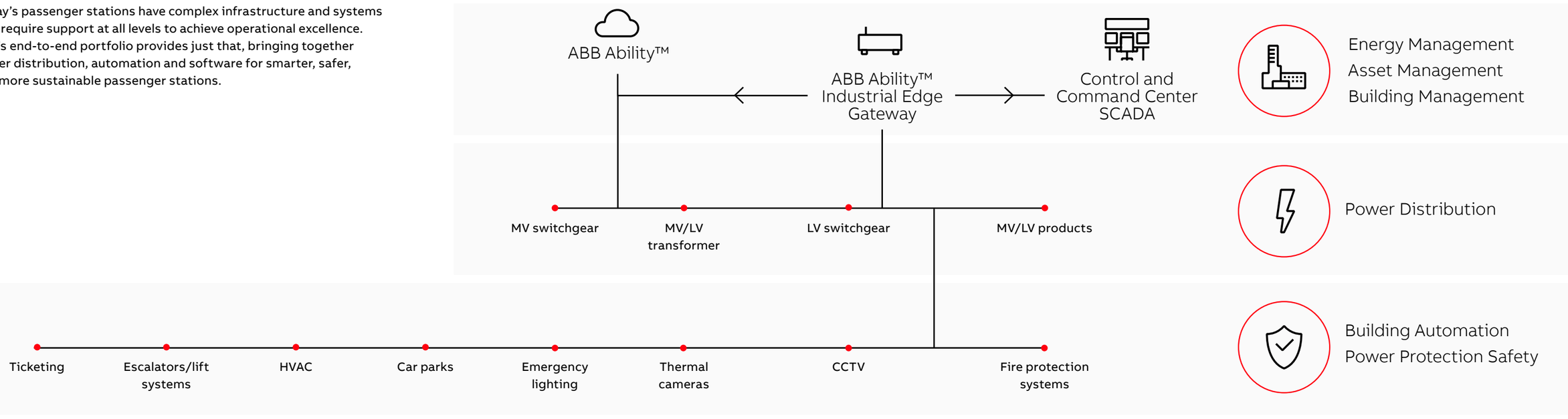


Future-proof your station

From full cloud service to plug-and-play digital upgrades, our portfolio of digital solutions helps stations of all sizes automate and future-proof their business. And with sustainability at the heart of all ABB products and services, it's never been easier to optimize operations for good.

Solutions at all levels

Today's passenger stations have complex infrastructure and systems that require support at all levels to achieve operational excellence. ABB's end-to-end portfolio provides just that, bringing together power distribution, automation and software for smarter, safer, and more sustainable passenger stations.



Power Distribution Solutions

Modern passenger stations are densely populated and include many critical sub-systems. If power fails or is interrupted, the entire transportation system can break down, causing costly downtime and risks to passenger health and station security.

To ensure continuity of service, ABB provides a full power distribution system from medium voltage to low voltage.

These are equipped with the most advanced electronics with advanced protection functions, logic selectivity to prompt isolation of any faulty area, reliable warning communications and alert management to enable intervention before failure occurs.

ABB solutions can help

Improve sustainability

- **Reduce energy consumption** thanks to an energy management system compliant with ISO 50001 and suitable for LEED certification
- **Save up to 150 tons of CO_2** by lowering energy losses

Ensure continuous service

- **Advanced electrical protection functions**
- **Fast commissioning time** with no external relay requirement and instantly recognized connected devices

Reduce costs

- **Continuous monitoring** for up to 5% reduction in energy consumption
- **Built-in flexibility** with a power distribution system designed to evolve alongside changing expectations and standards

MV digital switchgear

Simplify your medium voltage switchgear with intelligent digital technology designed for smart networks. ABB has a comprehensive range of options to improve equipment reliability and safety, while saving costs and space.

UniGear for primary distribution

Digital gas-insulated switchgear

- ZX0.2
- 36 kV, 2500 A and 31.5 kA

- ZX2
- 40.5 kV, 3150 A and 40 kA

Digital air-insulated switchgear with options up to:

- ZS1
- 24 kV, 4000 A and 63 kA

- ZS2
- 36 kV, 3150 A and 31.5 kA

UniSec for secondary distribution

UniSec

- 24 kV, 1250 A and 25 kA

Did you know?

Digital switchgear can reduce:

- Energy losses by up to 250 MWh* (saving 13,000 EUR)
- Save up to 150 tons of CO_2

* = compared to typical substation with 14 switchgear panels of UniGear ZS1 type over 30 years of operation)

Digital switchgear management

Digital management solutions help you make the most of your switchgear by delivering cloud-based insights that enable you to optimize maintenance and improve energy consumption.

READ MORE

ABB ecoGIS™ with AirPlus™

Migrate to a more certain future

Now is the time to make the move to a safer, more sustainable future. ABB eocGIS with AirPlus has the proven technology to get you there. The most reliable low-pressure SF6-free gas-insulated switchgear to ensure uninterrupted power with AirPlus's run-flat technology.

Above 12kV – AirPlus

Primary Distribution

- PrimeGear ZX0
- 24kV, 1250A, and 25kA

- ZX2 AirPlus
- 36/40.5kV, 2000A, 31.5kA

Secondary Distribution

- SafeRing AirPlus
- 24kV, 630A, 16kA

- SafePlus AirPlus
- 24kV, 630A, 16kA

Up to 12kV – Dry Air

Primary Distribution

- PrimeGear ZX0
- 12kV, 1250A, 25kA

Secondary Distribution

- SafeRing Air
- 12kV, 630A, 21kA

- SafePlus Air
- 12kV, 630A, 21A

Did you know?

ABB ecoGIS with AirPlus is the most reliable low pressure SF_6-free gas insulated switchgear.

Sustainable

- ~100% less global warming potential
- Clean production processes and recyclable at end-of-life

Reliable

- Low pressure design reduces the chances of a leak
- Proven technology in successful operation since 2015
- Familiar operation, so no new training is required
- Uses ABB's trusted SF6 product design for easy upgrade and expansion of existing lineups
- High dielectric strength that doesn't compromise on footprint

Available

- Continuous and safe operation in the event of an abnormal leakage with run-flat technology
- Product range available up to 40.5kV

LV digital switchgear

See your operations clearly with low voltage digital switchgear. Paired with withdrawable design, our solutions are space-saving, flexible and scalable with low ownership costs.

MNS Compact

- Fully IEC verified and tested up to 690V, 6300A, 100kA
- Modular construction that's extendable and reconfigurable
- Easy, single handle operation with front access
- Up to 36 power circuits per section
- Takes up to 65% less space than standard switchgear
- Familiar user-friendly connectivity across the MNS range
- Connect to and monitor a wide range of devices from circuit breakers to temperature monitors, motor controllers and more.

NeoGear

- Fully IEC verified and tested up to 400/415V, 3200A and 80kA
- Eliminates hazardous exposure to live busbar parts
- Plug in units for motor protection or energy distribution
- Takes up to 25% less space than standard switchgear
- Fewer parts and variants for easy installation, operation and modification
- Dissipates 20% less heat for significant energy savings.

System Pro E

- First-class quality assortment of enclosures and accessories
- Distribute, meter and control energy
- Digitally connected devices allow connection from main distribution boards, via sub-distribution boards and even to the smallest consumer units for final distribution.

Digital switchgear management

Digital management solutions help you make the most of your switchgear by delivering cloud-based insights that enable you to optimize maintenance and improve energy consumption.

READ MORE

LV Switchgear Smart Connected Products

ABB plug and play modular solutions evolve with your business and provide data insight that will help optimize your operation.

Circuit breakers

Manage any grid conditions with integration in all automation and energy management systems. Benefit from easy and safe operation, plug & play accessorizing and flexibility.

Air circuit breakers (ACBs) – SACE Emax 2
- Four sizes available ensuring high performance in all dimensions
- Advanced functions including Load Shedding, Power Controller, ATS, Interface Protection, Synchrocheck logics, and Adaptive Protection
- Triple marking certification (IEC, UL, CCC)
- Certified for Class 1 active energy measurement in compliance with the IEC61557-12 standard
- Remote connection through embedded Bluetooth Low Energy technology
- Safe and easy operations and maintenance

Moulded Case Circuit Breakers (MCCBs) – SACE Tmax XT series
- Easy to use design, integration and connectivity
- Seven sizes available and protection up to 1600A
- Extreme breaking capabilities and reliable performance
- 50 additional function upgrades available during lifecycle through ABB Ability™ Marketplace

Digital relays

Measure, protect and control electrical applications with our range of digital relays for Tmax XT and Emax2. Experience intuitive controls, connectivity, temperature protection and remote monitoring.

Ekip Touch
- All measurements in one place without the need for multiple sensors. This includes electrical, energy, network quality, operating parameters, and other events
- Touch interface to view measurements, alarms, and events
- Expandable with plug-in accessories
- Integrate with any control system through the Ekip Com communication module
- Internal temperature protection for operation in the most demanding environments
- Upgrade during lifecycle through ABB Ability™ Marketplace
- Remote configuration and monitoring through the EPiC app
- Class 1 accuracy for power and energy according to IEC 61557-12

Plug and play updates

Expand the connectivity, measurement, signaling and control of Tmax XT, Emax 2, Ekip UP and TruONE ATS solutions.

Ekip modules
- Set up and manage alarms and signals
- Establish cloud connection
- Verify synchronization of two electrical networks
- Integration of external temperature monitoring and even analog signals
- Integration with local control systems (BMS, SCADA, DCS) and ABB Ability™ solutions (ABB Ability™ Energy and Asset Manager)
- Configurations, monitoring and diagnostics to optimize operations
- Logic functions to signal alarms or trips
- Save diagnostic files for intelligent management

Digitalize your existing assets

Transform new or existing secondary distribution panels for added flexibility. Access unique digital functionalities that optimize operating costs in all types of tertiary and industrial facilities.

Why digitalization?

- **Increase longevity** and keep switchgear up to date
- **Switchgear has a lifecycle of 40 years.** Typically, electrical systems require change every 3-5 years

How?

- **100% flexible**
  Light, medium or high upgrades

Benefits?

- **Under 1 hour**
  to digitalize switchgear
- **Near 0** downtime
- **Up to 70%** cost savings
- **Near 0** resource depletion

Digitalization solutions

ABB solutions offer intuitive panel supervision, a single point of digital access and time-saving plug & play capability. While our digital devices include analyzers to visualize and communicate electrical data and energy parameters in any type of LV or MV installation, as well as alarms and actions designed to save costs.

For MV switchgear

Relion® relays
- Protection, control and measurement relays for MV electrical power systems
- Digital devices designed for interoperability between systems using the IEC 61850 protocol, covering all IEC and ANSI applications

For LV switchgear

Ekip UP digital unit
- Flexible and open sensors measure the energy parameters of the circuit, saving time and cost
- Monitors equipment status, measures temperatures, protects the installation with ANSI functions, integrates programmable signals, and implements load management or automatic shedding functions
- Intelligent management functions such as adaptive protection, automatic load shedding, load management or interface protection, which ensure maximum continuity, efficiency, and productivity

For LV sub-distribution

M4M analyzers
- Digital solution for the measurement of electrical and energy parameters
- Visualize and communicate electrical data and energy KPIs in any type of LV or MV installation

SCU100 control unit
- Digitizes and measures supply through voltage and correct inputs
- Ethernet connection for simple and intuitive panel supervision, avoiding multiple connections and product integrations
- Plug & Play external meter status and pulse signal configuration to save start-up time

System Pro M Compact® InSite
- Monitors and controls energy flow in sub distribution boards
- Digitizes modular switchgear, even in old switchboards with devices from other manufacturers
- Guarantees maximum continuity of service, preventive maintenance and productivity

Final distribution

CMS sensors
- Plug & Play sensors to measure modular circuits and save space
- Detailed monitoring of electrical and energy parameters

EQmatic
- ABB ultra-compact Ethernet gateway for digitizing, monitoring and managing final consumption of electricity, water or gas from your installation. Identifies inefficiencies and hidden costs through its integrated webserver
- Benefit from a configurable dashboard, historical data, instantaneous values, alarms, comparison functions, and cost allocation by consumer group
- Data can be collected from field devices such as ABB EQmeters and third party electricity, gas, water and heat meters. ABB EQmatic Energy Analyzers are available in three field bus variants: M-Bus, Modbus RTU and KNX

Modular switchgear System pro M compact
- Status and control signals of auxiliary contacts, contacts signaing, emission coils, motor control, and contractors

Digital I/O modules
- Read contact status, activate or deactivate lines and collect utility usage
- Can be connected to System pro M compact accessories of MCBs and RCDs, other DIN Rail products with digital input or output and water and gas pulse meters

Digital switchgear management

Monitor, manage and control your system with flexible, modular and scalable solutions.

ABB Ability™ SWICOM – Condition monitoring for medium-voltage switchgear

SWICOM gathers data by connecting with IEC 61850 based protection relays and converts it into diagnostic information. This provides an accurate picture of the mechanical and electrical health of assets by monitoring:

- Operation of mechanical parts
- Remaining life expectancy of assets
- Ambient temperature and humidity
- Temperatures in critical points on primary circuit
- Switchgear partial discharging

Connectivity provides full visibility and control via a touchscreen on the unit or a mobile app. You can also connect to SCADA via Ethernet TCP/IP or to ABB Ability™ Asset Manager, our cloud-based dashboard for remote access to asset information.

ABB Ability™ Condition Monitoring for Electrical Systems (CMES) – low voltage switchgear

ABB Ability™ CMES is on-premise condition monitoring for LV switchgear, enabled by connection to MNS and NeoGear LV digital switchgears. You can monitor and manage electrical distribution systems via smartphone, tablet or computer in real time to optimize maintenance and operational costs as well as energy consumption.

- Monitor switchgear conditions such as temperature, current levels, energy consumption, alarm and warning levels in real-time data so you can make the right decision at the right time
- Analyze algorithms that consider multiple data and do not require human input
- Predict maintenance needs based on your existing operational data
- Optimize energy consumption to reduce total plant operational costs

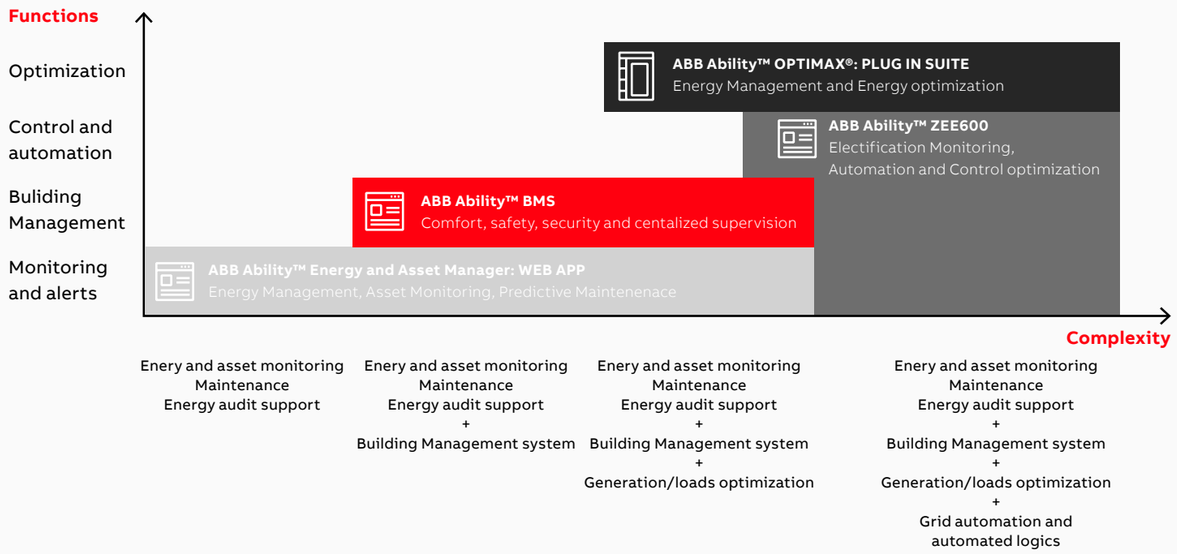
ABB Ability™ ZEE600

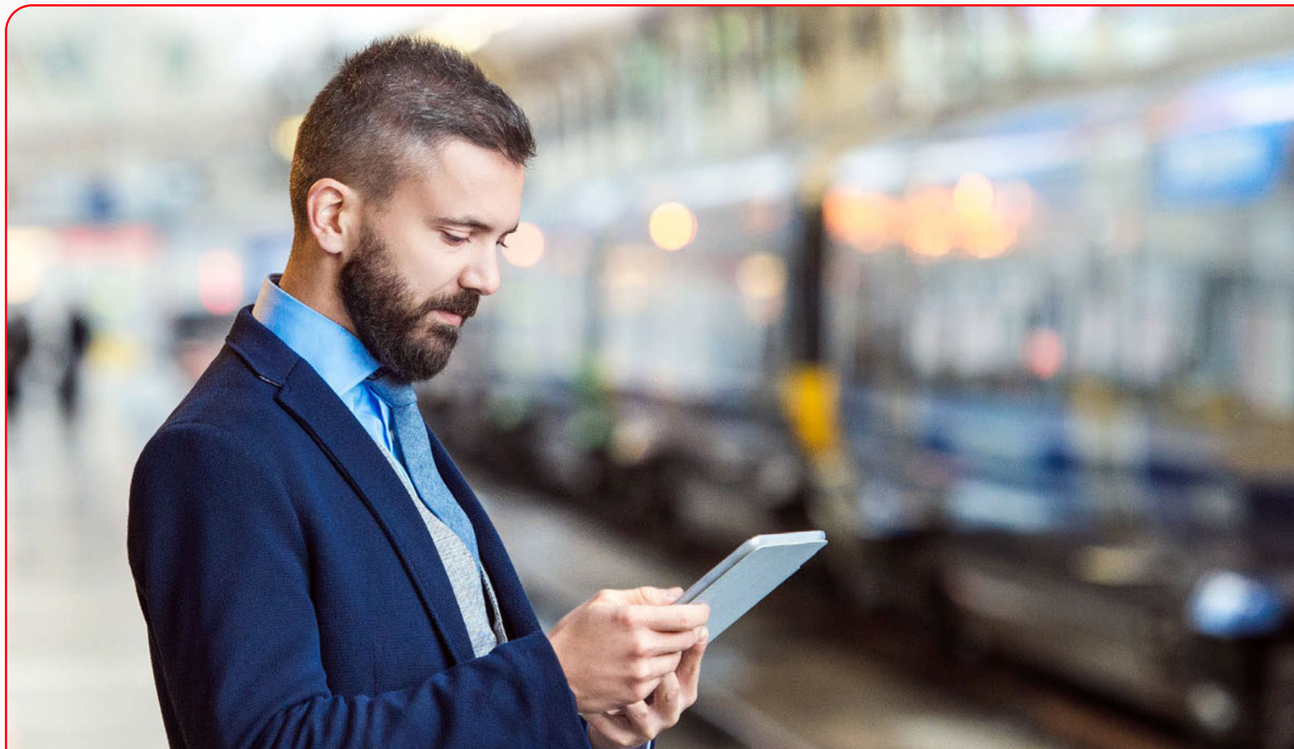
Electrification monitoring and control for distribution networks

- Seamless integration of diverse devices such as ABB and 3rd party make protection relays, meters, substation equipment condition monitoring units, Programmable Logic Controllers (PLC) and Remote Terminal Units (RTUs), deployed in digital electrification solutions
- Harnessing near-real time and diagnostics data to facilitate digitalization objectives
- While fully supporting predominant communication standards IEC 61850, IEC 60870-5 and Modbus-TCP across electrification automation systems across the world, the ZEE600 also supports standards like DNP, Profinet and Profibus as well as IEC 62349 Parallel-Redundancy Protocol (PRP)

BACK TO MV SWITCHGEAR

BACK TO LV SWITCHGEAR





Energy and Asset Management

Increase performance with ABB Ability™

The optimal running of your passenger station relies on operational decisions. Today, connectivity and data analytics can provide the information you need to make those decisions. Combining hardware and software, ABB Ability™ Energy and Asset Manager delivers visibility and actionable insights to optimize your operations, any time and from anywhere.

Monitor

Understand energy usage in real time and compare, report and identify costs. Track the health and performance of all your assets with granular visibility

Analyze

Optimize energy consumption, reduce demand and achieve sustainability goals. Easily detect potential asset failures with health assessment and performance trends

Act

Implement energy management strategies to realize savings and emissions targets. Analyze causes of asset failure and schedule proactive maintenance activities

Delivering savings for your passenger station

Traction Power Distribution

Power your network with ABB end-to-end solutions for DC traction power supply applications and AC products. Individual components or complete traction packages are available for all railway and urban transportation applications from very high speed to metro and tram lines.

Modular solutions

eHouse
- Prefabricated transportable substations, designed to house all pre-tested power equipment and protection and control devices
- A cost-effective, risk-reduced alternative to conventional concrete block and brick construction
- Custom engineered to meet application requirements for equipment layout, site footprint limitations and logistics
- Ready to operate in the field with minimum installation, commissioning and start-up time
- Ideally suited for any project where on-site work needs reducing

Outdoor compact substation module
- Single- or two-phase outdoor module with vacuum breaker for AC railway power supply up to 27. 5 kV, 2000 A, 50/60 Hz
- Factory-assembled frame fitted with FSK II breakers, a motor-operated disconnect function and hand-operated earthing switches
- Vacuum breaker designed to meet the requirements of all electric railway networks using a single-/two-phase system
- Simple and quick installation and commissioning on site with reduced wiring work

Power Converters

Traction Rectifiers
- Reliable and cost-effective diode rectifiers Enviline TDR/WDR for all voltage and power needs
- Active rectifiers Enviline TCR to boost DC voltage and increase substation spacing

DC Switchgear and Voltage Limiting Devices
- Enviline DCGear serve as control and protection equipment containing proven technology components, such as DC high-speed circuit breaker Gerapid
- Voltage limiting devices Enviline VLD ensure safe touch voltage limits and facilitate timely and safe ground fault clearance

Smart Energy Management Solutions
- Energy recuperation systems Enviline ERS lower overall energy costs by feeding back surplus in the feeding medium-voltage grid.
- Energy storage systems Enviline ESS capture surplus braking energy which can be re-injected in the DC grid, reducing the peak demand charges while at the same time supporting the DC voltage on the line
- Automated assured receptivity units Enviline ARU ensure track receptivity during regenerative braking avoiding the use of on-board resistors and reducing wear and tear of mechanical brakes

Power Protection Solutions

Keeping people safe is a critical goal of any passenger station. But it’s about more than keeping the tracks clear. It’s just as crucial to ensure your security, safety and customer-facing information systems run reliably, no matter what.

ABB solutions can help

Ensure continuous energy supply

- Best-in-class power protection technology for efficiency, availability, and scalability
- Support from our worldwide power protection network
- 700 field services engineers across 100 countries

Protect people and equipment

- Integrated arc and surge protection
- Clean power back-up avoids data loss or equipment damage

Reduce maintenance downtime

- Plug and play solutions cut commission times and remove need for specialist installation
- User-friendly digital interface makes spotting problems simpler and faster

UPS solutions

Designed to protect your critical building management systems, ABB UPS solutions are modular, flexible and supported by our decentralized parallel architecture. They'll ensure a flow of continuous, clean power to your data center, even during disruptions to power supply.

Control centers

Ensure constant availability for critical operations and traffic control with reliable, energy-efficient UPS solutions

Data Center

- A reliable UPS will guarantee a flow of continuous, clean power to the data center
- ABB provides several ranges of modular and standalone UPS solutions
- All solutions are class-leading in terms of system reliability efficiency, availability, scalability and flexibility

Emergency lighting

A reliable and complete offering for safe evacuation

Set up, maintain, and fully control your entire installation via Naveo®Pro mobile app

Real-time overview of all systems for better maintenance planning and enhanced safety

Passenger services

Ensure uninterrupted, individualized service for passengers

Location-based technologies and services protected by UPS ensure reliable timetable information, ticket purchase, passenger care and smooth connections

Introducing the most energy-lean UPS: DPA 250 S4

Utilizing state-of-the-art technology for railway applications, the DPA 250 S4 delivers energy-efficiency and reliability with a low cost of ownership.

- Transformer-free IGBT conversion
- Digital control and display
- Inbuilt back-feed protection

Building Management Solutions

As the volume of passengers steadily increases, managing efficient transportation, plus supporting its building infrastructure is becoming more challenging. Keeping electrical assets and buildings running consistently requires a more intelligent strategy. Our innovative products are designed for heavy-duty industrial applications and with smart functionality to empower better decision making.

Our comprehensive range of solutions covers the areas of building management, building automation and asset management.

ABB solutions can help

Improve maintenance strategies

- **Make more informed decisions** with advanced asset and conditioning monitoring
- **Warning and alert management** enables intervention and isolation before failure occurs
- **Easily identify energy thieves,** leakages and damages

Increase operational efficiency

- **Ensure reliable switching capacity** for high and alternating loads up to 20A
- **Monitor, optimize and control in real time** with ABB Ability™ fully integrated system
- **Maximize service continuity** through smart algorithms, even during emergencies

Reduce costs

- **Cut unplanned downtime** and extend asset lifecycles
- **Flexible,** simple metering calculation

Building automation

Real time data insights for smart decision making

ABB i-bus® KNX
- Intelligent control and automation for residential and non-residential buildings in accordance with international standards
- Automate all HVAC applications (heating, ventilation, air conditioning) in one single solution
- First globally standardized system, based on secure KNX protocol
- Devices communicate via single bus cable installed alongside normal power lines

ClimaECO
- Combine all levels of HVAC automation (from generation and distribution of heating circuits, to room automation) into one holistic solution to manage costs and energy objectives.
- Improve energy efficiency, reduce energy consumption and make time and cost savings in planning, integration and maintenance.
- Integrated BACnet interface so HVAC solutions and other building control devices operate on the same network
- Based on open and standardized technologies to eliminate the threat of single sourcing and reduce system dependence.

Key products to improve user experience for perfect climate conditions in a room:

- ABB Tenton® sensors: easy to use room thermostats
- SAR/A room control unit: to allow heating or cooling as needed in a room
- Air quality sensors: measure room temp, CO_2 levels and humidity
- Fan coil controllers: control fan units to regulate room temp
- Valve drive controllers: to control cooling surfaces, floor heaters or radiators.
- Heating/cooling circuit controllers: regulates flow of temperature
- Boiler/chiller interfaces: control and monitoring of chiller and boiler units
- Application controller: run automation modules for HVAC system

ABB i-bus® KNX DALI
Get greater control and increase comfort and wellbeing with light scenes and sequences.

The KNX DALI Gateway serves as an interface between KNX installations in your building and the digital DALI lighting control system to unite the two most important building automation standards.

DALI gateways integrate DALI ballasts into KNX bus with special functions like color control (tunable white, RGB), human centric lighting, emergency lighting and single or group control monitoring.

ABB Cylon®
- Connected Building Energy Management Solutions scalable for automation and energy control for any size passenger station.
- HVAC control for Central Plant, Chiller/Boilers, AHU/FAHU, DX/Fan-coil/VAV controls.
- BACnet solution, which can be combined with ABB i-bus® KNX Building Automation portfolio and HVAC(R) drives for complete electrical and HVAC control.
- Active Energy management allowing you to monitor, visualize and control energy requirements for a holistic view of your system to help identify where consumption can be reduced, drive innovation and maximize savings.
- Integration with CCTV, Fire Alarm, and Access Control Systems.
- Reduces engineering workload by more than 15-20% with freely programmable controllers (universal I/O)
- Reduced purchasing cost for 3rd part gateways thanks to built-in interface for Modbus and BACnet

Key products to automate the station:

CBX controller: freely programmable BACnet application controllers, allows integration of motor drives, meters and other sensors as well as expansion modules to increase control points.
Matrix control engine: provide flexible area control applications like alarming, trending, scheduling, and custom programming. Its mobile friendly characteristics provides remote access, so use is in control anytime anywhere. ASPect Nexus control engine: combines real time integrated control, supervision, data logging, alarming, scheduling and network management functions with internet connectivity and web server capabilities.

Building automation

Real time data insights for smart decision making

Emergency Lighting
- Reliable and complete offering for safe evacuation with wall and ceiling models for superb lighting illumination.
- 24/7 protection for travelers, visitors and station employees, plus easy integration with the interior.
- Benefit from low energy consumption, less maintenance requirements and long LED life.
- Solutions for all station designs, including MirEvo TwinSpot with unique ultra slimline LED design and high lumen output, ideal for use in large spaces and high ceiling installations.

Naveo®Pro
- Connects all types of installations to the cloud for real time status of your safety systems at all times.
- Set up, maintain and fully control your entire emergency lighting installation with our mobile app.
- Save time, enable better maintenance planning and enhance building safety with real time overview of all systems (of the PCB, light source and battery) and proactive alerts that guide you precisely to the faulty luminaire

Light switches & socket outlets
- ABB has one of the widest ranges of light switches and sockets outlets in the world, with more than 130 different functions.
- Choose from a wide variety of shapes, designs, color combinations and materials to meet functional and aesthetic requirements.
- Ensure a uniform appearance across light switches, dimmers, blind controls, movement detectors, socket outlets, USB sockets, timers, temperature controls, smoke detectors and other multimedia or security controls
- Multi standard, with ranges for global installation and use.
- Integration with KNX systems for some ranges.
- Fast, easy and 100% accurate assembly and installation with practical mounting plates and screwless options.

Working with us

Flexibility you can trust

Our flexible solutions are designed to help you deliver safer, smarter, more sustainable electrical infrastructure that maximizes the comfort of your passengers.

Our deep domain expertise and commitment to sustainable innovation informs everything we do. So no matter where your facility is on its digital journey, we'll work in partnership, building a modular solution that works for you.

Simple to set-up. Simple to scale

Enjoy further flexibility with ABB Ability™ Marketplace

ABB Ability™ Marketplace is your one-stop online portal for software services that makes it simple to add, manage and remove digital services and ABB Ability™ solutions, as needed. This highly flexible subscription-based model provides cost and time savings for all ABB installations.

For ease of use, you can filter by solution type, segment or profit centre while consultative experts are on hand to support your changing needs.

Customize your solution with our EPiC app

Take your ABB products to the next level

- Virtual Reality installation help
- Customize products and increase capabilities
- Configure signaling, communication and protection functions
- Diagnose issue with device status, alerts and events
- Remote assistance from ABB consultative experts

Simple and Flexible Digitalization

Unlock your station’s full potential, on-edge or in-cloud

When it comes to optimizing smarter, safer, more sustainable stations, operational data is your most powerful ally.

Whether you’re ready to fully embrace the advanced analytics of the cloud or simplify your existing gateways with edge technology, we’ve got a solution that helps you turn operational data into actionable intelligence.

Cloud services

Leverage operational data with real-time insight and analytics

Reduce OpEx costs by up to 30%

Enable predictive maintenance with real-time behavior analysis

Increase flexibility with highly customizable interface

Increase ROI with more informed investment decisions

ABB Ability™ Edge Industrial Gateway

Monitor all downstream low- and medium-voltage devices with a simplified cloud gateway or on-premise system

Collects your field device and parameter data into one user-friendly dashboard

Optional wi-fi and cellular connectivity

Upgrade to full cloud service at any time

Passenger Station

Digital device and asset data

Cybersecurity

360° protection for your business

We know that security means much more than protection against cybercrime and secure connections - you need to know your business-critical data is completely safe from device to edge to cloud.

Digitalization should never mean forfeiting safety, value, or control. That’s why ABB Ability™ closes the loop with an innovative, multi-layered approach to security.

Data

Our partnership with Microsoft Azure gives our customers access to enterprise-grade cloud infrastructure built into ABB Ability™

Access secure data storage with the highest redundancy on the market via your unique MyABB account

Control

Protect your intellectual property with encrypted communication channels, developed using banking protocols

Customize users’ access to data, so only the right people have access

Unique digital signature for every device

Standards

ABB is a proud member of the Group Cyber Security Council

Active participant in data standardization efforts such as Platform Industries 4.0 and Industrial Internet Consortium

Our annual Global Technology Forum brings together the finest minds to continually innovate new security standards and protocols.

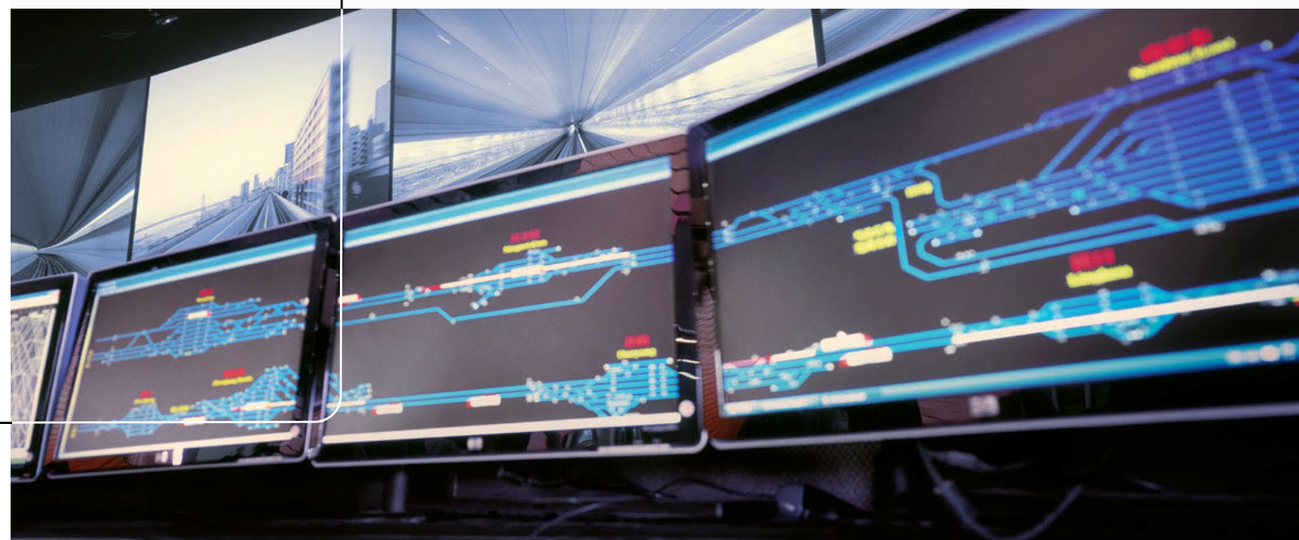


ABB Services

As your service partner we're committed to the reliability of your operations. Keeping your equipment operating at the highest efficiency and availability level throughout its entire lifetime is our highest priority.

We work closely with our research and development team to develop the most advanced service for our product portfolio and ensure proactive product life cycle management for all ABB solutions.

Support and service at every stage

- Installation and commissioning
- Maintenance
- Repairs
- Spares and consumables
- Extensions, upgrades, and retrofits
- Replacement
- Training
- Service agreements
- Advanced services

Building information modelling

ABB helps you design, build and manage your passenger station infrastructure with building information modelling. Constructing an intelligent 3D model, you get information and tools that inform planning and construction of your project. And you can easily integrate ABB solutions with the added benefit of verified and structured data.

Virtual

Coordination and execution of design in a virtual setting

Innovative

Prefabrication and activities onsite with robots

Smart

Your model updates with every change onsite

Real world examples

ABB has delivered tangible results to railway networks around the world. Here are just a few customer success stories.

ABB powers transport network integration in the Beijing-Tianjin-Hebei region

Challenge

The new Beijing Fengtai Railway Station is the first to adopt a high-speed railway and general-speed railway stereo double layout in China. The station needed to be closely integrated with other major railway stations and metro lines in Beijing, utilizing the transportation structure in the capital. The project required a safe and reliable power system in a retrofit solution.

Solution

Featuring optimized design, ABB distribution solution utilized leading components to ensure power availability and smooth operation of the rail system. ABB adopted Emax 2 air circuit breakers, new Tmax XT moulded case circuit breakers and other electrical products.

Outcome

This technology provides a low voltage electrical distribution network for overload, short-circuit, ground fault, and indirect electric shock protection, with the potential to build an electrical system with better performance in the future. The solution enables improved efficiency and will help create a safer, more comfortable and greener commuting environment for passengers.

ABB delivers customized uninterruptible power supply to railway network of 20 sites

Challenge

Today, rail operations have increasingly complex infrastructure with electrical and electronic systems that necessitate a need for a constant, reliable supply of clean power. A national railway network including 20 different sites asked ABB to deliver a customized power solution that would ensure continuous functioning and safe control of the complete system.

Solution

ABB has a range of uninterruptible power supply (UPS) solutions that can be applied to the rail industry. For this project, ABB employed the Conceptpower DPA 120 UPS, a high-power, modular and transformer-free UPS system that helps rail companies in their quest to achieve zero downtime. The UPS is built using online double conversion technology and provides a low cost of ownership. ABB customized the UPS solution to the user's needs, implementing additional product features at the customer's request so that it met all performance specifications and could function both as a normal three-phase UPS or with only one phase loaded. As a modular solution, it can also be scaled as needed in the future.

Outcome

The Conceptpower DPA 120 UPS has helped to ensure flow of power to essential equipment so that passengers are not inconvenienced or cargoes delayed. ABB's solution also supports station control centers to ensure an efficient, punctual, secure and reliable service. With UPS, ABB is helping to maximize the use of rail networks while lowering the total cost of infrastructure and railway lines.

Find out more today

As a global leader in integrated and collaborative digital solutions, ABB build on expertise across metro, railway and electric vehicle charging to bring power distribution, automation, and software solutions together under one flexible platform.

As your trusted partner in digital innovation, we are focused on helping you create value with safe, smart and sustainable solutions that future-proof your business. For more information, please contact our sales team today.

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