



SMART MODULAR DATA CENTRES

INTELLIGENT SOLUTIONS
FOR YOUR **EDGE** APPLICATIONS

2023

EMBRACE DIGITISATION

Our world is becoming increasingly digital, interlinked and intelligent. The Internet of Things, automation, 5G, robotics and artificial intelligence are opening up many new applications and business models.

To capitalise on the opportunities which come with digitalisation, your organisation must rely on a smart and strategic IT infrastructure.

The amount of data produced will continue to grow exponentially. These data volumes have to be pro-

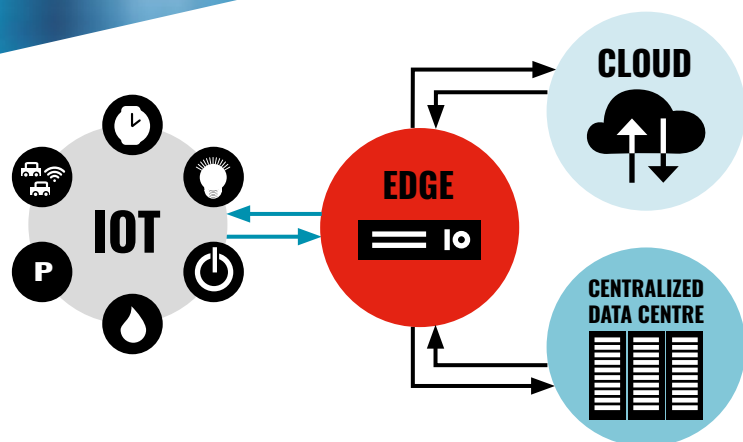
cessed close to their source (edge computing) due to, among other factors, efficiency and latency. This requires many small to medium-sized data centres that are smart and modular and can grow with increasing demands.

We are a global player that helps organisations to stay at the forefront of progress, elevating their core business. While you focus on developing your business we take care of your IT infrastructure – with one-stop service solutions tailored to your needs.



WHY EDGE DATA CENTRES?

- Low latency
- Data processing just in time
- Data aggregation
- Network-independent local operation
- Protection of critical data



CHARACTERISTICS OF AN EDGE DATA CENTRE

- Located in a strategic site close to the users and devices
- Supports distributed data processing
- Complete equipment in just one cabinet or in multiple racks
- Reliable self-contained system
- Provides optimal physical & cyber security
- Offers high-performance internet connection
- Remote monitoring of infrastructure
- Can work independently from the Cloud



Datwyler Micro Data Centre
with in-rack cooling



Datwyler Mini Data Centre
up to 8 racks, with in-row cooling



Use our
CALLBACK SERVICE!

We are happy to help you.

TYPICAL INDUSTRY APPLICATIONS

A rapidly maturing market:

- . Retail
- . Entertainment
- . Healthcare
- . Banking
- . Production
- . Education
- . Logistics
- . Government
- . many others



Data Centres



Office Buildings



Government Buildings



Shopping Malls



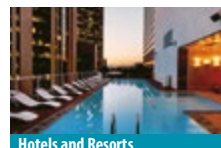
Event Arenas



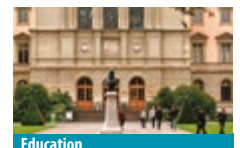
Transport Hubs



Manufacturing



Hotels and Resorts



Education

**DATWYLER'S
SMART MODULAR
MICRO AND MINI
DATA CENTRES
MAKE YOUR
LIFE EASIER!**

Ease of use

- . Pre-configured for various operational scenarios, therefore fast ordering
- . "Plug-and-play" solution
- . Rapid deployment
- . Touch-screen and user-friendly software

High reliability

- . Quality of each Micro or Mini Data Centre is tested prior to delivery
- . The environment and security monitoring system protects the equipment
- . All data is managed and stored redundantly on local storage media as well as in the Cloud
- . Can be monitored anywhere and anytime
- . Proactive alarm notification via email and/or SMS

Low TCO (Total Cost of Ownership)

- . Real-time monitoring of the UPS and cooling unit helps to save energy
- . Integrated cooling ensures high power usage effectiveness (PUE)
- . Small footprint and fast deployment
- . Constant monitoring reduces downtime caused by failure

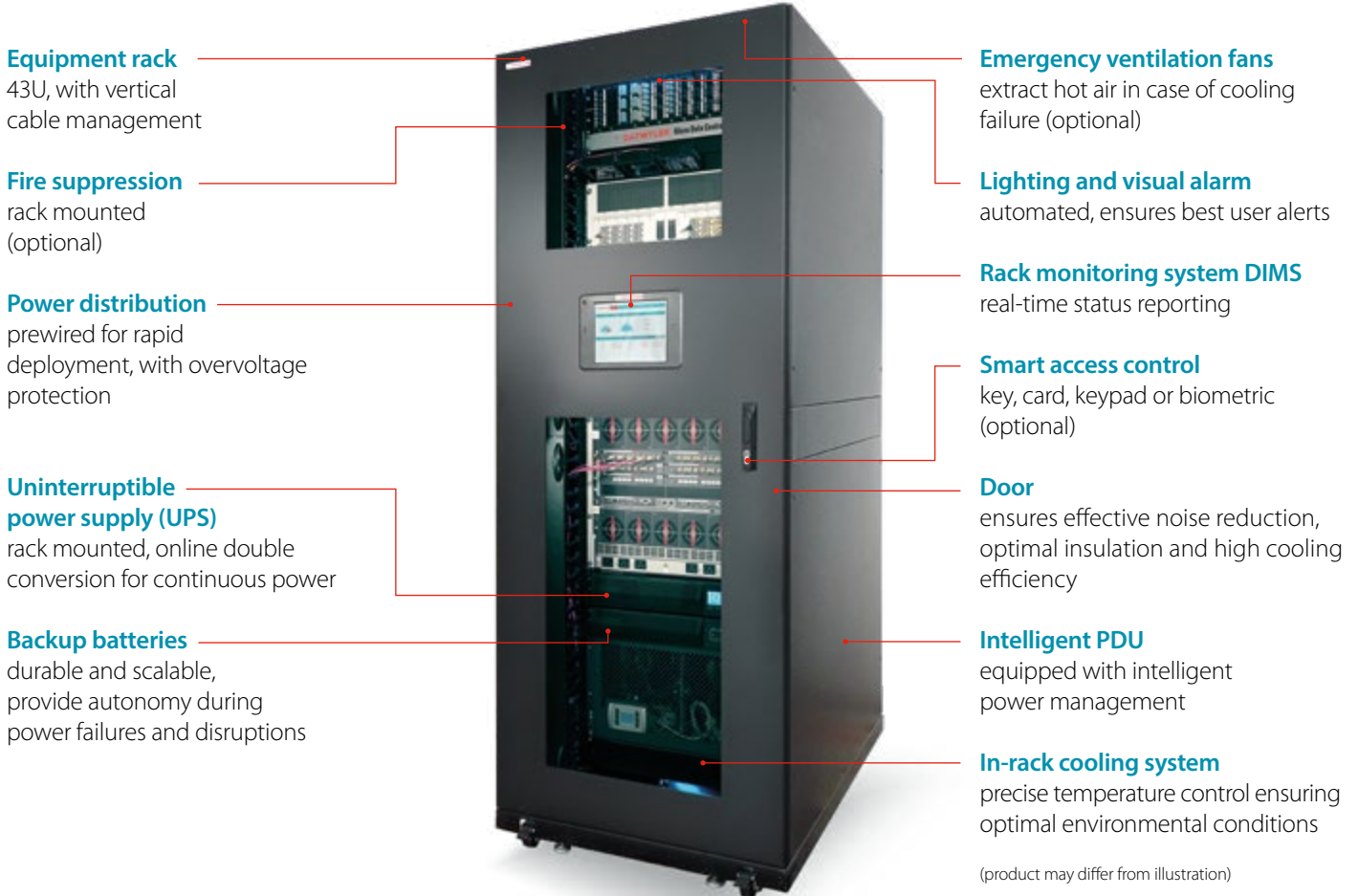
Fast maintenance

- . Key components are of modular design
- . UPS with maintenance bypass
- . Remote management of all the equipment in the rack(s) allows authorised personnel to be alerted so that faults can be rectified before they have serious consequences

DATWYLER MICRO DATA CENTRE

Datwyler Micro Data Centre is a compact, preassembled, plug-and-play, quick to deploy, fully monitored and managed, low maintenance onsite IT infrastructure solution. It is a standalone data centre that integrates the elements of cooling, power supply, monitoring and security into a single solution.

Unlike maintaining onsite data centres and server rooms which need extensive maintenance, planning, cost and space, the Datwyler Micro Data Centre is a compact solution that enables businesses to run applications on-premise or at the "Edge". The infrastructure can be customised according to customer needs and requirements.



SPECIFICATION	MDC 100	MDC 200	MDC 300
Height Units	43	43	43
Available space (U)	42	39	33
Dimensions (H x W x D)	2134 x 798 x 809 mm	2134 x 798 x 1209 mm	2134 x 798 x 1209 mm
Doors	Closed (glass front and metal back)	Perforated	Closed (glass front and metal back)
Access control	EK333	EK333	EK333
UPS capacity	-	up to 3 kVA	up to 3 kVA
Back-up time	-	13 / 28 min @ 100% / 50% load	13 / 28 min @ 100% / 50% load
Cooling capacity	-	-	3.6 kW
User interface	Touch screen, web browser	Web browser	Touch screen, web browser
Monitoring	Temperature, humidity, door status	Temperature, humidity, door status	Temperature, humidity, smoke, door status, leakage, vibration
Alarm	Sound/light alarm, email notification	Sound/light alarm, email/SMS notification	Sound/light alarm, email/SMS notification
Options	Cabling and cable management	Cabling and cable management, scalable backup batteries	Cabling and cable management, ventilation fans, fire extinction system, scalable backup batteries

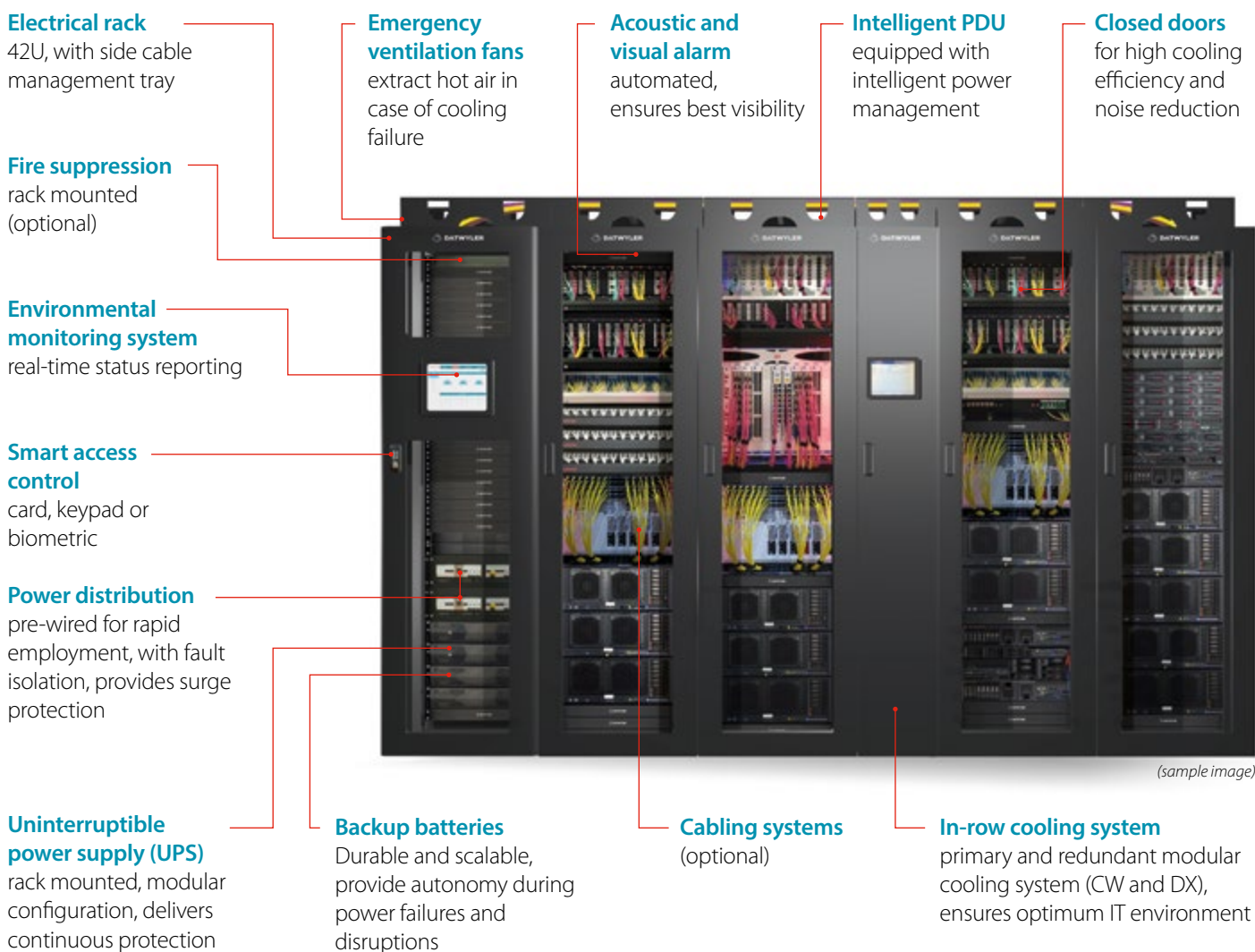
VERSIONS

The Datwyler Micro Data Centre is tailor-made, a customised solution to fulfil the customers' specific needs and requirements.

DATWYLER MINI DATA CENTRE

Datwyler's modular Mini Data Centre is a state-of-the-art, pre-assembled plug-and-play IT infrastructure solution. It consists of a 42U rack with integrated power distribution, uninterruptible power supply (UPS), fire suppression system (optional), air gap sealing and environmental monitoring system as well as additional IT equipment racks and an in-row cooling system. It can be deployed within a few hours. It provides multiple ways to configure power and cooling redundancy to meet the current demand while being ready for future technology migration at low cost and with less disruption.

Datwyler's modular Mini Data Centre is designed for applications such as edge computing, small data centre, building distributor (BD), floor distributor (FD) and "smart facilities" deploying IoT devices and running AI, AR, VR and automation.



SPECIFICATION

IT load	up to 72 kW	Remote management	cooling system, UPS, access control, iPDU, environment setpoint and alarm notification
UPS capacity	up to 80 kVA	Remote monitoring	cooling system, UPS, access control, iPDU, environmental monitoring system
IT racks	up to 8 (static load: 1300 kg / rack)		
Backup time	up to 15 mins.		
Cooling capacity	recommended : up to 75.3 kW (CW or DX)		
Dimensions (W x D x H)	800 x 1200 x 2200 mm		
Mounting	direct on floor or on raised floor	User interface	remote web interface
Cable entry	top / bottom access	Alarm	sound / light alarm, email notification
Emergency ventilation	top of the rack and front door		

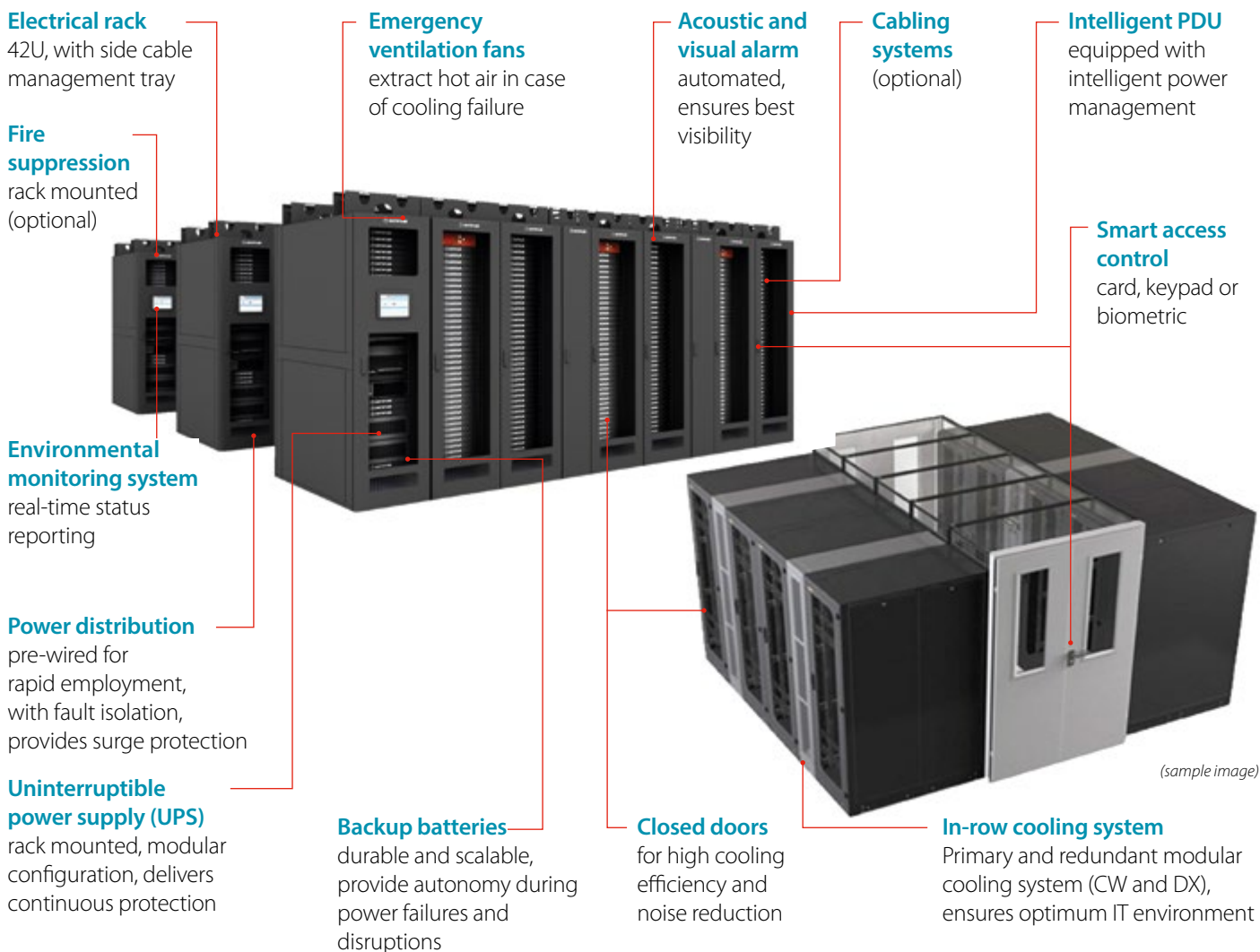
VERSIONS

The Datwyler Mini Data Centre is tailor-made, a customised solution to fulfil the customers' specific needs and requirements.

MID-SIZED AND LARGE DATA CENTRES

Datwyler's mid-sized and large data centres are application-specific, pre-assembled, state-of-the-art IT infrastructure solutions. Depending on the requirements and local conditions, several rows of Datwyler's Mini Data Centre can be implemented, which are scalable for future requirements. Alternatively, Datwyler implements customer-specific solutions with cold or hot aisle containment.

Both variants offer an integrated power distribution, uninterruptible power supply (UPS), a fire suppression system (optional), air gap sealing, brush strips, an environmental monitoring system and an in-row cooling system (optional). These data centre solutions offer multiple configuration options for power and cooling redundancy to meet current needs while enabling cost-effective and non-disruptive migration to future technologies.



SPECIFICATION

IT load	customisable	Remote management	cooling system, UPS, access control, iPDU, environment setpoint and alarm notification
UPS capacity	customisable	Remote monitoring	cooling system, UPS, access control, iPDU, environmental monitoring system
IT racks	customisable	User interface	remote web interface
Backup time	customisable	Alarm	sound / light alarm, email notification
Fire suppression system	customisable (Novec 1230, for example)		
Availability	Tier I, Tier II, Tier III and Tier IV		
Mounting	Direct on floor or on raised floor		
Cable entry	Top / bottom access		
Emergency ventilation	Top of the rack and front door		

VERSIONS

Each Datwyler Data Centre is tailor-made, a customised solution to fulfil the customers' specific needs and requirements.

DIMS - DATWYLER INFRASTRUCTURE MONITORING SYSTEM

The Datwyler Infrastructure Monitoring System (DIMS) provides a top level as well as a detailed overview of the status of IT infrastructure housed within a Micro and Mini Data Centre. The system is characterized by real time remote monitoring of environmental conditions, access and energy consumption of IT infrastructure devices and systems. In case of faults or emergencies the system is capable of alerting the user to take timely and necessary action to protect the mission critical IT systems.

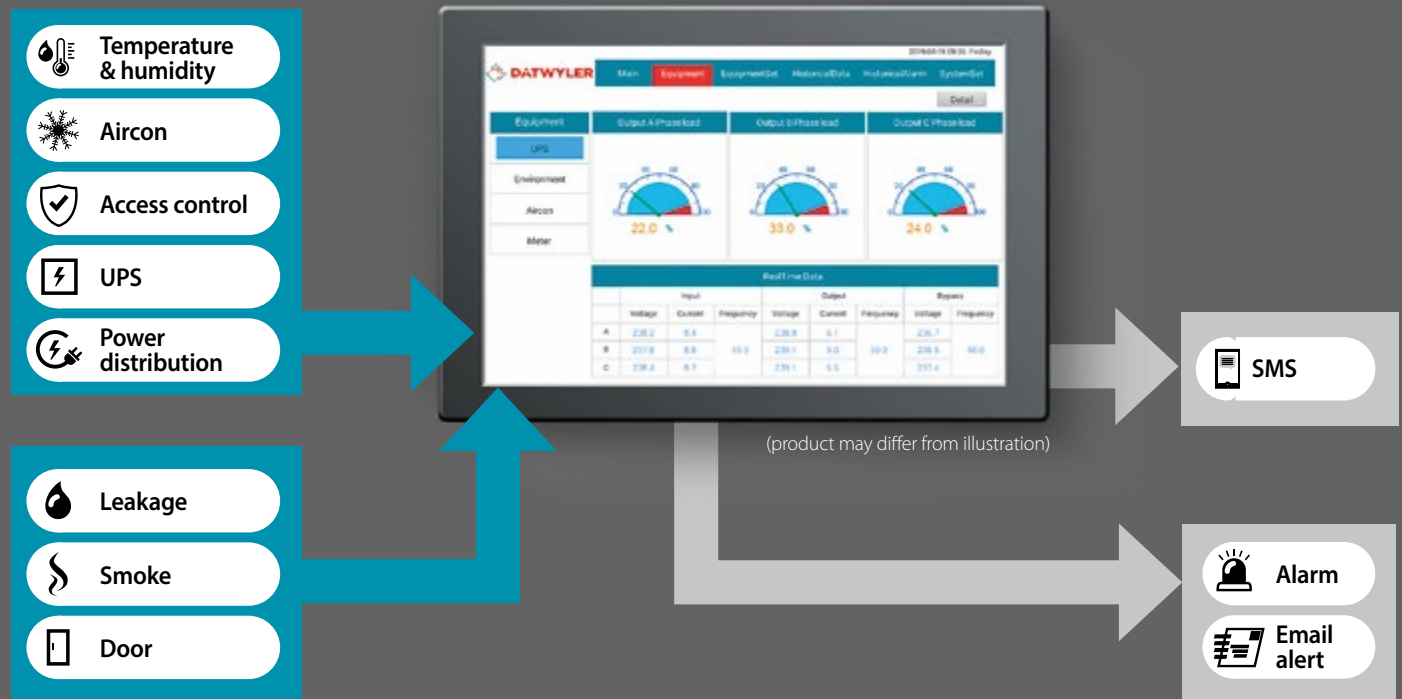
SYSTEM ARCHITECTURE

Real-time monitoring

Openness & flexibility

Alarm notification

Reports & graphs



DIMS FEATURES

- Multilingual Web GUI with integrated logic
- Autosensing ports for the automatic detection of sensors
- User access management
- Integrated interfaces: Ethernet, USB, CAN, analog & digital
- SNMP-compatible
- Provides notifications and alerts such as e-mail, SMS and SNMP traps
- Extensive range of sensors for environmental monitoring, security control and power monitoring
- USB interface for video camera
- SD card slot for optional SD card (max. 64 GB)
- SIM card slot for optional LTE modem
- Alarms for maintenance and critical events
- Graphical representation of environmental data

IT SAFE AND DATA CENTRE CONTAINER

Protect your sensitive data and servers on site with an IT Safe against all major physical hazards such as theft, vandalism and natural forces.



IT SAFE

The modular compact data centre for the security of your IT infrastructure.

- . IT protection with high availability
- . Compact: less than 2 m²
- . Flexible, modular and expandable
- . Maximum IT security
- . Standard with two doors at the front and two at the back
- . Monitoring
- . Energy efficient systems
- . Fully redundant cooling system (optional)
- . Cooling units designed for continuous operation
- . Immediately applicable

Use the mobile Data Centre Container wherever critical applications, data and servers are used in your business. In addition to mobile and modular use, the Data Centre Container protects against dust, damage, fire, rain, extinguishing water and unauthorised access.

DATA CENTRE CONTAINER

Mobile, modular, robust and absolutely reliable.



- . Fully welded steel container
- . Fire protection: EI90, EI60, EI30 (i -> o) according to EN 13501-2 and EN 1363-1
- . Dust and water tightness IP 56 according to EN 60529
- . Smoke tightness according to EN 1634-3
- . Class RC 3-4 burglar resistance according to EN 1627/EN1630
- . Corrosion protection system: class C1 (indoor areas) to class C5 (coast) according to DIN EN ISO 12944

Please also use the online configuration tools on our website to create your individual data centre solutions.

DATWYLER SERVICES



EFFECTIVE EXPERT SERVICES FOR ALL OUR CUSTOMERS

Companies can optimise their resources and concentrate on their core competences by outsourcing IT tasks to specialist providers, while at the same time ensuring that their IT systems are always state-of-the-art and safe from cyber attacks.

Our services cover the whole value chain: from site surveys, conception and system engineering through installation, logistics and turnkey supply to documentation and system maintenance. The basis for this is our competence in product design, operating experience, our international presence, and our globally established partner network.

Datwyler believes that individual and flexible solutions are part of a good service. First-class support and fast response times in the event of problems are a matter of course for us.

DATA CENTRE INFRASTRUCTURE AND DATA NETWORK SERVICES

The Datwyler Data Centre Infrastructure and Data Network range of services includes all the technical and site-related measures needed to ensure the successful design and project implementation of your IT infrastructures as well as their professional maintenance.

- . Design and Consultancy
- . Audit and Assessment
- . Financing and Leasing
- . Turnkey Implementation and Commissioning
- . Maintenance and Repair

Further information can be found on our website under the menu item "Services".

SERVICE LEVELS FOR DATA CENTRE INFRASTRUCTURE SOLUTIONS

Datwyler's IT infrastructure solutions meet the highest quality standards. Still, the wear of mechanical and electronic components, the aging of batteries or the pollution of filters can lead to unwanted failures.

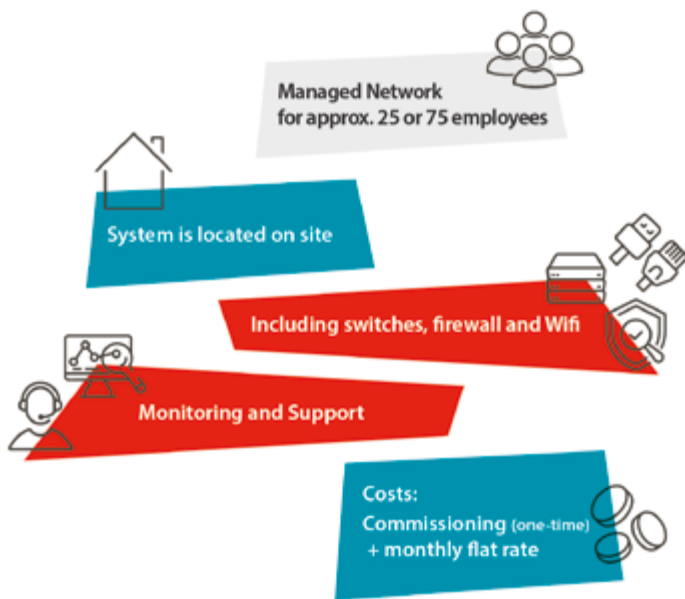
Your systems require regular maintenance to ensure proper operation and maximum availability throughout the entire operating cycle.

Scope of services:	Data Centre SLA Basic	Data Centre SLA Premium
Yearly maintenance		
Review and functional control of all components according to the configuration	x	x
Execution of maintenance work during office hours, Mon – Fri, 08:00 a.m. – 05:00 p.m.	x	x
Execution of maintenance work outside office hours, Mon – Fri, 05:00 p.m. – 10:00 p.m.	optional	optional
Further maintenance windows, at weekends, at nights, etc.	on request	on request
Status report and entry in the maintenance log	x	x
Support and response time		
Free support hotline 5 x 8 hrs (office hours, Mon – Fri, 08:00 a.m. – 05:00 p.m.)	x	x
Ticketing account in customer portal 7 x 24 hrs	x	x
Free augmented reality support		x
Guaranteed response time until the next working day (Mon – Fri, 08:00 a.m. – 05:00 p.m.)	x	x
Guaranteed response time 24 hrs / 365 days a year	optional	optional
Extended warranty service		
Guaranteed availability of spare parts and components during the contract period for a maximum of 10 years	x	x
Free spare parts and wear parts*		x
Repair costs		
Repair assignments depending on the effort*	x	
Free on-site repairs		x
Monitoring		
Remote monitoring of all components according to the configuration		x

* if not covered by guarantee or warranty

Access to these services is restricted to data centres and data networks installed by Datwyler. Datwyler will submit maintenance alternatives on request which will be tailored to your particular requirements.

MANAGED SERVICES



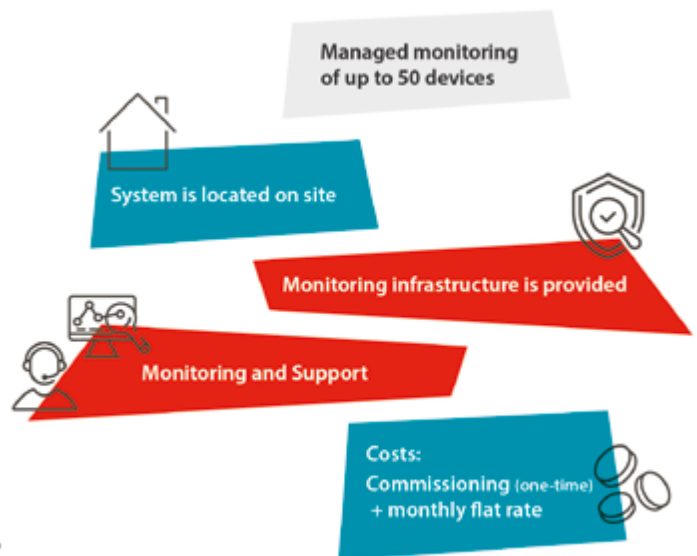
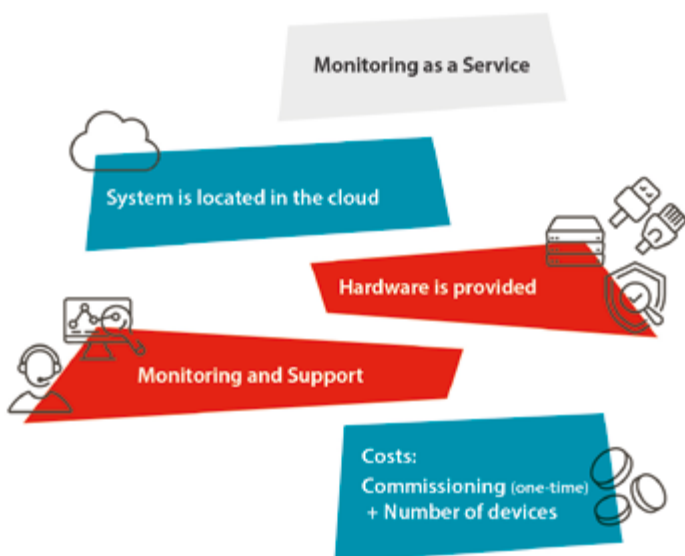
Datwyler IT Infra has established a reputation as a provider of reliable IT infrastructure solutions. By adding managed networks and managed monitoring to the service portfolio Datwyler supports organisations in being able to concentrate on their core competences.

Datwyler offers standardised Managed Network packages adapted to customers with up to 25 or up to 75 employees. As well as this there are individualised solutions tailor-made to the customer's requirements. Datwyler attaches great importance to high performance and the greatest possible security.

These services are perfectly coordinated. They include planning, implementation and administration of the network, and they ensure that everything runs smoothly. This also includes monitoring the entire network in order to identify and rectify potential problems and attacks at an early stage.

A central element of the managed networks are the integrated security solutions that protect against cyber attacks.

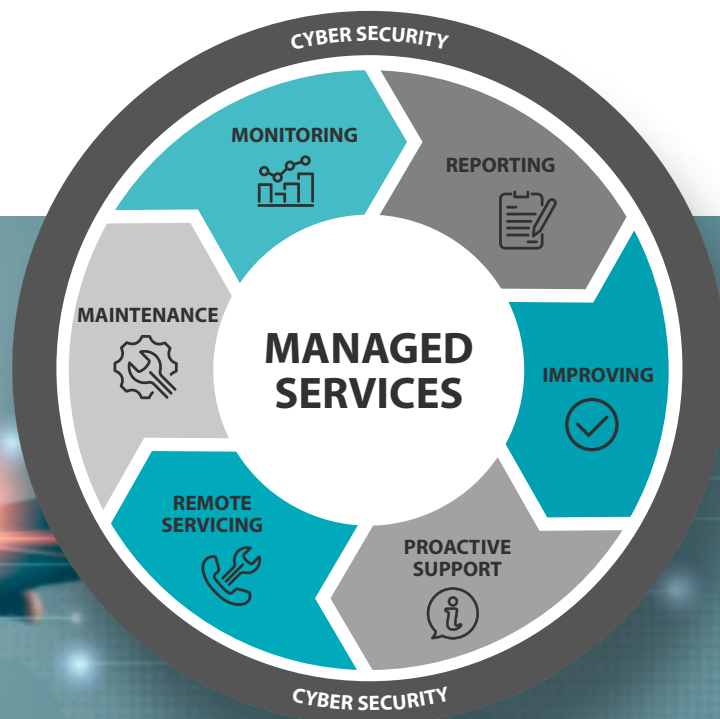
Datwyler's Managed Monitoring and Monitoring-as-a-Service allow companies to monitor their IT infrastructure around the clock. Data from the network, servers, applications and end devices are continuously



collected and analysed, and potential problems are identified before they can cause malfunctions.

The Datwyler team of experts also supplies its customers with detailed reports which help them optimise the performance of their IT infrastructure.

SERVICE LEVELS FOR MANAGED SERVICES



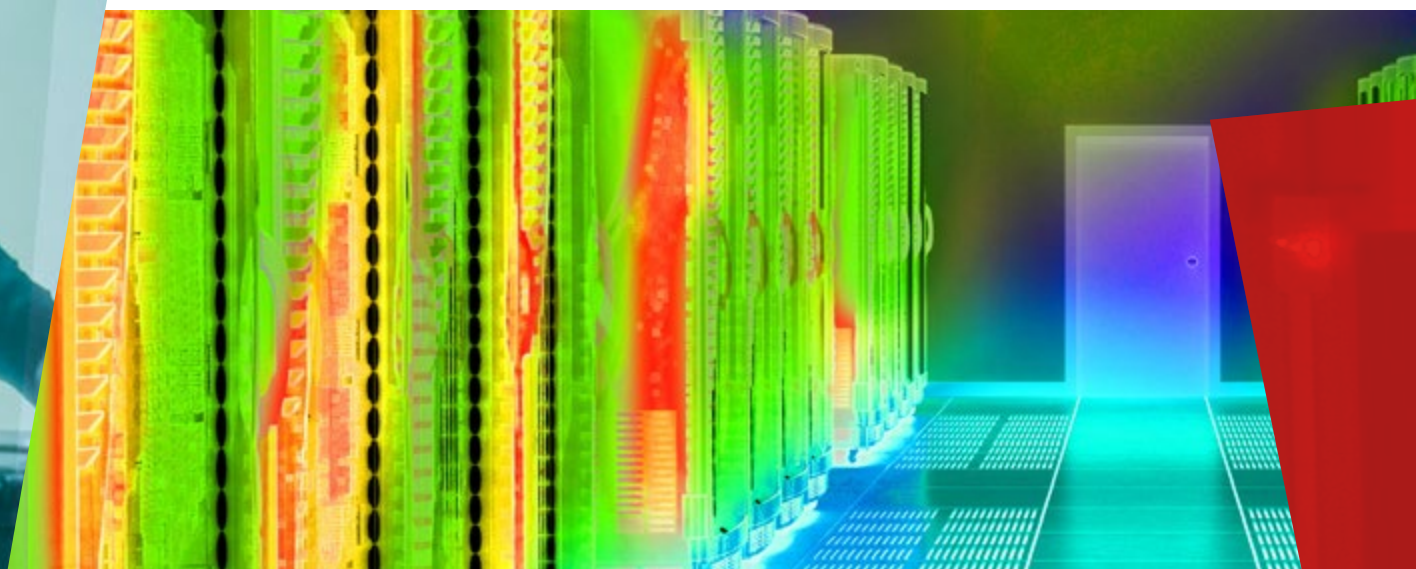
Scope of services:	Service Basic	Service Premium	Service Premium+
Maintenance of the network infrastructure			
Maintenance work at fixed agreed times/year	6x	12x	12x
Maintenance work during office hours, Mon – Fri, 08:00 a.m. – 05:00 p.m.	x	x	x
Maintenance work outside office hours Mon – Fri, 05:00 p.m. – 10:00 p.m.		x	x
Maintenance work at weekends (Sat/Sun)			x
Detailed maintenance report	x	x	x
Support and response time			
Support Hotline 5 x 9 hrs (office hours, Mon – Fri, 08:00 a.m. – 05:00 p.m.)	x	x	x
Customer Portal Ticketing System 7 x 24 hrs	x	x	x
Guaranteed response until the next business day (NBD)*	x		
Guaranteed response within 4 hrs*		x	
Guaranteed response within 1 h*			x
Extended warranty service			
Guaranteed availability of spare parts and components*	x	x	2 h
Repair and maintenance costs			
Free support (incl. free on-site support)			x
Monitoring			
Monitoring of the components agreed in the service and proactive response within the agreed response time	x	x	x
Prices			
Fixed commissioning costs	x	x	x
Monthly flat rate	x	x	x

* Office opening hours 08:00 a.m. – 05:00 p.m.

DATA CENTRE HEALTH CHECK

Datwyler Data Centre Health Check assessment service provides an entry-level on-site assessment of existing data centre IT infrastructures and components.

The Data Centre Health Check compares your current environment to the industrial standards and best practices for maintaining a reliable facility. We identify high priority issues, overall system risks and problem areas while providing recommendations for data centre improvements. Datwyler performs the assessment by its own certified data centre experts.



HEALTH CHECK PROCEDURES

1. Pre-visit:

Meeting with your IT and data centre operational team at the site along with completion of a questionnaire: define availability class, requested specifications and size in order to provide a detailed assessment offer.

2. Document study:

Collect and analyse your relevant documents.

3. Site assessment:

Assessment based on a pre-defined catalogue of criteria; measurements on cooling systems, power supply systems, cabling infrastructure, safety and security environment as well as staff interviews.

4. Information analysis:

Conduct a gap analysis by comparing the results from the catalogue of criteria and site assessment with data centre international standards to evaluate the current state of your data centre facility.

5. Report:

Present the results to you in a clear format that quickly addresses the issues and summarizes the risks along with recommendations to optimize performance and to improve efficiency.

WHY DATA CENTRE HEALTH CHECK? MEASUREMENTS

- . Check compliancy related to defined standard
- . Indicate single points of failure
- . Identify weaknesses, prevent downtime and increase availability
- . Analyse internal organization processes and documentation
- . Provide recommendations for improvement

- . Thermal scanning
- . Temperature and humidity measurement
- . Power consumption measurement
- . Airflow measurement
- . Cabling infrastructure performance tests
- . Electrostatic potential and grounding tests



DESIGN VALIDATION

We validate the design of your new or existing data centre and compare it for compliance to EN 50600 standard.

The outcome is a report which will indicate the level of compliance.



ASSESSMENT

- . We perform an assessment based on the relevant European standard EN 50600.
- . We use a comprehensive test catalogue covering the building environment, building construction, power supply systems, fire alarm and fire suppression systems, security systems, air conditioning, cabling, organisation and documentation.
- . We conduct a gap analysis to evaluate compliance of your data centre facility.

SECURITY CHECK

for your IT and OT network infrastructure

Secure your IT and OT network infrastructure and optimise its performance!

Datwyler's experts will carry out a comprehensive analysis of your network architecture for you. During this assessment, we identify application vulnerabilities, potential threats (malware, botnets), and devices at risk. In addition, we analyse your network utilisation and performance to ensure your critical applications are always available. We provide you with specific recommendations to improve your security and performance.



Security and threat analysis



Analysis of availability and productivity



Utilisation and performance assessment

Here you can find more information about our
HEALTH AND SECURITY CHECK





ITinfra.datwyler.com



DATWYLER