DATWYLER

SMART MODULAR DATA CENTRE

CUTTING-EDGE SOLUTIONS FOR YOUR DECENTRALISED DC ARCHITECTURE

2022

ITinfra.datwyler.com

EMBRACE DIGITISATION

Our world is becoming increasingly digital, interlinked and intelligent. IoT, 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/OT infrastructure.

The amount of data produced will continue to grow exponentially. These data volumes have to be processed close to their source (edge computing) due to, among other factors, efficiency and latency. A lot of smart modular data centres are needed to do this.

Datwyler is 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/OT infrastructure – with one-stop service solutions tailored to your needs.
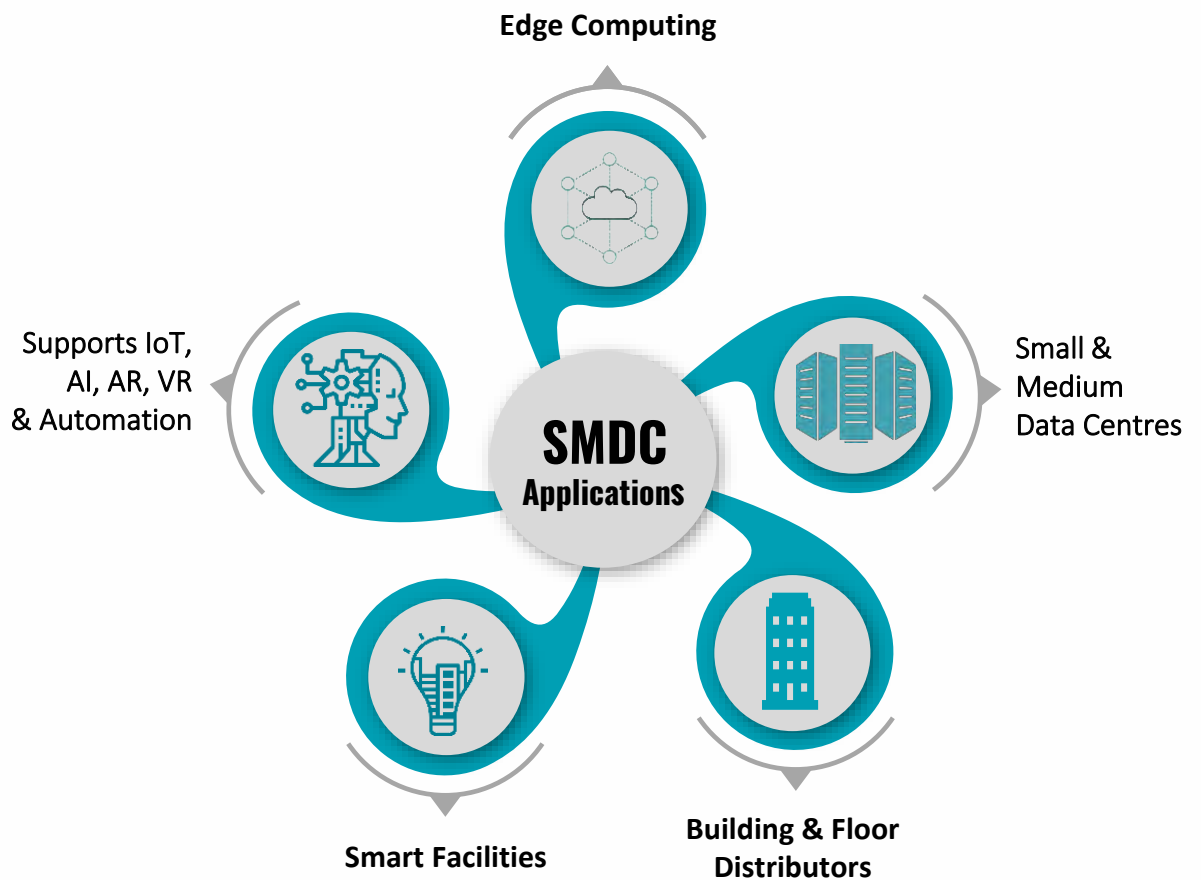
"In 2018 about 10% of data were created and processed outside centralized data centre and cloud. By 2025, they predict this figure will reach 75%."

GARTNER

WHY EDGE DATA CENTRES?

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

SMART MODULAR DATA CENTRE APPLICATIONS

Edge Computing

Supports IoT, AI, AR, VR & Automation

SMDC Applications

Small & Medium Data Centres

Smart Facilities

Building & Floor Distributors

KEY FEATURES

Tailored to your needs

Lower CAPEX & OPEX

Fully integrated / one vendor

Scalable & Modular (Pay as you grow)

Prefabricated (Quick Deployment)

Fully remotely monitored Low

carbon footprint

DATWYLER SMART MODULAR DATA CENTRE

Datwyler's Smart Modular Data Centre is a state-of-the-art, pre-assembled plug-and-play IT infrastructure solution for edge computing that consists of one 42U rack, power distribution, uninterruptible power supply (UPS), cooling system, fire suppression system, air gap sealing and environment monitoring system. Complete data centre deployment within few hours, future-proof with multiple ways to configure power and cooling redundancy to meet the current demand while ready for future technology migration at no cost and less disruption. Datwyler's Smart Modular Data Centre is designed for applications such as edge computing, computing node in remote and branch offices, floor distributor (FD) and smart facilities deploying IoT devices and running AI, AR, VR and automation. Also it can be monitored and controlled in a single platform.

SUB-SYSTEM DESCRIPTION

**Fire suppression
(FM200 or Novec 1230)**
Rack mounted system to prevent fire hazard from spreading

Power distribution
Pre-wired power distribution panel with fault isolation to provide surge protection and rapid deployment

Uninterruptible power supply
Rack mounted UPS with modular configuration to deliver continuous / purified power and protection to the IT equipment

Backup batteries
Durable and scalable batteries to provide autonomy during power failures and disruptions

Equipment rack
42U rack space for IT equipment with side cable management tray

Dual power input
Pre-equipped with rack mounted automatic transfer switch (ATS) (optional)

Double glass
For higher cooling efficiency and noise reduction

In-rack cooling system Modular cooling system equipped with humidifier that ensures maximum uptime availability at an optimum IT environment

Emergency ventilation fans
Extract hot air from the rack in case of cooling failure

Smart access control
Card or keypad

Environment monitoring system
Real-time status reporting

Lighting and visual alarm
Automated lighting system to ensure the best visibility and visual alarm during operation

Intelligent PDU
Far more than a power strip: equipped with intelligent power management

In-Rack Cooling

Side Cooling Type

SMART MODULAR DATA CENTRE (3 KVA)

MODEL	40014180ZY	40014600ZY	40015990ZY	40078800ZY
Sensible cooling capacity	3.8 kW	3.5 kW	3.8 kW	3.5 kW
Internal condensor	No	Yes	No	Yes
Available space (U)	24 to 27U	22 to 25U	24 to 27U	22 to 25U
Rack Dimensions (W x D x H)	600 x 1400 x 2000 mm - 42U		800 x 1400 x 2000 mm - 42U	
UPS capacity	up to 3 kVA			
IT load	up to 2.7 kW			
Backup time	10 to 15 minutes			
Power distribution module (PDM)	PDM6 input breaker 63A/1P*1			
Reliability	Tier I			
Input voltage	220~240 VAC, 1Ph+N+PE 50/60 Hz			
Cable entry	Top / bottom access			
Emergency ventilation	Top of the rack and front door			
Fire suppression	FM200-J / NOVEC 1230 rack mounted			
Remote management	Cooling system, UPS, access control*, iPDU*, environment setpoint and alarm notification (SMS / email)*			
Remote monitoring	Cooling system, UPS, power usage effectiveness (PUE), iPDU*, IT load, access control*, temperature, humidity and alarm status			
User interface	10.4" touchscreen and remote web interface			
Alarm	Sound and light alarm with SMS* or email* notification			
Mounting	Direct on floor or on raised floor			

SMART MODULAR DATA CENTRE (6 OR 10 KVA)

MODEL	40014190ZY	40014630ZY
Input voltage	220~240 VAC, 1Ph+N+PE 50/60 Hz	380~415Vac, 3Ph+N+PE 50/60 Hz
IT load	5.4 kW	9 kW
UPS capacity	6 kVA	10 kVA
Available space (U)	27 to 31U	24 to 28U
Backup time	8 to 16 minutes	11 to 15 minutes
Sensible cooling capacity	5.5 kW	12.5 kW
Power distribution module (PDM)	PDM6 input breaker 63A/1P*1	PDM10 input breaker 125A/3P*1
Rack	SR600X1400 - 42U	
Reliability	Tier I, Tier II and Tier III	
Input voltage	220~240 VAC, 1Ph+N+PE 50/60 Hz	
Cable entry	Top / bottom access	
Emergency ventilation	Top of the rack and front door	
Fire suppression	FM200-J / NOVEC 1230 rack mounted	
Remote management	Cooling system, UPS, access control*, iPDU*, environment setpoint and alarm notification (SMS / email)*	
Remote monitoring	Cooling system, UPS, power usage effectiveness (PUE), iPDU*, IT load, access control*, temperature, humidity and alarm status	
Alarm	Sound and light alarm with SMS* or email* notification	
Dimensions (W x D x H)	900 x 1400 x 2000 mm	
Mounting	Direct on floor or on raised floor	

The Smart Modular Data Centre is a tailor-made and customized solution to fulfil the customers' specific needs and requirements.
* Additional component is optional.

DATWYLER SMART MODULAR DATA CENTRE (UP TO 300 KVA)

SUB-SYSTEM DESCRIPTION

Equipment rack
42U rack space for IT equipment with side cable management tray

Double glass
For higher cooling efficiency and noise reduction

In-row cooling system
Primary and redundant modular cooling system (CW & DX), equipped with dual power input in addition to humidifier that ensures maximum uptime availability at an optimum IT environment

Environment monitoring system
Real-time status reporting

Power distribution
Pre-wired panel with fault iso-lation to provide surge protection and rapid deployment

Emergency ventilation fans
Extract hot air from the rack in case of cooling failure

Dual power input
Pre-equipped with rack mounted automatic transfer switch (ATS) (optional)

Uninterruptible power supply
Rack mounted with modular configuration to deliver continuous / purified power and protection to the IT equipment

Fire suppression (FM200 or Novec 1230)
Rack mounted system to prevent fire hazard from spreading

Lighting and visual alarm
Automated lighting system to ensure the best visibility and visual alarm during operation

Smart access control
Card or keypad

Backup batteries
Durable and scalable batteries to provide autonomy during power failures and disruptions

Intelligent PDU
Far more than a power strip: equipped with intelligent power management

Cable containment
Integrated cable containment as part of the subsystem

SMART MODULAR DATA CENTRE (10 TO 40 KVA)

SPECIFICATIONS			
IT load	up to 36 kW	Remote management	Cooling system, UPS, access control*, iPDU*, environment setpoint and alarm notification (SMS / email)*
UPS capacity	up to 40 kVA		
IT racks	up to 8 (static load 1300 kg / rack)		
Backup time	8 to 15 minutes		
Sensible cooling capacity	up to 50.4 W (CW or DX)	Remote monitoring	Cooling system, UPS, power usage effectiveness (PUE), iPDU*, IT load, access control*, temperature, humidity and alarm status
Input voltage	380~415 VAC | 50/60 Hz | 3Ph+N+PE*		
Dimensions (W x D x H)	(1500 - 6900) x 1400 x 2000 mm		
Reliability	Tier I, Tier II and Tier III		
Mounting	Direct on floor or on raised floor	User interface	10.4" touchscreen and remote web interface
Cable entry	Top / bottom access	Alarm	Sound and light alarm with SMS* or email* notification
Emergency ventilation	Top of the rack and front door		
Fire suppression	FM200-J / NOVEC 1230 rack mounted(1u/2u)*		

SMART MODULAR DATA CENTRE (UP TO 300 KVA)

SPECIFICATIONS			
IT load	up to 267 kW	Remote management	Cooling system, UPS, access control*, iPDU*, environment setpoint and alarm notification (SMS / email)*
UPS capacity	up to 300 kVA		
IT racks	up to 100 (static load 1300 kg / rack)		
Backup time	8 to 15 minutes		
Input voltage	380~415 VAC | 50/60 Hz | 3Ph+N+PE*	Remote monitoring	Cooling system, UPS, power usage effectiveness (PUE), iPDU*, IT load, access control*, temperature, humidity and alarm status
Reliability	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	User interface	10.4" touchscreen and remote web interface
Fire suppression	FM200-J / NOVEC 1230 rack mounted(2u)*	Alarm	Sound and light alarm with SMS* or email*

The Smart Modular Data Centre is tailor-made and customized solution to fulfill the customers' specific needs and requirements.
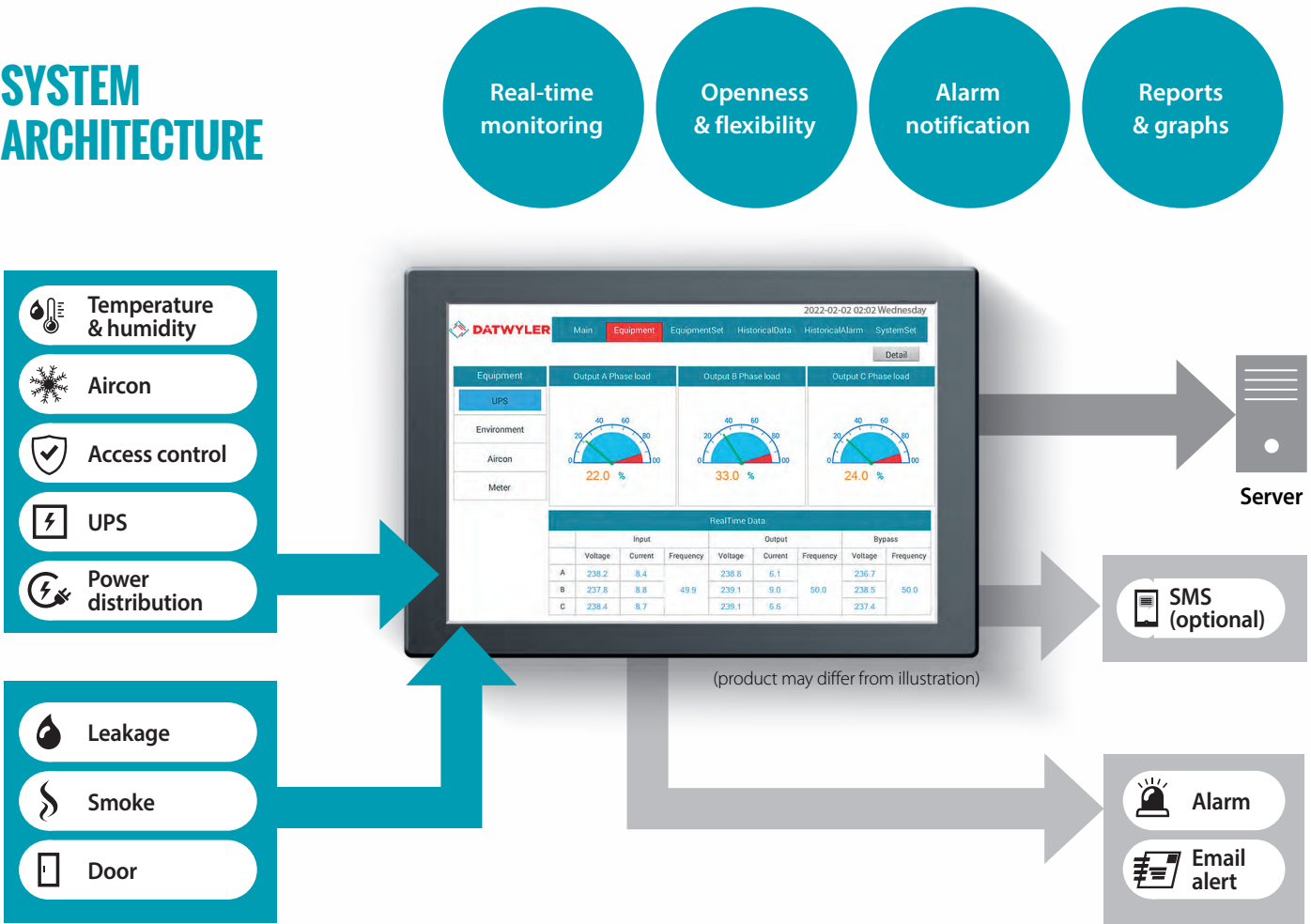
* Additional component is optional. The rack mounted fire fighting solution as optional and it can be traditional covering the whole data room as well.

DATWYLER EMS
FOR SMART MODULAR DATA CENTRE

The Datwyler Data Centre Infrastructure Management solution features an innovative approach towards IT infrastructure management, taking into consideration the latest technological advancement in IoT, AI, IP communication and other technologies. The platform allows the DCIM to integrate with a wide range of systems supporting the IT infrastructure. It provides real-time monitoring of environment conditions, access control and energy consumption, activates the alarm in case of an emergency and collects data for planning of preventative maintenance. It comes with a friendly and easy to use graphical user interface that simplifies the complexity and sophistication of the systems running behind.

SYSTEM ARCHITECTURE

(product may differ from illustration)

HMI TOUCH SCREEN FEATURES

. Flat touchscreen with multi-touch function
. Multilingual Web GUI with integrated logic
. SNMP enabled ports for auto detection of sensors
. User access management
. Integrated interface Ethernet, USB, CAN, analog & digital
. Provides notifications and alerts such as email, SMS and SNMP traps
. Extensive range of sensors for environmental monitoring,
  security control and power monitoring
. USB interface
. Face recognition system
. Sim card slot for optional GSM modem
. Warning alarms for maintenance and critical events
. Graphical representation of environmental data

VALUE-ADDED SERVICES
PROJECT LIFE CYCLE

Design
(5 mins.)

The Smart Modular Data Centre configurator is a user-friendly tool that offers customers to have the experience of generating their full DC design from scratch within less than 5 mins., from small to medium data centres including the racks, UPS, smart power distribution, cooling, water leak detection, fire alarm and suppression, access control and environmental monitoring systems with SMS and Email notification and cabling interconnection between racks.

Implementation
(48 hours)

Datwyler provides quick deployment of Smart Modular Data Centre to support your business needs. The solution is pre-assembled, pre-integrated and factory tested which significantly reduces deployment time and work at site. We ensure seamless and successful deployment within 48 hours driven by our robust project plan, Experts' technical know-how and local stock availability.

Operation and Maintenance

SaaS

Datwyler delivers a comprehensive operation and maintenance services using the Smart Service Platform. This platform gives DC Operators and Facility Managers the ability to control and monitor all their connected equipment and various applications in one platform which includes but not limited to Smart Modular Data Centre, UPS , PDU, CCTV, Building Management System, Smart Lighting System and much more.

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