



# SANTAK MDC 3.0Pro-A series

Powering reliable data centers

Simplifying engineering deployment



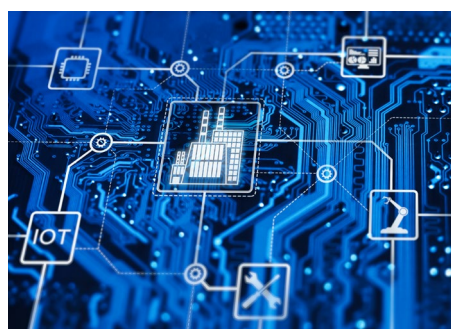


# SANTAK MDC

## Product introduction

As a new generation of high-performance, cost-effective intelligent micro data center launched by SANTAK, MDC 3.0 Pro-A series MDC primarily targets the needs of small and medium-sized data centers, and commits to providing users with simple and reliable data center solutions.

MDC 3.0 Pro-A series adopts a modular design, integrating power supply and distribution, temperature control, aisle, cabling, and monitoring into a single module, satisfying the needs for rapid delivery and on-demand deployment. Paired with SANTAK's self-developed PEC series intelligent dynamic environment monitoring and management system, it achieves uninterrupted monitoring of power supply and distribution, intelligent temperature control products, temperature and humidity sensor, water immersion sensors, smoke sensors, cameras, and other equipment within the module. This comprehensively improves the reliability, security, energy efficiency, and intelligence of the data center's power supply and temperature control systems.



# Key product features

MDC 3.0 Pro-A series features integrated design, security and reliability, space-saving and energy-efficient operation in the server room, time-saving and labor-saving installation, rapid and flexible deployment, intelligent monitoring, and efficient and stable cooling. It is a high-performance, cost-effective product for a new generation of intelligent MDC.



## Key product features

- Integrating power supply and distribution, temperature control, server racks, cabling, and monitoring into a single module facilitates rapid deployment and flexible expansion.
- Featured ambient lighting for terminal door status indication provides multiple alarms, enhancing the user experience.
- Optional manual sliding doors and automatic sliding doors prevent unauthorized access and improve data center security.
- A variety of monitoring screens are available: 10-inch, 21-inch, and 43-inch.

## Green and energy-saving

- Intelligent temperature control and high-efficiency cooling technologies are adopted to reduce energy consumption and enhance energy utilization efficiency.
- The UPS supports ECO high-efficiency mode, achieving an efficiency of up to 99%.



## Key product features

- A 3D visual model can be generated based on the on-site layout of MDC. The 3D model can be rotated and zoomed in/out.
- Dynamic alarm prompts are provided. When an alarm occurs in related equipment, the 3D model on the homepage will display the alarm status accordingly.
- AI functions are available, such as AI cooling.

## Safe and reliable

- Highly reliable power supply and cooling systems are equipped to ensure the stable operation of the data center.
- Core components are rigorously selected from suppliers of leading international brands.

## Rapid deployment

- Core components are pre-assembled and pre-tested in the factory, which significantly shortens the construction cycle.

# Key product features

Primarily small and medium-sized data centers, such as: enterprise server rooms, intelligent educational institutions, medical facilities, government agencies, and financial institutions.



# SANTAK's self-developed PEC series dynamic environmental monitoring system

The PEC series system can be customized based on user needs:

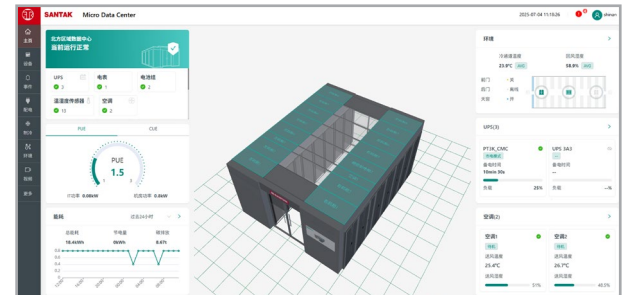
- Hierarchical user permission management
- Configuration management, supporting on-site equipment configuration changes and layout adjustments
- Visual monitoring with 3D visualization/link layout
- Real-time monitoring of equipment and environment
- Alarm notifications
- Alarm linkage and event recording & playback
- Report analysis (trend/event)
- Capacity management
- Load management
- Equipment management
- Energy efficiency management
- Mobile app monitoring
- AI functions
- Northbound interface (SNMP)
- Network security certification
- iF International Design Award for monitoring design



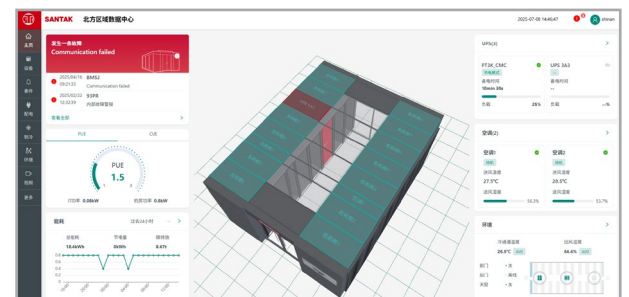
2023 iF -MDC - SANTAK Micro Data Center System



SANTAK A series - Homepage (normal)



SANTAK A series - Homepage (alarm)



Event page

| 序号 | 设备名称      | 报警描述           | 报警   | 报警时间       | 报警清除时间     | 报警清除人 | 报警清除方式 |
|----|-----------|----------------|------|------------|------------|-------|--------|
| 1  | PTAC/CRAC | 机房温度报警 (18.00) | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 2  | UPS/BAU   | 机房电压报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 3  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 4  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 5  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 6  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 7  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 8  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 9  | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 10 | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 11 | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 12 | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 13 | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |
| 14 | 空调        | 机房湿度报警 (1.00)  | 报警清除 | 2023-09-01 | 2023-09-01 | —     | 报警清除   |

AI



# Key components



# Key component specifications

| UPS                                |                                                                                                                                                                                                                                                                                                               |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power input type                   | 380/400/415VAC, 50/60Hz, 3P+N+PE                                                                                                                                                                                                                                                                              |
| Lightning protection               | Class C, In=20kA                                                                                                                                                                                                                                                                                              |
| Input power factor                 | >0.99 @ 20-100% load, >0.95 @ 10-20% load                                                                                                                                                                                                                                                                     |
| Input switch                       | Single input or ATS dual input                                                                                                                                                                                                                                                                                |
| UPM                                | 40kVA per module                                                                                                                                                                                                                                                                                              |
| UPS chassis capacity               | 120kVA/200kVA optional                                                                                                                                                                                                                                                                                        |
| Output power factor                | 1 (ambient temperature ≤ 35°C)                                                                                                                                                                                                                                                                                |
| Overall efficiency                 | Up to 98%                                                                                                                                                                                                                                                                                                     |
| Output power distribution          | Mains power output branches: 63A/3P cooling unit power distribution circuit * 6 + Backup 63A/3P circuit * 1 + Backup 16A/1P circuit * 3<br>UPS output branches: 32A/1P IT power distribution circuit * 48                                                                                                     |
| Power distribution cabinet         |                                                                                                                                                                                                                                                                                                               |
| Power input type                   | 380/400/415Vac, 50/60Hz, 3P+N+PE                                                                                                                                                                                                                                                                              |
| Input switch                       | Single or dual MCCB: 125A/160A/250A/400A                                                                                                                                                                                                                                                                      |
| Lightning protection               | Class C, In=20kA                                                                                                                                                                                                                                                                                              |
| Output branch                      | 20/32/48/60                                                                                                                                                                                                                                                                                                   |
| Monitor                            | Precision power distribution rack: total power consumption monitoring of both main and branch circuits; Standard power distribution rack: power consumption monitoring of the main circuit                                                                                                                    |
| Communication                      | RS485                                                                                                                                                                                                                                                                                                         |
| Rack & PDU                         |                                                                                                                                                                                                                                                                                                               |
| Rack size                          | H: 2000mm, 42U W: 600/800mm D: 1200mm                                                                                                                                                                                                                                                                         |
| Perforation ratio                  | Front single-hinged door, rear swing mesh door, with a perforation ratio of 80%                                                                                                                                                                                                                               |
| Color                              | RAL9005                                                                                                                                                                                                                                                                                                       |
| Static load                        | 3000kg                                                                                                                                                                                                                                                                                                        |
| Optional accessory                 | Side panels, blind plates, trays, L-shaped brackets, horizontal cable organizers, etc.                                                                                                                                                                                                                        |
| PDU                                | Input: Single-phase 16A/32A/63A; Output: GB socket 16/24 standard port                                                                                                                                                                                                                                        |
| Aisle system                       |                                                                                                                                                                                                                                                                                                               |
| End door                           | Automatic sliding doors, manual sliding doors                                                                                                                                                                                                                                                                 |
| Ambient lighting                   | Three-color alarm ambient lighting                                                                                                                                                                                                                                                                            |
| Skylight                           | 300/600/800mm fixed skylights, 600/800mm flip-up skylights, optional one-piece skylight reset assembly                                                                                                                                                                                                        |
| Lighting                           | LED energy-saving lamp tubes, with an illuminance of over 300 Lx.                                                                                                                                                                                                                                             |
| Strong and weak current cable tray | Each rack equipped with two strong and weak cable trays at the top                                                                                                                                                                                                                                            |
| Cross-row cable tray               | One at each end of the aisle                                                                                                                                                                                                                                                                                  |
| Cooling unit                       |                                                                                                                                                                                                                                                                                                               |
| Type                               | Air-cooled direct expansion                                                                                                                                                                                                                                                                                   |
| Cooling capacity                   | 12.5/25/30/40/50/60kW                                                                                                                                                                                                                                                                                         |
| Power input                        | 380V/3P, 50Hz                                                                                                                                                                                                                                                                                                 |
| Air supply method                  | Horizontal air supply                                                                                                                                                                                                                                                                                         |
| Refrigerant                        | R410A                                                                                                                                                                                                                                                                                                         |
| Commonly used optional accessory   | Extension component, low-temperature components, condensate pumps, etc.                                                                                                                                                                                                                                       |
| Monitoring system                  |                                                                                                                                                                                                                                                                                                               |
| Monitoring controller              | PEC-500: 1U rack-mounted<br>PEC-300: 0U 10-inch all-in-one screen, 4*RS232 serial port (sharing signals with PORT1-2 of RS485), 12*RS485 independent serial ports, 1*HDMI (4K*2K resolution at 24Hz), 1*VGA (maximum resolution: 2560*1200), 8*DI, 4*DO wet contact, 2*DO dry contact, built-in 4G SMS module |
| Display screen                     | 10/21.5/43 inch                                                                                                                                                                                                                                                                                               |
| Environmental monitoring           | Temperature and humidity sensors, smoke detectors, water immersion sensors, smart access control systems, audible and visual alarms, high-definition cameras, etc.                                                                                                                                            |
| Power equipment                    | Integrated UPS rack, cooling unit, power distribution cabinet, UPS, battery monitoring device, etc.                                                                                                                                                                                                           |

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