# ATOM

## MICRO DATA CENTER SOLUTIONS

''Easy to connect your business to worldwide''

**KEPBER TECHNOLOGY CO.,LTD**

ATOM micro data center (MDC) is a smaller or containerized (modular) data center architecture that is designed for computer workloads not requiring traditional facilities, Whereas the size may vary from rack to container, a micro data center may include fewer than four servers in a single 19-inch rack,It may come with built-in security systems, cooling systems, and fire protection, Typically there are standalone rack-level systems containing all the components of a 'traditional' data center, including in-rack cooling, power supply, power backup, security, fire and suppression, Designs exist where energy is conserved by means of temperature chaining, in combination with liquid cooling,

## Why use ATOM micro data center?

### Easy Deployment

Within one day, you can deploy the IT equipments and power on your business, Pre-manufactured and fully tested means that no-extra on-site engineering required to activate the product,

### Easy Management

Design once and deploy anywhere, By this standardized architecture and remote monitoring platform, you can gain control of these critical assets, reduce risks, operational costs and improve service level,

### Easy Expansion

Buy small then scale to big, These stand-alone scalable solution means you can plan and invest your IT assets step by step while your business grows, Invest only when necessary,

### Easy Customization

Lego style components designed by experienced RhD team support diverse customization including capacity configuration, redundancy configuration, mechanical and software modifications,

## ● The Benefits of ATOM micro data center

KEPBER/ATOM Micro Data Centerat first glance looks like most any other equipment cabinet,It is typically a pre-fabricated unit equipped with climate controls, power protection and distribution, network connectivity, physical security features, fire suppression, interference protection, and shock-resistant design,

## ● Cooling system

The built in dedicated modular cooling system removes heat and creates appropriate working temperature and humidity environment for critical IT equipments, while consumeslower energy benefiting from fully closed enclosure and hot/cold air management design, Emergency ventilation system opens in case the cooling falls in failure, and we can start or stop the cooling remotely from anywhere,

## ● Power system

Rack mounted UPS(Uninterruptible power supply) system provides good power quality protecting IT equipment from poor power conditions and power outages, 48VDC power system for telecom communication equipments, Matching with battary system which is configurable with backup time from 5 minutes to 4 hours to guarantee business continuity,

## ● Monitoring system

The monitoring system collects and displays all MDC information, such as temperature humidity, smoke, door opening, power and cooling status, Supports remote web access, email alert, SMS alert, and modbus-TCP integration,

## ● Pack system

Fully closed rack system provides safe space for IT equipments, which is noise cancelling, thermal insulated, and dust proof, Special double layer transparent front door design prevents condensate and offers status indication of IT equipments,

## ● Security system, Access control and Camera

3 in 1 (fingerprint/pin/RFID), front and rear door, access control system provides full protection and supports use management and logging records,Camera system provides remote video monitoring to learn assets status in any time of situation and we can open the door remotely from anywhere,

## ● Fire suppression system

Rack mounted fire system automatically detects system fire status, and release the built in FM200 or NOVEC 1230 gas to extinguish the fire, Early stage fire detection system send alarm before the fire causes any damage,
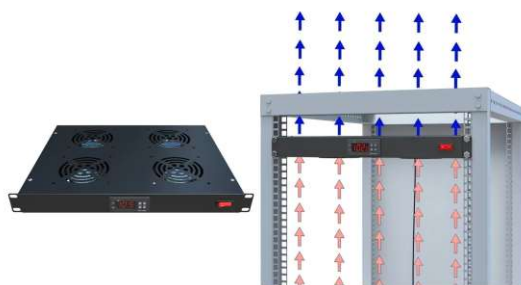
Exhaust fan (Option)

www.kepber.com

The ATOM Series solution is a rapidly scalable one based on our All-in-one Micro data center product, with the modular subsystem and the powerful DCIM platform, this solution is totally born for the customization,We want to formulate the single row solution free for every customer's tailored requirement; Depending on the usage and size of the customer's business and the number of devices to be used, there are 3 types of MDC to choose from as appropriate

## MDC with Top Cooling

33U cabinet, MDC fully integrated with closed rack, cooling, UPS, battery, power distribution, security, monitoring and fire systems.No complex piping of remote condenser installation.
(Avaliable for it equipment is 27U)
** in case use only air conditioner

Cooling

## MDC with Buttom Cooling

42/45U cabinet, MDC fully integrated with closed rack, cooling, UPS, battery, power distribution, security, monitoring and fire systems. Stable air circulation throughout the cabinet to allow all equipment cooled. (Avaliable for it equipment is 27/30U)
** in case use only air conditioner

Cooling

## MDC with Side Row Cooling

42/45U cabinet, MDC fully integrated with closed rack, cooling, UPS, battery, power distribution, security, monitoring and fire systems. Stable airflow throughout the cabinet and offers plenty of space for equipment. (Avaliable for it equipment is 35U up)
** in case use only air conditioner

Cooling

## Key Features

- Rack-level cooling, cold and hot aisle isolation, high efficiency, the PUE values as low as 1,4,
- Plug and play design, available online in 10 minutes at the fastest,
- Fully enclosed design, dust and noise reduction, protection level up to IP54,
- Cabinet covered with insulation material to prevent condensation,
- The cabinet is equipped with an emergency pop-up door system as standard, which can automatically open the front and rear doors in the event of a high temperature or fire alarm,
- Cabinets, Intelleigent power distribution and cooling units have a variety of forms and specifications orflexible application,
- The front and rear doors of the cabinet are equipped with a 3-in-1 access control system,
- Standard 10-inch integrated touch screen monitor screen, the monitoring system does not take up U space of the cabinet,
- Support remote web, APP and centralized monitoring, support monitoring protocols such as Modbus-TCP,SNMPV1 / V2, BACnet,
- Support global customized services,

## ATOM micro data center

Most SMBs that are integrating more cloud into their IT system system, Increasingly, SMBs need cost effective,agile and scalable solutions that help to ameliorate IT risks and headaches for a smala staff,

With the right selection of Micro Data Center solution at local site, you can utilize the cost effective cloud solutions,and protect your business with the network connectivity, local backup, and local sensitive data, Now bring a self contained micro data center into your office,

## The key benefits of Micro Data Center for SMB IT

- Saving cost, Less dedicated resources(room space, people, electricity power) needed for the simplified solution,
- Reducing complexity, The portable solution with packaged cooling and all the necessary power, battery, and monitoring is easy to install and easy to use,
- Improving performance and security level, Pre-engineered with design of reliability, efficiency and securityfirmly protects the local IT assets,
- Saving time, Plug and play with the fully integrated and pre-tested solution,
- Display monitor for UPS management (inout/output, back up time, etc), Water leak, Access control, Fire suppression, Cooling system, intelligent PDU, Temperature and Humidity sensor, etc (customize)

| Precision cooling | | Temperature sensor |
| --- | --- | --- |
| UPS+Batter | | Humidity sensor |
| Power distribution | | Smoke sensor |
| PDU | | Monitoring host |
| Access control | | Fire suppression |

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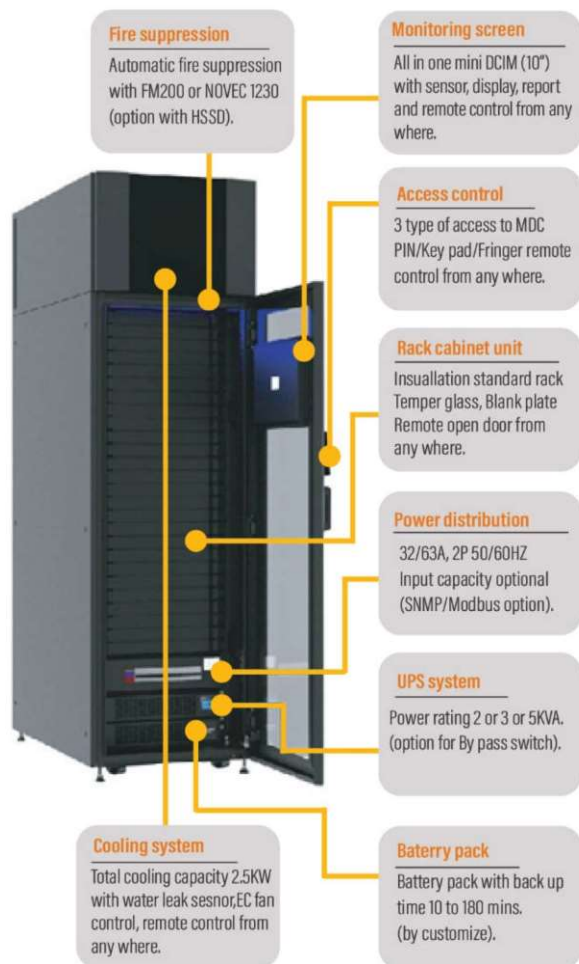
## ATOM/AT-30 Micro data center
(Self-contained type without outdoor unit)

The ATOM/AT-30 micro data center series The new "hybrid" data centers architecture can consist of a combination of a centralized cloud characterized by massive compute and stronge,regional edge data centers that consist of compute and stronge located closer to the user,and local edge with smaller compute and stronge assets very near to where the data is being consumed like a branch office or retail store",

**Fire suppression**
Automatic fire suppression with FM200 or NOVEC 1230 (option with HSSD).

**Monitoring screen**
All in one mini DCIM (10") with sensor, display, report and remote control from any where.

**Access control**
3 type of access to MDC PIN/Key pad/Fringer remote control from any where.

**Rack cabinet unit**
Insuallation standard rack Temper glass, Blank plate Remote open door from any where.

**Power distribution**
32/63A, 2P 50/60HZ Input capacity optional (SNMP/Modbus option).

**UPS system**
Power rating 2 or 3 or 5KVA. (option for By pass switch).

**Cooling system**
Total cooling capacity 2.5KW with water leak sesnor,EC fan control, remote control from any where.

**Baterry pack**
Battery pack with back up time 10 to 180 mins. (by customize).

### The ATOM/AT-30 micro data center series

- One Cabinet- Self containment design free of outdoor unit installation,
- One Pivot - All subsystem are integrated into DCIM platform and accessible via SNMP ,
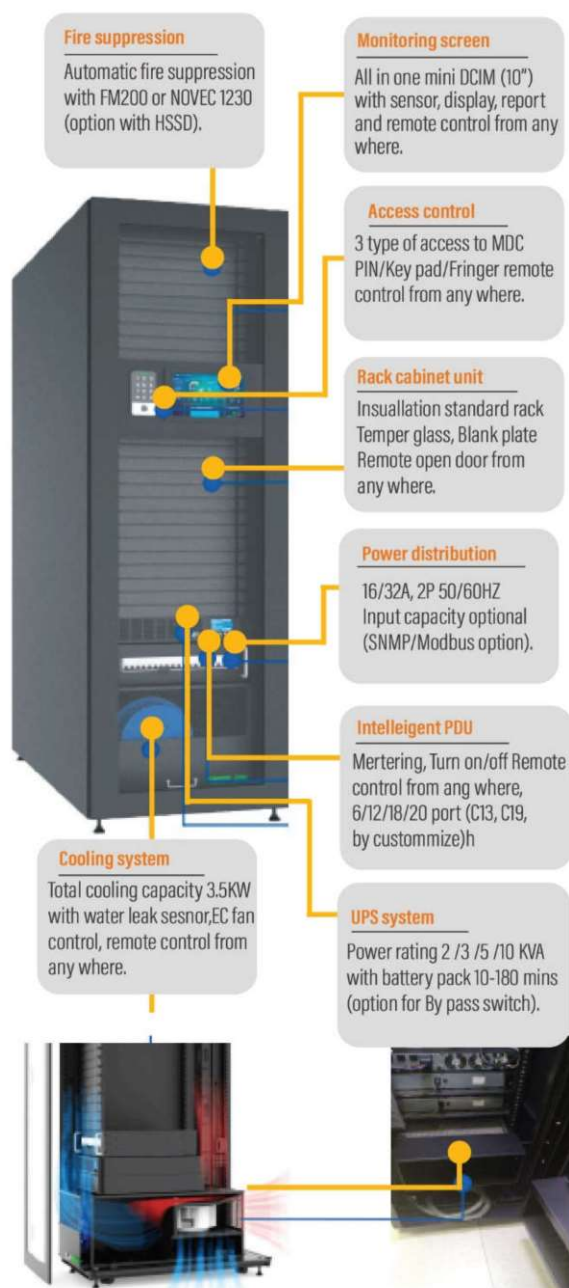- One Hour - Extremely concise and simplified nstallation in one hour for a data center,

| ATOM/AT-30 Micro data center (cooling on top of rack cabinet) | |
|---|---|
| **Model** | **AT-30** |
| **Unit** | |
| Unit (cabinet) | 33 U |
| Available | 19 U |
| Redundancy | N |
| Width -mm | 600 |
| Depth -mm | 1100 |
| Height -mm | 1590 |
| Weight -kg | 180 |
| IP degree | IP 55 |
| **Power** | |
| Input Power | 220/230, 50/60Hz |
| UPS-kVA | 2/3/5 KVA |
| MountType | Yes |
| Standard Battery | 10 -180 mins |
| PDU | Standard or Intelleigent |
| **Cooling** | |
| Cooling | Air cooled |
| Cooling Type | PackagedDX/Self-contained |
| Mount Type | Top of Rack |
| Capacity-kW | 3.5 KW |
| Air flow | 700 m2s |
| Space/weight | 5U/25 kg |
| EC fan | Yes |
| Water leak | Yes |
| Emergency Ventilation | Yes |
| **Monitoring and security** | |
| Monitoring | UPS; Power distribution; Coolling; |
| | Temp&Hum sensors; Access control |
| Monitoring Function | SNMP avilable; RS485/232 serial |
| | ports CANBUS ports expansion |
| Seucurity | Access control (front and back) |
| | CCTV, Fire suppression |

## ATOM/AT-60 Micro data center
### (Self-contained type without outdoor unit)

The ATOM/AT-60 micro data center series; Data Center Architecture "Future of innovation" can consist of a combination of air conditioning systems, electrical systems, access to small data centers , monitoring all of environment capture, Fire suppression, CCTV and care It is characterized by unattended remote access management, similar to large-scale data centers, and therefore suitable for deployment Such as a branch office or a retail store or small office,

**Fire suppression**
Automatic fire suppression with FM200 or NOVEC 1230 (option with HSSD).

**Monitoring screen**
All in one mini DCIM (10") with sensor, display, report and remote control from any where.

**Access control**
3 type of access to MDC PIN/Key pad/Fringer remote control from any where.

**Rack cabinet unit**
Insuallation standard rack Temper glass, Blank plate Remote open door from any where.

**Power distribution**
16/32A, 2P 50/60HZ Input capacity optional (SNMP/Modbus option).

**Intelleigent PDU**
Mertering, Turn on/off Remote control from ang where, 6/12/18/20 port (C13, C19, by custommize)h

**Cooling system**
Total cooling capacity 3.5KW with water leak sesnor,EC fan control, remote control from any where.

**UPS system**
Power rating 2 /3 /5 /10 KVA with battery pack 10-180 mins (option for By pass switch).

| ATOM/AT-60 Micro data center (cooling at bottom of rack cabinet) | |
|---|---|
| **Model** | **AT-60** |
| **Unit** | |
| Unit (cabinet) | 42/45 U |
| Available | 27/30 U |
| Redundancy | N, N+1 or 2N |
| Width -mm | 600/800 |
| Depth -mm | 1100 |
| Height -mm | 2050 |
| Weight -kg | 210 |
| IP degree | IP 55 |
| **Power** | |
| Input Power | 220/230, 50/60Hz |
| UPS-kVA | 2/3/5 KVA |
| MountType | Yes |
| Standard Battery | 10 -180 mins |
| Distribution unit | Standard or Monitoring |
| PDU | Standard or Intelleigent |
| **Cooling** | |
| Cooling | Air cooled |
| Cooling Type | PackagedDX/Self-contained |
| Mount Type | bottom of Rack |
| Capacity | 3.5 KW |
| Air flow | 700 m2s |
| Space/weight | 5U/25 kg |
| EC fan | Yes |
| Water leak | Yes |
| Emergency Ventilation | Yes |
| **Monitoring and security** | |
| Monitoring | UPS; Power distribution; Coolling; Temp&Hum sensors; Access control |
| Monitoring Function | SNMP avilable; RS485/232 serial ports CANBUS ports expansion |
| Seucurity | Access control (front and back) CCTV, Fire suppression |

# ATOM/AT-70 Micro data center
# (Self-contained type without outdoor unit)

The ATOM/AT-70 micro data center series; Data Center Architecture " A large data center in a single cabinet" "can consist of a combination of air conditioning systems, electrical systems, access to ATOM data centers , monitoring all of environment capture, Fire suppression, CCTV and care It is characterized by unattended remote access management,This is smart for reducing costs and reducing maintenance while the performance remains the same,

**Fire suppression**

Automatic fire suppression with FM200 or NOVEC 1230 (option with HSSD).

**Monitoring screen**

All in one mini DCIM (10") with sensor, display, report and remote control from any where.

**Access control**

3 type of access to MDC PIN/Key pad/Fringer remote control from any where.

**Rack cabinet unit**

Insuallation standard rack Temper glass, Blank plate Remote open door from any where.

**Power distribution**

32/63A, 2P 50/60HZ Input capacity optional (SNMP/Modbus option).

**Intelleigent PDU**

Mertering, Turn on/off Remote control from ang where, 6/12/18/20 port (C13, C19, by custommize)

**Cooling system**

Total cooling capacity5.6, 7.6, 10KW with water leak sesnor, EC fan control, remote control from any where.

**UPS system**

Power rating 3 /5 /6 /10 KVA with battery pack 10-180 mins (option for By pass switch).

**Fire suppression**

Automatic fire suppression with FM200 or NOVEC 1230 (option with HSSD).

**Cooling system**

Cooling controller, display management, setting.

## Benefit of AT-70 series

- All-in-one design
- Plug-and-play
- Fast deployment
- Install data center in 1hr
- One rack One data center

- Move anywhere you need
- No cooling installation
- Installation cost-effectiveness
- Easy expansion
- Easy configuration

- Adjust the rack numbers anytime based on requirement
- Easy Service
- Rack mounted Cooling maintenance without influence in the other racks

## What is self-contained air condition type

In a packaged unit air conditioning system the compressor, condenser, and evaporator are all located in one self contained unit, which usually is located on the ground or a roof top, Package air conditioners are normally used for mobile homes,homes on a crawl space, and residential and commercial roof tops, Supply and return air ducts come from indoors through the home's exterior wall or roof to connect with the package air conditioner system, which is usually located outdoors,

## What is self-contained air condition for Micro data center type

It is a phenomenon for the future of the data center, with the ability to simply plug in a power outlet and there will be air conditioning systems for equipment, uninterruptible power supplies, display devices, automatic door opening and closing systems, And fire extinguishing system in case of fire Customers are able to work or inspect this liquor equipment from anywhere,

| Technical specification of AT-70 series | | | |
|---|---|---|---|
| **Model** | **AT-701** | **AT-702** | **AT-703** |
| **Unit** | | | |
| Unit (cabinet) | 42/45 U | 42/45 U | 42/45 U |
| Available Space | 35 U/37 U | 35 U/37 U | 35 U/37 U |
| Redundancy (cooling+power) | N, N+1 or 2N | N, N+1 or 2N | N, N+1 or 2N |
| Width -mm (cooling mm) | 600/800 | 600/800 | 600/800 |
| Depth -mm | 1100 | 1100 | 1100 |
| Height -mm | 2050 | 2050 | 2050 |
| Weight -kg | 210 | 210 | 210 |
| IP degree | IP 55 | IP 55 | IP 55 |
| **Power** | | | |
| Input Power | 220/230, 50/60Hz | 220/230, 50/60Hz | 220/230, 50/60Hz |
| UPS-kVA | 3/5/6/10 KVA | 3/5/6/10 KVA | 3/5/6/10 KVA |
| MountType | Yes | Yes | Yes |
| Standard Battery | 10 -180 mins | 10 -180 mins | 10 -180 mins |
| Distribution unit | Standard or Monitoring | Standard or Monitoring | Standard or Monitoring |
| PDU | Standard or Intelleigent PDU | Standard or Intelleigent PDU | Standard or Intelleigent PDU |
| **Cooling** | | | |
| Cooling | Air cooled | Air cooled | Air cooled |
| Cooling Type | PackagedDX/Self-contained | PackagedDX/Self-contained | PackagedDX/Self-contained |
| Mount Type | Side of Rack | Side of Rack | Side of Rack |
| Capacity | 5.6 KW | 7.6 KW | 10.0 KW |
| Air flow | 2,000 m2s | 2,250 m2s | 2,400 m2s |
| Space/weight | 30x1100x2050 | 5U/25 kg | 5U/25 kg |
| Heating capacity | 3 KW | 3 KW | 3 KW |
| EC fan | Yes | Yes | Yes |
| Water leak | Yes | Yes | Yes |
| Emergency Ventilation | Yes | Yes | Yes |
| **Monitoring and security** | | | |
| Monitoring | UPS; Power distribution; Coolling; | UPS; Power distribution; Coolling; | UPS; Power distribution; Coolling; |
| Monitoring Function | Temp&Hum sensors; Access control SNMP avilable; RS485/232 serial port CANBUS ports expansion | Temp&Hum sensors; Access control SNMP avilable; RS485/232 serial port CANBUS ports expansion | Temp&Hum sensors; Access control SNMP avilable; RS485/232 serial port CANBUS ports expansion |
| Seucurity | Access control (front and back) CCTV, Fire suppression | Access control (front and back) CCTV, Fire suppression | Access control (front and back) CCTV, Fire suppression |

Note : 800mmx1200mmx2200mm (45U Rack)

The other option , please contact with KEPBER technology

## Standard of cabinet unit type

The unit is made of high quality cold steel sheet (electro galvanized), multi-layer paint coating to prevent rust, thickness : 20 mm corner edge, all other areas 1.2 to 1.5 mm, multilayer paint coated and insulated for protection moisture

It is compatible with 19" / IEC60297-3 metric standard and is a beautiful ETS compliant design with precision, size and Black built door with easy-to-read depth markings for adjustable

- The front door is made of tempered glass, thickness 6 mm.
- The rear door is double-door type to save space for operation or maintenance.
- The bottom is equipped with 4 sets of special load-bearing wheels for easy movement.

## Standard of cooling unit type

### For model AT-30 series (Top mount)

- Self-contained air conditioner/without outdoor condensing.
- Rotary compressor or inverter compressor (option).
- Electronic valve (EEV) for control refrigerant in system.
- EC brushless fan for control air flow.
- Water leak sensor.
- R410 or R134.
- Emergency ventilation fan.
- Cooling capacity 3.5 Kw (option 2.5Kw, 5Kw).
- IP 55.

### For model AT-60 series (Bottom mount)

- Self-contained air conditioner/without outdoor condensing.
- Rotary compressor or inverter compressor (option).
- Electronic valve (EEV) for control refrigerant in system.
- EC brushless fan for control air flow.
- Water leak sensor.
- R410 or R134.
- Emergency ventilation fan.
- Cooling capacity 3.5 Kw (option 5Kw).
- IP 55.

### For model AT-70 series (Side row mount)

- Self-contained air conditioner/without outdoor condensing.
- Rotary/Scroll compressor or inverter compressor (option).
- Electronic valve (EEV) for control refrigerant in system.
- EC brushless fan for control air flow.
- Water leak sensor.
- R410 or R134.
- Emergency ventilation fan.
- Cooling capacity  5.6 Kw, 7.6 Kw, 10 Kw.
- IP 55.
- Electronic heater 3 Kw.
- Humidifier (steam boiler) option.
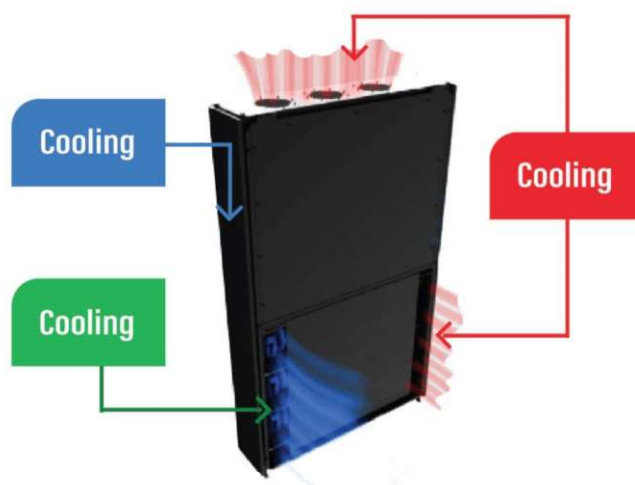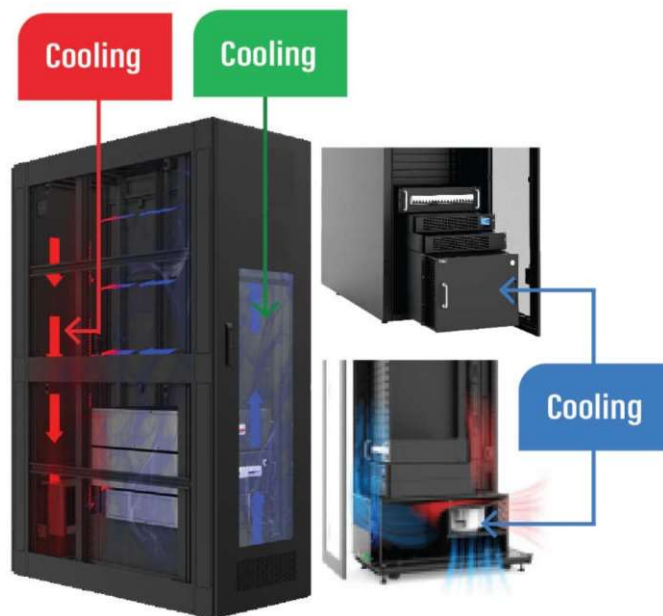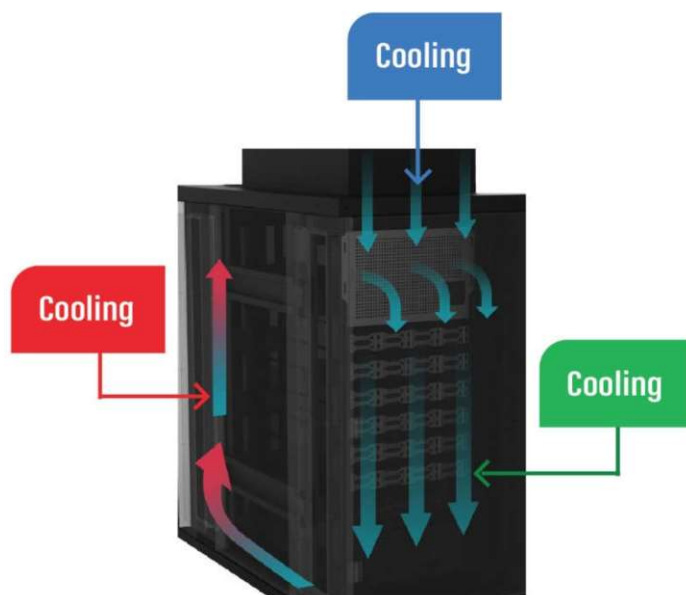
## Standard of UPS type

XTREME, is releasing Rack true online UPS (Microprocessor control optimizes reliability) with the best price/quality performance ever in market. It has power rating 2 KVA to 10 KVA.

XTREME, Built-in over voltage cut-off protection and surge immunity by MOV for full-time equipment protection, Operation Status; Load & Batt. Capacity Levels in Bars for 25%; Output Voltage & Frequency; Apparent Power (kVA) Active Power (kW) info for Output Load; Batt. Voltage (VDC) & Remainin % on Batt. Mode; Manual Bypass Switch (Optional); Self Diagnosis at Initializing; Overload, Battery Low, Battery Disconnected, Different Warnings & Alarms; Indicators for Operation Status.

## Main features

- Wide input voltage range 110-300Vac.
- 2U x 570 mm. depth delivery up with backup power. (3U of 10 kVA unit)
- 9 inch standard cabinet or non-standard cabinet compliant.
- Extendable backup time with EBM to meet long backup time.
- Resettable input circuit breaker.
- Can start without mains.
- Standard RS232 communication, NMC card, MODBUS card, SNMP card, Lan (10/100 MB) card or Relay card optional.
- Wide input voltage and frequency range, to minimize battery use and extend battery lifetime.
- Online double conversion technology (PWM Technology with IGBTS).
- Adapted to remote area with poor grid power.
- Adapted to middle and big cities under power supply shortage pressure.
- Up to 0.99 input power factor.
- Switching time 0ms.
- ECO mode for energy saving.
- Users can easily monitor and access to their UPS status from a comprehensive LCD display.

## Standard of Power Distribution

Input Votage : 220V/230V/240V (Single Phase).
Input frequency : 50/60 Hz.
Surge protection capacity : C Level : 20KA/2P (L+N).
Input Votage : 220V/230V/240V (Single Phase)
Input frequency : 50/60 Hz.
Power rating : 32A/63A/80A.
Branch breaker : 2×16A/1P+3×10A/1P (up to equipment).

## Optional Redundancy function

According to the UPS configuration,the power distribution module is optional for N+1 and 2N Redundancy type respectively for dual UPS and dual UPS parallel for redundancy.

## Option for Meter monitoring

- Communication with SNMP (LAN port) or RS 232/485 (Modbus).
- Monitoring Input/Output Votage, Current, Frequency, KWh, etc.

**Expansion SNMP**

**RS 485**

**Main**  **CB**  **Back**
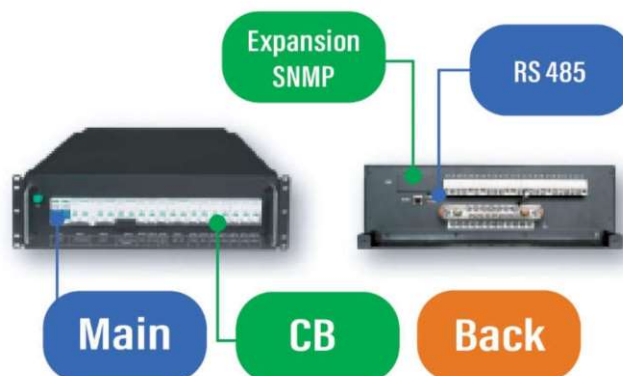
**Front**

## Standard of Fire suppression type

In-Rack Fire Protection Module is a purposely developed device for fire protection within cabinet, it integrates fire automatic detection, automatic fire extinguishing, and automatic signal transmission in hone rack–mounted device.This device can not only ensure the cabinet's own data and equipment from fire hazards, but also prevent it from becoming the source of fire to the adjacent cabinet or the surrounding environment. The device adopts clean fire extinguishing agent, and the main component is HFC-227ea (FM200) , which is non-toxic and harmless to the cabinet facilities and surrounding personnel. (option for NOVEC 1230)

## Advantage

### Higher Safety

- It runs on relatively lower pressure and uses far less agent to securely extinguish a fire inside cabinet, which means it's a ot safer to the surrounding equipment and valuable DATA during extinguishment.

### Compact Size

- The device is standard 19 inches and takes up only 2U, which is the size of a server. Integrate fire automatic detection, automatic fire extinguishing, and automatic signal transmission in one rack–mounted.
- Different alarm temperature threshold can be selected;
- Fully automatic triggering of total flooded fire extinguishing within the cabinet, all agent are discharged within 10 seconds;
- Working status display(Pressure);

### Standard of Intelligent PDU

- Accurate algorithm of power factor and energy consumption for each outlet for PUE calculation.
- Remote On/Off of each outlet via the protocol like HTTP/SNMP, SHH with encryption.
- Customer self-defined alarm threshold of overloading for local and remote access.
- Customer self-defined action and schedule of each outlet to make each one work as presetting.
- Self-defined power-on sequence of outlet, the time interval of each outlet is adjustable.
- Group management and electrical isolation in 3 phase PDU and electrical isolation.
- Remotely Accessible via Web; SNMP; SSH or Telnet interface.

| Function dedcriptioncription | | | |
|---|:---:|:---:|:---:|
| **Function dedcriptioncription** | **Basic monitoring type** | **Metering monitoring** | **Managed monitoring** |
| **Input monitor** | | | |
| IInput energy (KW) | X | X | X |
| Input voltage/current/ Frequence monitoring (V,A, Hz) | X | X | X |
| Input power monitoring (KWh) | X | X | X |
| Input Power factory moniotoring  (P.F) | X | X | X |
| Input frequency monitoring (Hz) | X | X | X |
| **Output monitor** | | | |
| Output current of each outlet (A) | 0 | X | X |
| Output power of each outlet/Real Power (KVA) | 0 | X | X |
| Each outlet current thesnold setting | 0 | X | X |
| Output energy of each outlet/Active Power (kW) | 0 | X | X |
| **Manage and control** | | | |
| Dry contact connection monitoring | X | X | X |
| Relay alarm output linkage | X | X | X |
| Outlets group management | 0 | X | X |
| Remote switch ON/OFF or reboot of each outlet | 0 | 0 | X |
| On/off time interval setting of each outlet | 0 | 0 | X |

## Environment monitoring appliance for MDC

DCIM System is the high level of Kepber-ATOM software platform, which is specially designed for the micro data center scenarios both in hardware and software offers to monitoring and management function in the same time.
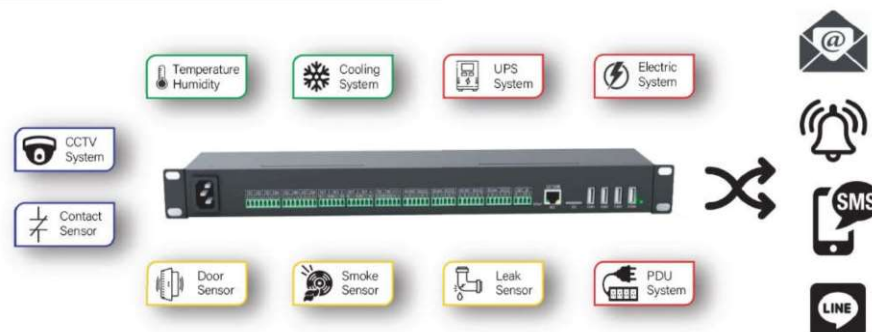
With embedded SNMP-LINK software platform. The connection and management are not only accessible via SNMP protocol but also via RS485/CANBUS, flexible expansion and the remote management.

Wifi function support the wireless connection via the smartphone; Tablet and Laptop. Alert by Email, System dry contact or SMS and Line appliaction (option).

Well management for all In-rack facilities: UPS; Power distribution; PDU; ATS/STS; cooling sensors, various information indication like PUE; Energy consumption; Environment status.

Flexible Facility management via IP addressing to link in.
History record more than 30 days (by SD memory) for Temperature/Humidity and Device ( Door, Fire suppression, Smoke, Water leak, UPS, etc,) and Alarm record more than 30 days (by SD memory).

Main Facility connection are all by the network, easy adding and expanding new devices, boarder bandwidth and stable communication than traditional RS485.

Communication between facilities are all with electric isolation to minimize the EMI,temperature and humidity sensor;I/O are all in isolation to maintain the stable operation
The hub with programmable assets management, easy access to facilities and data in the data center.
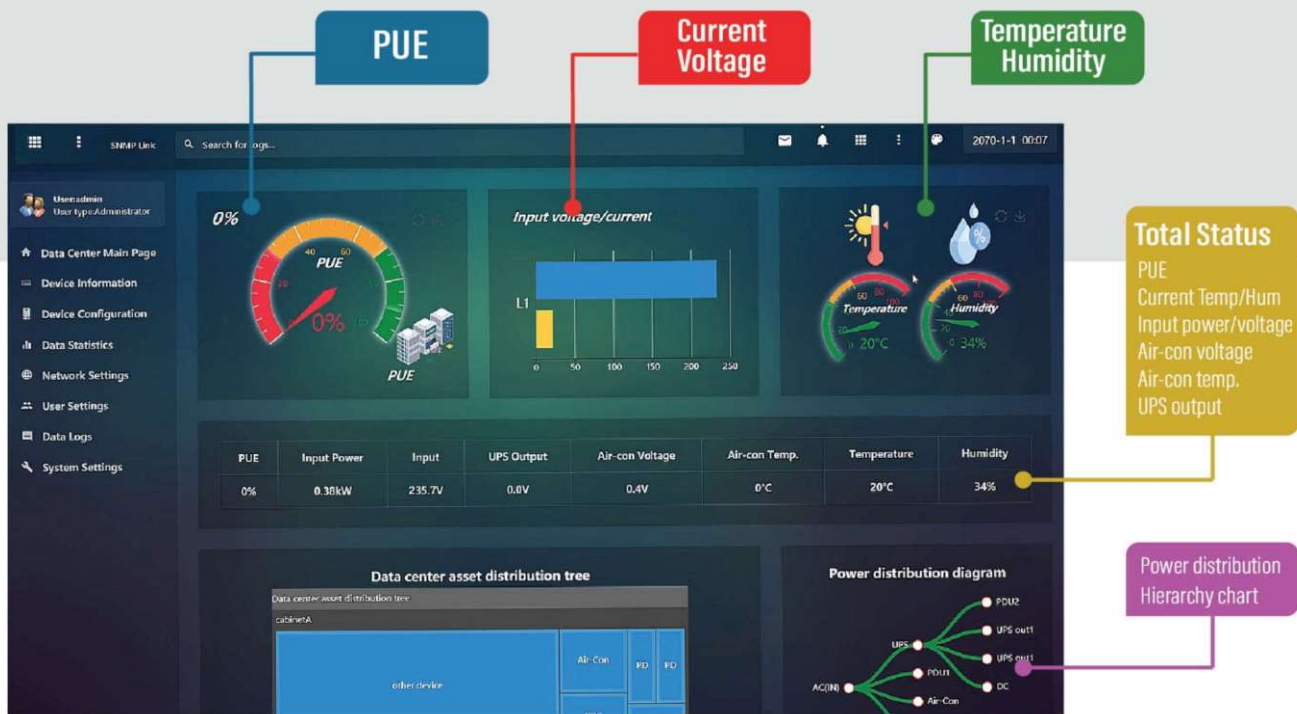
| Environment monitoring appliance for MDC | | |
|---|---|---|
| Item | Description | Perfomance |
| 1 | Power Input | 220/230 Vac, 50/60Hz |
| 2 | System information | 64M internal memorySD card scalable |
| 3 | Network port | 1 x LAN port, 10/100 mbp, scalable WIFI |
| 4 | RS485/232 serial port expansion | 4 port x RS485/232 port Supporting MODBUS expansion (like cooling;UPS;sensors) |
| 5 | Input port | 8 port x 5V level Signal, |
| 6 | Output port | 4 port x dry contact output.3A/30VAC ,1A/125VAC |
| 7 | CANBUS chief cable | Canbus input |
| 8 | Temperature & humidity sensor | 2x IIC digital temp sensor port |
| 9 | USB port | 4xUSB port for external device powering; 12A max |

## DCIM and Display monitor for MDC

DCIM System is the high level of Kepber-ATOM software platform, which is specially designed for the micro data center scenarios both in hardware and software offers to monitoring and management function in the same time.

## The parameters shown includes all the MDC facility devices like

| | |
|---|---|
| The unit display | : Current/Threshold temperature and humidity. Fire suppression, Smoke detector, Water leak, Door status. Power distribution hierarchy chart High sensitivity smoke, Device-ICON status. |
| Main power distribution display | : Input/Output voltage, current, |
| Power distribution unit display | : Current/Thesold voltage, current, Each port status and control on/off. (by model). |

| | |
|---|---|
| Power comsumption dispaly | : Each port status and control on/off. (by model). PUE, PUE trend curve. A percentage (%) of power consumption of total IT device. The total power (kWH) of IT and other devices is a bar graph style. |

PUE

Current Voltage

Temperature Humidity

Total Status
PUE
Current Temp/Hum
Input power/voltage
Air-con voltage
Air-con temp.
UPS output

Power distribution Hierarchy chart

### UPS

Input/Output voltage, current, Load capacity.
Battery remain time/back up time/capacity.
Batttery status, UPS-IP address.
Temperature, Output power factor.
Display of UPS unit graphic stat

### Air-Con

Discharge (outlet) temperature.
Return (inlet) temperature and humidity.
Temperature/Humidity setting status.
Temperature/Humidity current status.
Display a percentage (%) of speed fan and compressor.
Remote turn on/off air conditon from any where.

## Access door control for MDC

ATOM guard access control is a kind of high protection smart locker for the privacy like data center and some classified area, with the metal cover and high protection IP degree, it has the intelligent control and management via the internal smart controller

- Remote open door (front and back) form any where by DCIM.
- Door status ( open or close).
- IP55 Protection degree.
- Less than 05 second finger recognition.
- Standalone mode complete setup and programmable for the user adding and delete.
- Full metal cover more robust.
- Audio-visual indication for acceptance.
- Relay outputs for electric lock and alarm.

KEYPAD

FRINGER

CARD

| Access door control for MDC | |
|---|---|
| **Description** | **Specifications** |
| Identification verification speed | <0.5 sec (verification time), FRR <1%, FAR<0.0001% |
| Fingerprint capacity (user) | 500 |
| ID card capacity (user) | 500 |
| PIN capacity (user) | 500 |
| Memory capacity (user) | 10000 |
| Fingerprint Sensor | 500 DPI |
| IP Degree | IP 55 |
| Card Reading Distance | 3-6 CM |
| Professional access function | Open door by multilevel verification, anti pass back |
| Communication | RS 485 (Modbus), LAN by TPC/IP (option) |
| Short Circuit Protection | Output protection time≤100 |
| Static Current | ≤35mA |
| Door Access Methods | Biometric; ID Card;PIN code |
| Operation | 40-60°C, 0-95% |
| Management | Supporting finger print adding/Delete<br>Supporting ID Card adding/Delete |

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