

UniCool-Edge

Variable Speed Package Air Conditioner for Edge Data Center
Capacity: 20kW & 40kW





Product Overview

UniCool-Edge, pioneering horizontal packaged CRAC unit designed for edge computing application, featuring for its excellent performance in partitioning temperature field, forming cold and hot aisle, managing the airflow distribution, and enhancing the system efficiency.

Combining VFD technology with integrated free cooling function (economizer), UniCool-Edge has become a cutting-edge solution of AIRSYS classic families.

Moving towards an era of interconnection and intelligence of all things, with the rapid development of IoT, 5G, and edge intelligence, edge computing came into being with limitless potential in this application wave.

Facing this general trend of 'Cloud to the Edge', UniCool-Edge units are going to wherever bits and bytes are blazing with the enhanced design combining yesterday's experience and today's innovation.

As an international supplier of ICT refrigeration solutions, AIRSYS takes into consideration global variations in power supplies and working range.

Working Range and Control Accuracy

Indoor:

Temp. range & accuracy: $18^{\circ}\text{C}\sim 35^{\circ}\text{C}\pm 1^{\circ}\text{C}$
($64^{\circ}\text{F}\sim 95^{\circ}\text{F}\pm 1.8^{\circ}\text{F}$)

Outdoor:

Standard configuration: $-30^{\circ}\text{C}\sim 46^{\circ}\text{C}$
($-22^{\circ}\text{F}\sim 115^{\circ}\text{F}$), up to 53°C (127°F)

Storage:

Temp.: $-40^{\circ}\text{C}\sim 70^{\circ}\text{C}$ ($-40^{\circ}\text{F}\sim 158^{\circ}\text{F}$)
Humidity: 5~95%

Applications

- Edge computing data centers
- High-tech electronic devices rooms
- Power distribution stations
- Industrial process control center
- Container data center
- Energy storage cabinet



Unit Identification

01	02	03	04	05	06	07	08	09	10	11
UNI-EDG	.	40	V1	R3	M	R410	A	AC	.	XXX

01	UNI-EDG	Product series name: UniCool-Edge: Horizontal installation packaged telecom air conditioner with fresh air free cooling, it can be abbreviated as "UNI-EDG."
02	.	Separator Character "."
03	40	Unit nominal cooling capacity by kW: 20, 40
04	V1	Compressor type & number V1: Variable speed compressor
05	R3	Cabinet type & size code: R1, R3, L1, L3 * R: Right air supply / L: Left air supply (From indoor view)
06	M	Control configuration: M: Multiple control / S: Single control
07	R410	Refrigerant: R410=R410A
08	A	Power source code: A, B, C, D, E A: 208/230V 1PH 60Hz B: 208/230V 3PH 60Hz C: 460V 3PH 60Hz D: 380V 3PH 50Hz E: 220V 1PH 50Hz
09	AC	Supply fan power: AC powered EC fan
10	.	Separator Character "."
11	XXX	Special design code

For example:

UNI-EDG.40V1R3MR410CAC Stands for UniCool-Edge unit with 40kW nominal cooling capacity, equipped with 1 variable speed compressor, multiple control, R410A refrigerant and the power supply is 460V/3Ph/60Hz with AC powered EC fan.

Note: *If Multi control units are ordered, one Multi-unit control box is required.

Advanced Technology & Pioneering Design

1 Outstanding Efficiency

- Enclosed hot and cold aisles to avoid mixed air and enhance the efficiency of the cooling system
- Penetration heat transfer by air pressure differential, effectively managing heat dissipation and uniformizing airflow distribution to erase any hot spot

2 Energy Saving

- Integrated with free cooling system, saving up to 90% of the energy requirement
- VFD technology - Variable speed compressor
- EC supply fan
- Auto-control optimizes system performance

3 Reliability

- 24*7 uninterruptible operation design
- Overcome locational and environmental constraints
- High-performance components of international well-known brands
- Classic line with low failure rate

4 Safety Operation

Highly safety performance guaranteed by functions and protections designed for the unit.

5 Intelligent Control

- Conduct self-diagnosis with the 'mind' given to it
- React and cope with various situations through intelligent algorithms according to on-site feedback
- Smart switch the cold source to meet temperature, humidity, and cleanliness according to environmental changes
- Partition temperature field by cold and hot aisle and realize multi-zone coordinated temperature control using the algorithm based on temperature and air pressure differential
- Intelligent calculation, coordination of various components, to achieve optimal performance
- Visualization web communication platform, supporting to be connected to the customer platform or AIRSYS NetOne cloud platform

6 Easy Installation & Maintenance

- Outdoor compact Wall-mounted Package Design breaking space constraints with no interior room occupied
- Realize in-plant prefabrication and pre-testing, integrated transportation without on-site installation
- Plug-in wiring connection and easy-removable components
- Accessible component easy to maintenance
- Lockable server breaker access- service safety

Outstanding Efficiency

Enclosed Hot and Cold Aisles

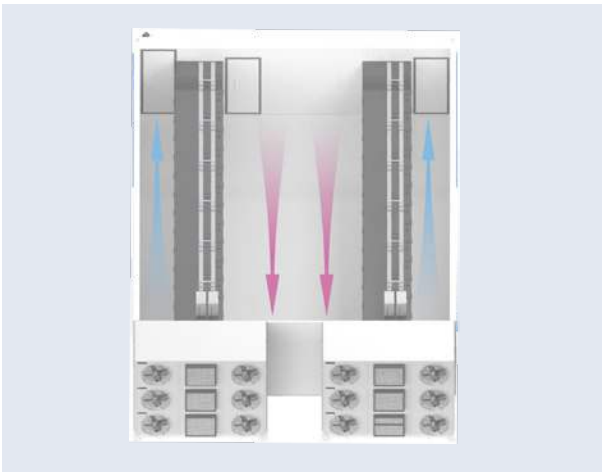
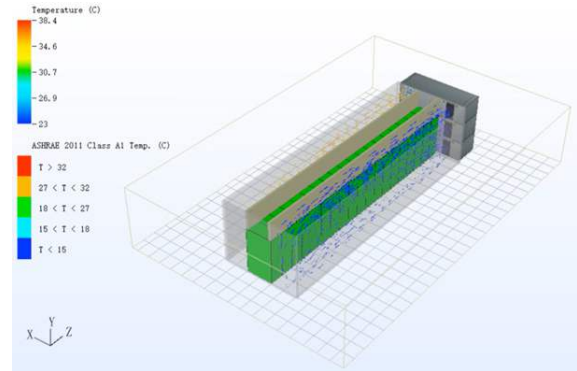
Enclosed hot and cold aisles to avoid mixed air and enhance the efficiency of the cooling system.

Higher Supply Temperature Setpoint

Cooling systems can be set to a higher supply temperature (thereby saving energy and increasing cooling capacity) and still supply the load with safe operating temperatures.

Elimination of Hot Spots

Containment allows cooling unit supply air to reach the front of IT equipment without missing with hot air. When no mixing occurs, the supply air temperature can be increased without risk of hot spots while still gaining economizer hours.



Left supply and right supply units are installed at the same end of Edge DC, hot/cold aisles containment can still be realized.



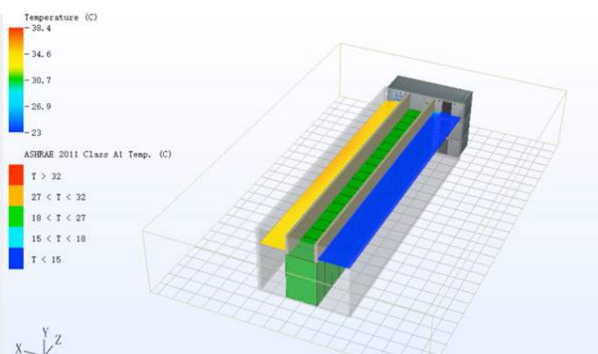
Units can be installed at different ends of Edge DC which realize high cooling density and eliminate hot spots.

Economizer Hours Are Increased

When outdoor temperature is lower than indoor temperature, the cooling system compressors don't need to work to reject heat to the outdoors. Increasing the set point temperature on cooling systems results in a larger number of hours that the cooling system can turn off its compressors and save energy.

Air Pressure Differential Penetration

Penetration heat transfer by air pressure difference, effectively managing heat dissipation and uniformizing airflow distribution to erase any hot spot. Air pressure differential can be controlled to prolong the life of IT facilities.





Energy Saving

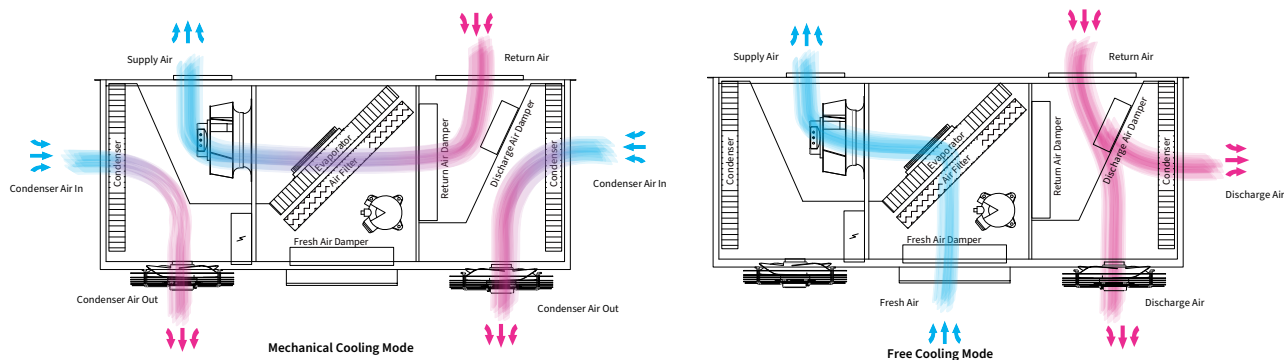
Free Cooling System

Energy-Saving Operation

Each unit is equipped with both mechanical cooling system and free cooling system as standard. The fresh air free cooling is designed to be the primary source of cooling.

When the outdoor and indoor temperature difference meets the free cooling requirement (2°C/3.6°F default, adjustable), the free cooling system will automatically bring in outside air to the room and stop the mechanical cooling system, therefore reducing power consumption.

When the temperature difference between indoor and outdoor is higher than 10°C (18°F), the free cooling system can supply 100% of the cooling capacity, saving up to 90% of the energy requirements.



Auto-Control Optimizes System Performance

Flexible Function- Humidity Limitation

This humidity limitation function can be enabled or disabled on site. If it is enabled, when the humidity is higher than the setpoint, free cooling will be turned off in order to stabilize the inside humidity within the station.

Flexible Function- Air Filter Protection

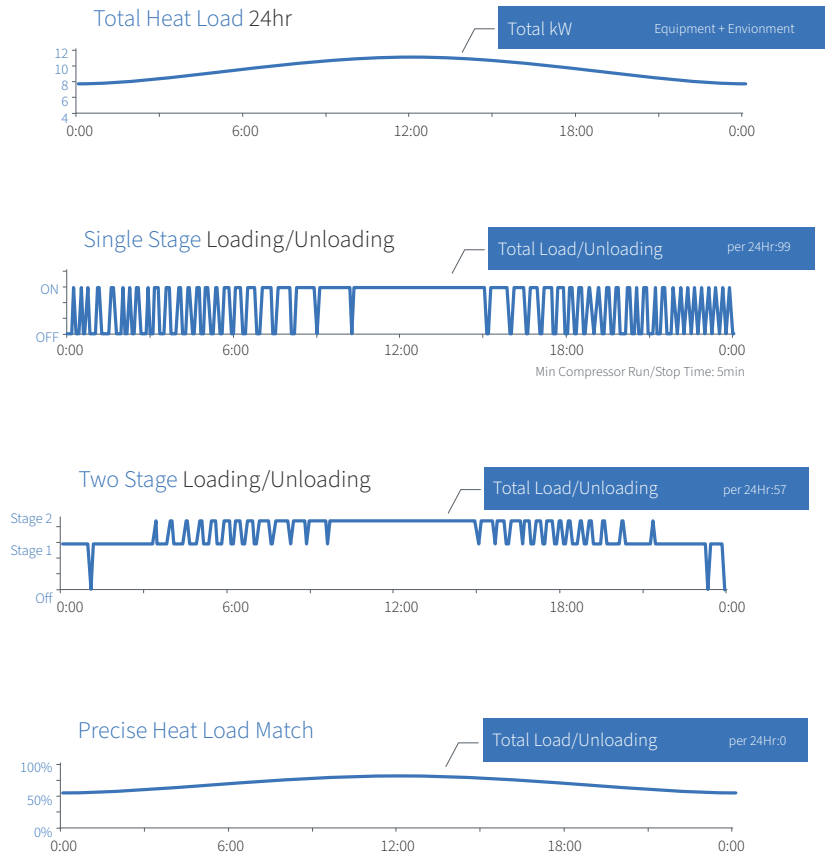
With AIRSYS patented product- Air filter protection device (AFPD), free cooling can be disabled automatically in harsh environments such as sandstorms, dust, and other adverse weather conditions to protect the filter which reduces both service costs and energy consumption.

VFD Technology

Precise Heat Load Match

Just like an airplane experiences most of its stress during takeoff and landing, loading, and unloading between stages of cooling introduces most of the mechanical stress on the compressor. The turn on of a fixed compressor wears down contactors and the resulting inrush current wears down other electronics. Even for properly sized units and properly set minimum compressor run/stop timer, the loading and unloading can reach one hundred times a day which would be > 30,000+ times per year.

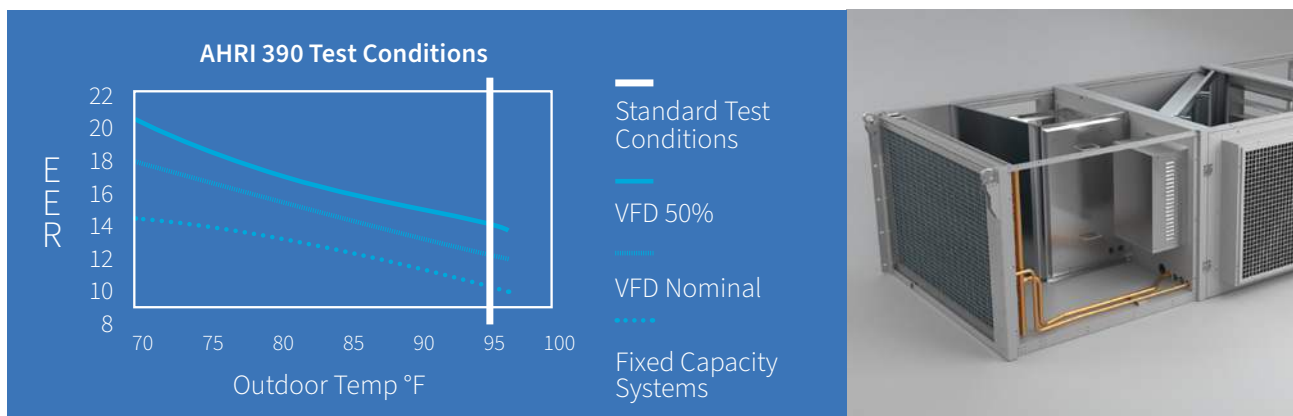
By precisely always matching the heat load, the Variable Capacity units minimizes sudden loading and unloading of the compressor, vastly extending the life and reliability of the entire cooling system.



Compressor

Synchronized Cooling Mode

With variable capacity systems, buildings with one or more redundant HVAC units can use Synchronized Cooling Mode, which allows any building with redundant units to achieve 14-16 EER while maintaining full redundancy except during emergency situations.



Soft Start

Instead of sudden and numerous starts and stops, the variable compressor will ramp up capacity at startup and continuously modulate capacity to match the load of the shelter. This means generators no longer need to be sized to Locked Rotor Amps and a smaller generator and transfer switch system can be used. Soft start has the following advantages:

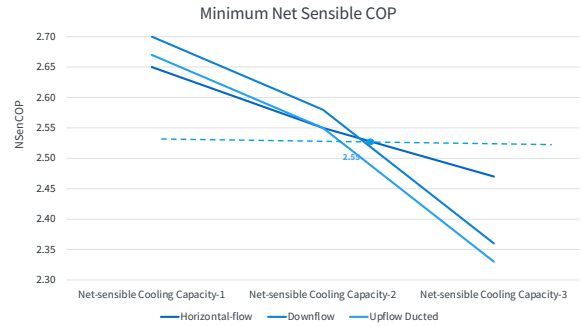
- Minimizes mechanical stress during the start-up of the compressor
- Eliminate spike voltage on start-up
- Reduced noise from sudden compressor loading

Advanced Energy Efficiency

Net Sensible COP

Net Sensible Coefficient of Performance (NSenCOP). A ratio of the Net Sensible Cooling Capacity in kilowatts to the total power input in kilowatts (excluding reheaters and humidifiers) at any given set of Rating Conditions.

After carefully performance testing, it turns out that NSenCOP of UniCool-Edge units is as high as 3.0, which is 17.6% higher than AHRI requirement.



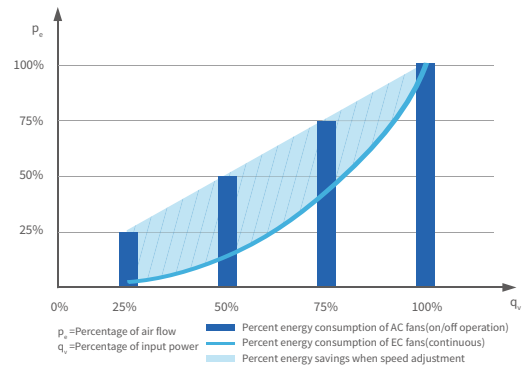
EC Fan

An EC fan refers to a centrifugal fan that utilizes an Electronically Commutated motor (or brushless DC motor). EC fans have numerous benefits including:

Energy Efficiency

EC fans have brushless DC motors and integrated control modules. Motor efficiencies of 85-90% are achievable; 30% to 50% higher than traditional AC fans.

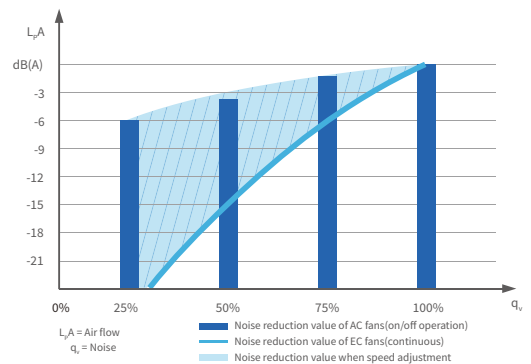
The difference in energy efficiency between variable speed EC fan control and traditional on/off fixed speed AC fans can be seen in the graph; the bars show the power consumption of fans which are switched in gradually as required while the blue curve shows the power consumption with infinitely variable speed control.



Lower Noise

In a given installation, switching off half the fans (and halving the air flow) will typically only reduce the generated noise by approximately 3 dB. Compare this to EC fans, where reducing fan speed to provide half the air flow typically yields a reduction of approximately 15 dB. This is possible as EC fans are able to operate across an infinitely controllable speed range, which in turn effectively avoids electromagnetic and rectifier noise (generated by other traditional motor and speed control devices), thus reducing the overall noise level.

In the graph, the bars indicate the sound pressure level of fans which are switched in gradually as required and the blue curve shows the sound pressure level with infinitely variable speed control.



As can be seen from the picture EC fan sound pressure level is 12dB lower compared to the traditional AC fan.

Compact, Integrated Electronic Control System

All EC fans have dedicated speed control modules and filters built into the motor assembly, making for a compact and self-contained solution. All that is required is to connect the main power supply and the sensor signals to the controller for complete speed control of between 10% and 100%. EC fans provide a simple, convenient solution and can also support group control and remote monitoring.





Reliability

1 Expert in Wall Package Units

UniCool-Edge is an upgrade horizontal version of wall-mounted package unit which belongs to AIRSYS P-CRAC family with 15 years of global market verification. Up to 50k units are presenting and performing their abilities at different sites of the world.

2 High Performance Components

EC Fan

When the pressure drop across the filter reaches 250Pa, the unit air flow will not be lower than 90% of design air flow at standard operating conditions.

Compressor

Highly reliable scroll compressors with more than 10 years lifespan.

Heat exchanger

Evaporator and condenser with high efficiency heat exchanging copper tube and enhanced aluminum fins which are also easy to clean.

High torque and low leakage air damper

The air filter is equipped with a high torque and low leakage air damper.

The time for opening and closing the damper is less than 35 seconds. The Air Leakage across the damper is less than 5% by volume of the air normally passing through the unit when a reverse pressure of 125 Pa is applied.

3 Wide Working Range

To overcome locational and environmental constraints, the unit can work at minimum -30°C (-22°F), maximum 53°C (127°F) ambient temperature continuously and reliably. The storage temperature can vary between -40°C (-40°F) and 70°C (158°F).

4 Environmental Resistance

Dual Layer Exterior Protection-Galvanized steel exterior coated with an additional layer of thermoset polymer provides two layers of protection against corrosion which can meet:

- Water immersion resistance-240 hours, no blistering and loss of light (ASTM D870)
- UV resistance-12 months outdoor exposure without powdering (GR487)
- Salt spray test- 500hrs (ISO 9227)

The treatment is sufficient to provide protection for 15 years life cycle for inland installation. If necessary, the treatment for sea air environment can be supplied as an option.

5 Strong Structure

The standard unit framework is supplied with corrosion protection treatment.

The unit has passed a transportation test to confirm the structure is strong enough to be able to transport on low grade roadways.

6 24*7 Uninterruptible Operation

UniCool-Edge units combine precise temperature and humidity control with outstanding reliability and energy efficiency throughout 24*7 operation.



Easy Installation & Maintenance

Wall-Mounted Package Design

Outdoor Wall-mounted Package Design occupies no interior space and allows IT facilities to be deployed best to the space.

The design can significantly reduce installation workload and cost as no piping, brazing and leakage testing at site. Only easy wiring and wall opening is required.

Easy Maintenance

The main components such as compressors, fans, motors, dampers and other related items are all easily accessible and maintained from the front of the unit.

The weight of each panel is less than 10kg (22lb) for ease of removal and reinstatement.

Service Port

Service ports are accessed without removing door assembly.

Lockable Server Breaker Access

To guarantee service safety, circuit breaker door is hinged and lockable for tamper resistance.

Design for Easy Re-assembly

For maintenance-related parts, plug-in connections and easy-removable components are applied.

Automatic Maintenance Sequential Test

A maintenance test facility is provided to enable an engineer to press/select one button that will activate a self- test routine.

The self-test routine will check for the satisfactory operation of the fresh air damper and the compressor refrigerant circuits.

This is achieved by applying a dummy return air temperature signal, slowly ramping up from a point below the system set point to a high temperature level thereby testing the damper operation (via changes in the supply temperature).

The system stops the supply fan for a controlled period, to simulate the low pressure of refrigeration system and to check if the low pressure protection working normally.

The system stops the condenser fan for a controlled period, to simulate the high pressure of refrigeration system and to check if the high pressure protection working normally.

Safety Operation



Emergency Ventilation Function

The emergency ventilation function can be enabled or disabled on site.

If it is enabled, the emergency ventilation function will be engaged once the room temperature exceeds the heat-protection setpoint for internal equipment. The emergency will be triggered at any time other than when fire/smoke alarm has been triggered.



Voltage Protection

There is a voltage relay for protection. When the supply voltage is over the permitted range, the unit will be stopped. For 3 phase units, if there is phase unbalance or phase absence, the unit will also be stopped for protection.



Random Restart when Power Recovered

Once power has been restored (following an outage), the unit will restart automatically with a random time delay between 1 to 60 seconds to avoid multiple items of equipment starting at the same time.



Intelligent Control

Control Functions

1 Fully Automatic Control

The unit is equipped with a full automatic control system; all control, protection, alarm functions are automatic with auto-restart.

2 Working Mode Auto-Alternated

The unit automatically selects between mechanical cooling and free cooling modes. In the event of either electrical or mechanical failure affecting the refrigeration system, the unit will be capable of automatic reversion to the fresh air cooling mode.

3 Automatic Self-Diagnosis

All the components connected to microprocessor are continuously tested. In case of malfunction, the failure is shown on the display with relevant information.

4 Multi-zone Control

Multi-zone and multi-unit control adopts flexible combination mode, which can realize the combined control of different models in the same region and different models in different regions.

Control algorithm based on temperature and also on air pressure differential, the priority is depended on customer's demand.

5 NetOne Cloud Platform

AIRSYS NetOne platform is a monitor and control system providing real-time visibility, control, planning, and optimization for you facilities. UniCool-Edge's control system can be accessed to NetOne platform.

6 Comfort Mode for Service Engineers and Technicians

When a service engineer is working in the base station, HVAC comfort mode (22°C/72°F, adjustable) can be selected by pressing 2 buttons on the user terminal.

7 Running Data Logging

The controller has a memory of 1M for data logging. If the interval of data logging is less than 5 minutes, the controller can store at least 48 hours working data. Data output:

The RS485 communication card is standard configuration for the unit while pCOWeb card is optional which enable automatic download of logs. The format of the data should be CSV or Excel file.

8 Web Server Monitoring System

The unit can be equipped with a Web Server card with TCP/IP protocol and Ethernet network to realize remote control and monitoring. Each computer can be connected to the web server by Ethernet network and check the working status and control the unit in time everywhere. Lead-Lag auto alternated When lead or lag unit is failure, the lag or lead unit will work. Balance all units working time automatically If there are 2 units installed, the controller will alternate the working unit automatically according to the total working time of the units to balance the working time.

Controller Introduction

Variable Controller Options For Different Demands

Build-In Vs External

The 'Built-in Controller + PGD Displayer' combination is the most common and economic way to control and maintain the unit. It allows the air conditioners to work independently or cooperate with each other.

External controller with individual power supply provides availability when air conditioner fails and it's indoor installation reduces inconvenience to maintain or fix the unit from outside. Both 'Built-in Controller' and 'External Controller Box for Multiple Control' option provides possibility to have two or more units work together and realize Lead/Lag control.

Standard Controller Components

- Controller platform
- Supply and return air temperature sensor
- Outdoor temperature sensor
- Humidity sensor
- Clock and calendar display
- RS485 with MODBUS RTU communication protocol
- pGD display: 6-keys keyboard can display graphical images and text

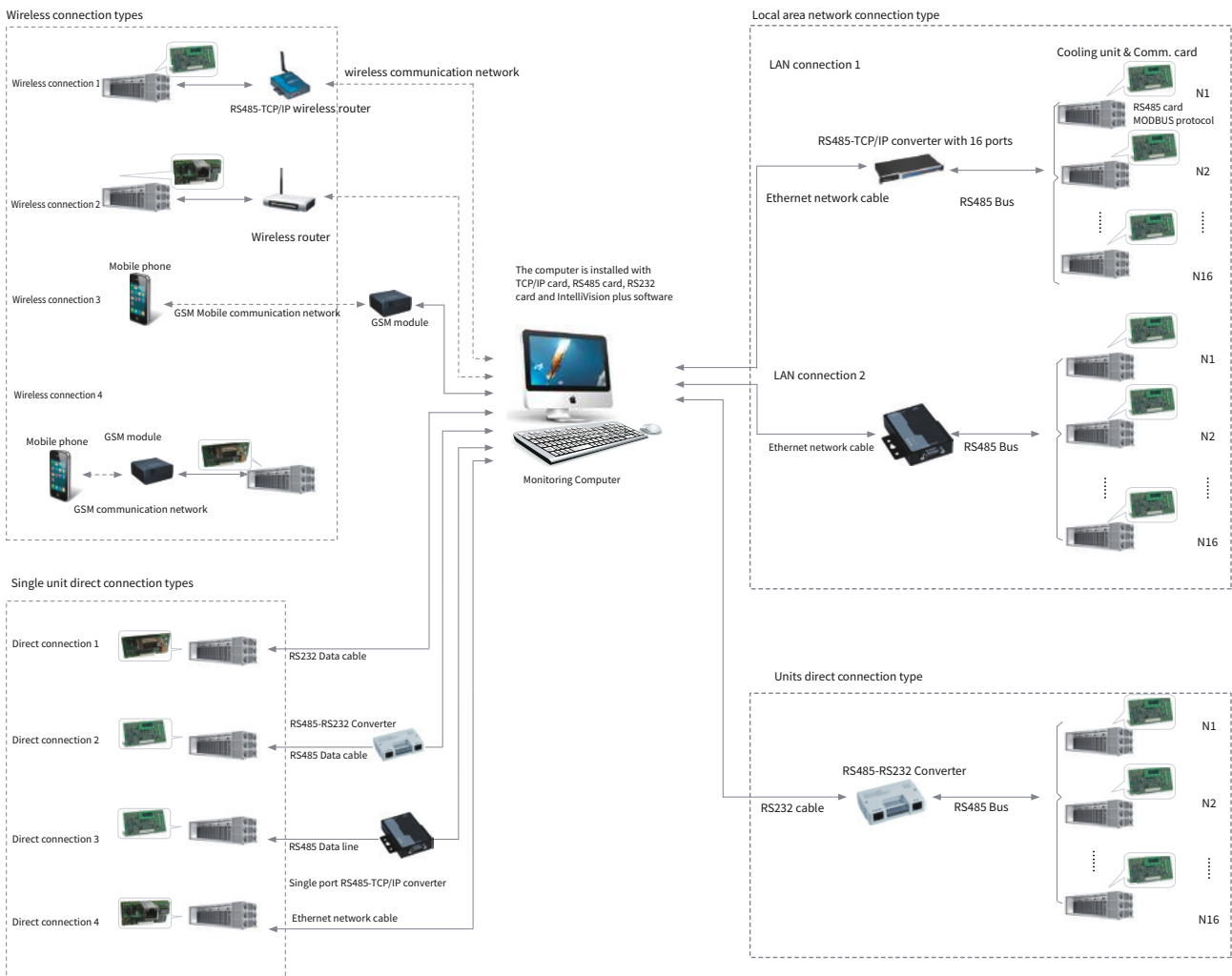


ASMUC Multiple Control Box

Units	Model of Multiple Control Box
Units with AC power supply	ASMUC.6.AC
Units with DC power supply	ASMUC.6.DC



Networking Structure Chart



Nitoring And Control Method	Related Network Configuration	Farthest D
Wireless network connection		
Wireless connection 1: Wireless communication without unit server	RS485-TCP/IP converter; wireless router	No limitation
Wireless connection 2: Unit server based Wireless communication	Web server card; wireless router	No limitation
Wireless connection 3: Communication with remote computer by GSM mobile phone	GSM communication module	No limitation
Wireless connection 4: Communication with air conditioner directly by GSM mobile phone	GSM communication module; RS232 card	No limitation
Direct cable connection		
Direct connection 1: Direct connection by RS232 data line	RS232 communication card	1.5m
Direct connection 2: Direct connection by RS485 data line	RS485 communication card	1500m
Direct connection 3: Direct connection by Ethernet network line	Web server card	Can be extended by hub.
LAN network connection		
LAN connection 1: LAN network by multi-port protocol converter	RS485 communication card; Multi port RS485-TCP/IP protocol converter	Can be extended by hub.
LAN connection 2: LAN network by single port protocol converter	RS485 communication card; Single port RS485-TCP/IP protocol converter	1500m
LAN connection 3: LAN network by RS485-RS232 protocol converter	RS485 communication card; Single port RS232/ RS485 protocol converter	1500m

Unit Main Components

Standard Components

1 Unit Framework

The unit is made of folded galvanized steel exterior coated with an additional layer of thermoset polymer provides two layers of protection against corrosion.

2 Mechanical Cooling System

- Reliable compressor
- Filter dryer
- Thermodynamic expansion valve
- High efficiency evaporator / condenser coils
- Auto reset type reliable high/low pressure switch

3 Free Cooling System

- Air damper include
- Damper blade
- Damper actuator: 0~10V maximum~45s open or close time.

4 Supply Fan

AC powered EC centrifugal fan.

5 Condenser Fan

IP54 axial propeller fan with directly coupled motor, internal thermal protection and external current protection.

6 Supply Air Temperature Sensor

A supply air temperature sensor installed in the mixing box can be used to control the position of the air damper.

7 Air Filter

G4 main air filter, 2" disposable pleated type. G2 nylon filter, at outside air inlet.

8 Build- in Controller

- Controller platform
- Supply and return air temperature sensor
- Outdoor temperature sensor
- Humidity sensor
- Clock and calendar display
- RS485 with MODBUS TCP/IP communication protocol
- pGD user terminal

9 Air Pressure Differential Switch

The filter clogged alarm will be triggered if the filter is clogged.

10 Wall Mounting Kits

The unit is designed to be installed hanging on the shelter wall and is enclosed with related mounting accessories such as: angle brackets, through wall bolts, sealing tape and supply and return grill etc.

Optional Components

1 External Controller

- External Controller Box for single control
- External Controller Box for multiple Control

2 Filter Options

Main filter: F7 washable

3 Spring Loaded Damper Actuator

When there is power failure, the damper can be closed automatically within 20s.

4 Remote Communication Card

pCOWeb communication with SNMP, BACNET, Modbus485 TCP/IP Communication Protocol

5 Air Filter Protection Device

The AFPD has been developed to maximize the filter working life and enable free cooling to function in harsh environments such as sand storms, dust and other adverse weather conditions. This reduces both service costs and energy consumption.

6 Wider Operation Temperature Range

- High temperature up to 53°C (127°F)
- Low temperature down to -40°C (-40°F)

7 DC Powered EC Supply Fan

DC powered EC fans can be chosen to keep free cooling function and emergency ventilation when AC power failure

8 Coastal Environment Package

- Level 1: anti-corrosion coated condenser;
- Level 2: anti-corrosion coated condenser and corrosion resistant fasteners;
- Level 3: anti-corrosion coated condenser, corrosion resistant fasteners and whole stainless steel cabinet (customized option).

9 Dehumidification Function

- Indoor humidity sensor
- Electric heater

10 Color Option

- White
- Grey
- Black
- Tan

Unit Specification

Unit Model		20V1			40V1	
Power Supply						
Power Source		230V/1PH/60HZ	230V/3PH/60HZ	460V/3PH/60HZ	230V/3PH/60HZ	460V/3PH/60HZ
Max Input Power	kW	11.8	11.8	12.6	18.4	19.2
Rated Power	kW	6.6	6.5	6.7	12.9	13.1
Rated Current	A	28.7	16.3	8.4	32.4	18.6
MCA (6kW Heater)	A	68	39	20	59	33
MOP (6kW Heater)	A	80	45	20	70	40
MCA (12kW Heater)	A	101	58	29	78	42
MOP (12kW Heater)	A	140	80	40	100	50
Performance						
Total Capacity (1)	Btu/h	68,500	68,500	68,500	137,000	137,000
	kW	20.1	20.1	20.1	40.2	40.2
Sensible Capacity (1)	Btu/h	68,000	68,000	68,000	134,000	134,000
	kW	19.9	19.9	19.9	39.3	39.3
Net Sensible Cooling Capacity (1,2)	Btu	65,500	65,500	65,500	126,200	133,100
	kW	19.2	19.2	19.2	37.0	39.0
NSenCOP (1,2)	W/W	2.6	2.6	2.7	2.8	2.9
Net Sensible Heat Ratio (1)		0.96	0.96	0.96	0.92	0.97
EER (1)	Btu/W	10.4	10.5	10.2	10.6	10.5
	W/W	3.0	3.1	3.0	3.1	3.1
Free Cooling Capacity (3)	Btu	63,000	61,700	61,700	126,100	123,400
	kW	18.5	18.1	18.1	37.0	36.2
EER (3)	Btu/W	70.1	77.2	47.5	54.9	37.4
	W/W	20.5	22.6	13.9	16.1	11.0
Electric Heater (6kW Heater)						
Heating Capacity	Btu	40900	40900	40900	40900	40900
	kW	12.0	12.0	12.0	12.0	12.0
Current	A	52.2	30.1	15.1	30.1	15.1
Electric Heater (12kW Heater)						
Heating Capacity	Btu	20,400	20,400	20,400	20,400	20,400
	kW	6.0	6.0	6.0	6.0	6.0
Current	A	26.1	15.1	7.5	15.1	7.5
Compressor						
Type		Scroll				
QTY	n.	1				
Power Input (1)	kW	4.7	4.6	4.6	9.6	8.5
Current Input (1)	A	20.4	11.5	5.8	24.1	11.9
Evaporator Fan						
Type		EC Centrifugal Fan				
QTY	n.	1				
Power Input(1)	kW	0.9	0.8	1.3	2.3	3.3
Current Input(1)	A	3.9	2.0	1.6	5.8	4.1
Air Volume(1)	CFM	2,700	2,640	2,640	5,410	5,290
	m ³ /h	4,600	4,500	4,500	9,200	9,000
Condenser Fan						
Type		Axial Fan				
Qty	n.	2				
Power Input(1)	kW	1.0	1.1	0.8	1.0	1.3
Current Input(1)	A	4.3	2.8	1.0	2.5	2.6
Air Volume(1)	CFM	6,470	6,470	6,470	9,410	10,580
	m ³ /h	11,000	11,000	11,000	16,000	18,000

Unit Model		20V1	40V1
Refrigerant			
Type		R410A	
Control		Electric Expansion Valve	
Air Filter			
Preliminary Air Filter (G2)	n.	1	
Main Air Filter (G4 or F7)	n.	2	4
Noise (4)			
Indoor Side	dB(A)	60	65
Outdoor Side	dB(A)	65	69
Dimensions			
Width	in	92 11/16	131 1/16
	mm	2,355	3,330
Depth	in	51 3/16	51 3/16
	mm	1,300	1,300
Height	in	25 9/16	34 1/4
	mm	650	870
Width(Package)	in	96 11/16	135
	mm	2456	3430
Depth (Package)	in	60 5/16	61 7/16
	mm	1,532	1,560
Height (Package)	in	32 15/16	41 9/16
	mm	836	1056
Weight			
Weight	lbs	1,102	1,488
	kg	500	675
Weight(With Packaging)	lbs	1,157	1,764
	kg	525	800

(1) Rated at 35°C/95°F Outdoor and 35°C/95°F Dry Bulb, 11.1°C/52°F Dew Point Return Air Temperature

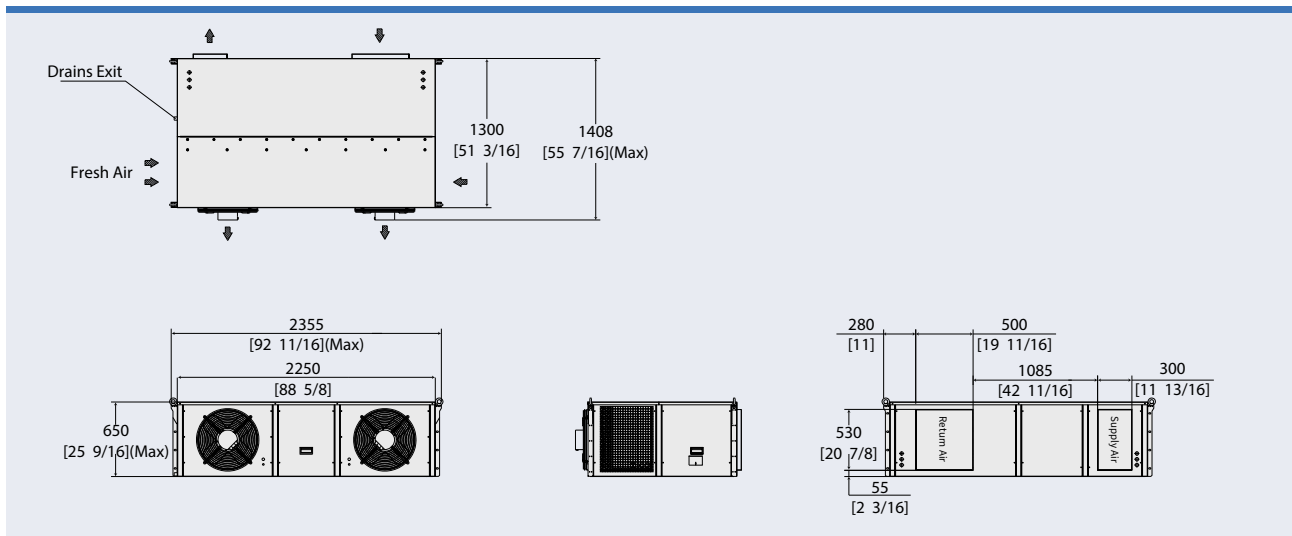
(2) Net Sensible Capacity and Net Sensible COP Certified to AHRI 1360

(3) Measured at $DT (T_{inside} - T_{outside}) = 12°C/21.6°F$.

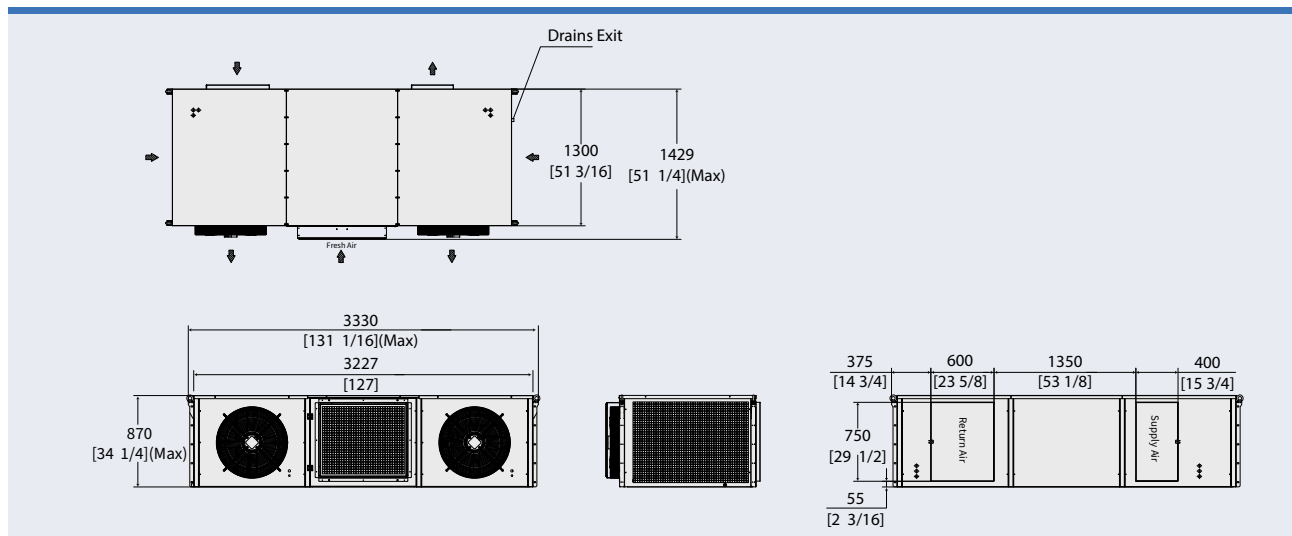
(4) When ambient temperature is 35°C/95°F, 2m/6.5 feet distance from unit in open space.

Unit Dimension Drawing

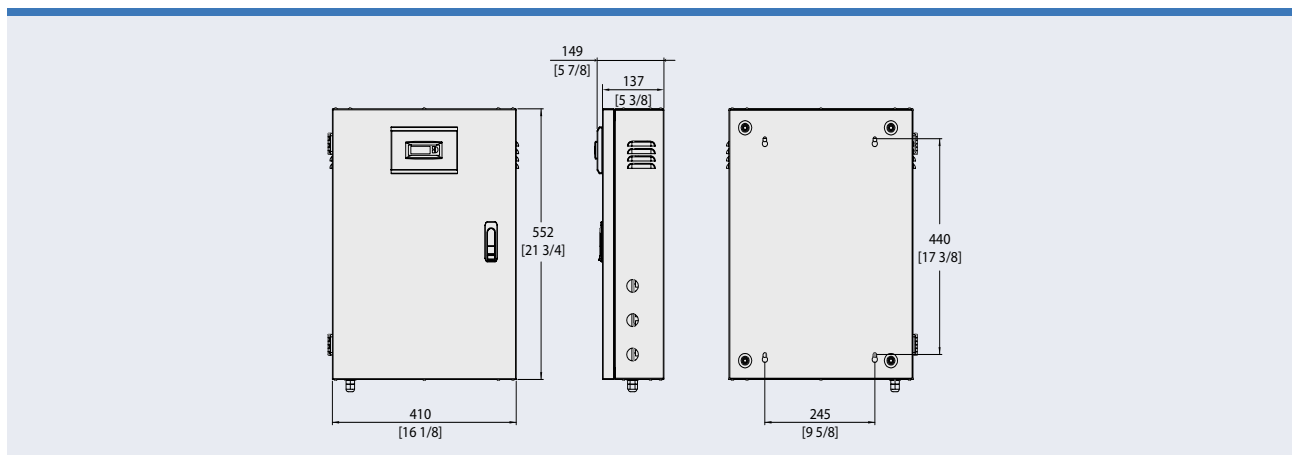
Unit (20V1R1)



Unit (40V1R3)



Controller Box





Head Quarter

AIRSYS Cooling Technologies, Inc

Add: 7820 Reidville Rd. Greer, SC 29651 , USA
Tel: +1 (855) 874 5380
Email: sales@air-sys.us

AIRSYS Brasil Ltda.

Add: Av. Moaci, 395 Conj 35/36 04083-000 – Planalto Paulista SAO PAULO – SP
Tel: +55 (11) 25976817 / +55 (11) 21585560
Email: airsys-brasil@air-sys.com.br

AIRSYS Deutschland GmbH

Add: Feringastr. 6, 85774 Unterföhring / München, Germany
Tel: +49 89 9921 6510
Email: anfragen@air-sys.eu

AIRSYS Refrigeration Engineering Technology (Beijing) Co., Ltd.

Add: 10th floor, Hongkun Shengtong building, 19, Ping Guo Yuan Xi Xiao Jie, Shijingshan, Beijing, China 100043
Tel: +86(0)10 68656161
Email: airsys@air-sys.com

AIRSYS Singapore Pte. Ltd

Add: 50, Tagore Lane Entrepreneur Centre, #03-04 (F), Singapore 787494
Tel: +65 64991850
Fax: +65 68416301
Email: sales@air-sys.sg

AIRSYS Malaysia Sdn. Bhd.

NO. 7-1, Jalan 109F, Plaza Danau 2, Taman Danau Desa, 58100 Kuala Lumpur Wilayah Persekutuan Malaysia
Tel: +60 3 7982 2010
Fax: +60 3 7980 1242
Email: sales@air-sys.sg

AIRSYS Philippines Corporation

Add: Unit 1603 16th Floor 139 Corporate Centre Building Valero St. Salcedo Village Bel-Air 1209 Makati, Philippines
Tel: +63 84581047
Fax: +63 88470496
Email: sales@air-sys.sg

PT AIRSYS Technology Indonesia

Add: Prosperity Tower ,Lt.2 Unit C Jl. Jend. Sudirman Kav. 52-53, RT.5/RW.3, Senayan Jakarta 12190
Tel: +62 855 1101 979
Email: sales@air-sys.sg

AIRSYS (UK) Ltd.

Add: 245 Europa Boulevard, Warrington, UK. WA5 7TN
Tel: +44 (0) 1925 377 272
Call Centre: +44(0)8456099950
Email: enquiries@air-sys.uk

Gu'an AIRSYS Environment Technology Company Ltd.

Add: 25, Dongfang Street, Gu'an Industry Park, Langfang City, Hebei Province, China
Tel: +86(0)10 68656161

Shanghai AIRSERVE HVAC System Service Co., Ltd.

Add: Room 1701, Xinda building, No. 322 Xianxia Road, Changning District, Shanghai, China 200336
Tel: +86(0)21 62452626 Fax: +86 (0)21 6245962

AIRSYS Australia Sales Office

Add: PO BOX 1088, Flagstaff Hill, SA, 5159, Australia
Tel: +61 479151080
Email: sales@air-sys.sg

