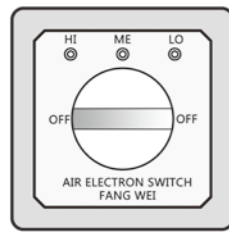


# em

According to different usage requirements, the FFU control method could be selectable from single control, electric box small group control, touch screen small group control, computer group control etc, which enable to provide the best economical and reasonable solutions to end user base on the central air-conditioning system and the number of FFUs applied in the cleanroom. The control system can realize operation instructions, speed adjustment, fault indication, real-time monitoring of FFU operation status and other operations.

## 1 Single control

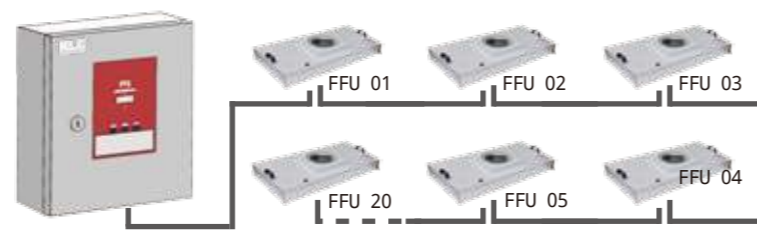


rotary switch



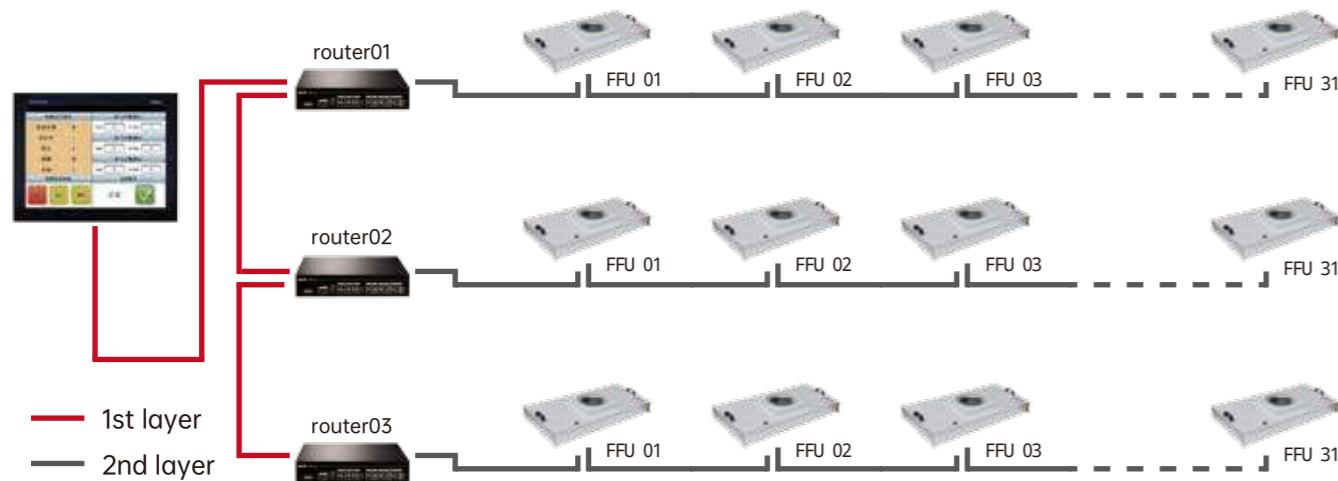
control panel

## 2 Electric box small group control



controllable FFU units: <20

## 3 Touch screen small group control

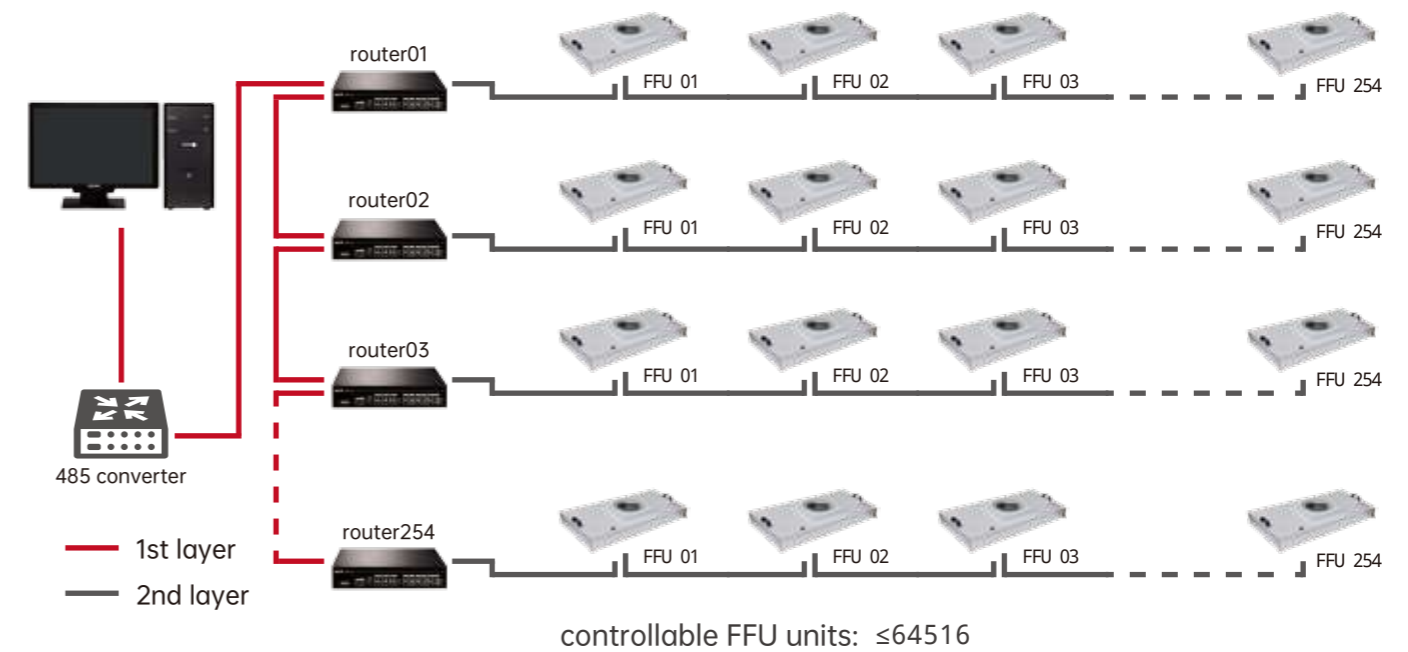


controllable FFU units: ≤254

### Touch screen small group control system

1. Able to control each FFU unit's operation, stop and speed setting in the system, monitor the running status in real time and detect faults.
2. Able to control maximum 254 FFU units, each 31 FFU units shall be equipped with a router.
3. Able to distinguish the authority of different operators, different operation functions as per different user or user group.
4. Able to run energy management settings, enable to set time tasks and automatically control the FFU at specified time.
5. Enable terminal control with tablet PC, industrial touch screen or other industrial control equipment.
6. The terminal protocol can adopt Modbus RTU, TCP/IP and other communication protocols.

## 4 Computer group control



### Computer group control system

1. Able to centralized control a large number of FFU units including the operation, stop, rotation speed, and monitor the status and failure.
2. Able to provide on-site layout, visually display FFU location and status.
3. Able to divide groups arbitrarily in order to facilitate the management of FFU in different areas.
4. Able to run energy management settings, enable to set time tasks and automatically control the FFU at specified time.
5. Able to record the system log, enable to view historical operations, equipment failures and other information.
6. Able to distinguish the authority of different operators, different operation functions as per different user or user group.
7. Able to add customized functions.

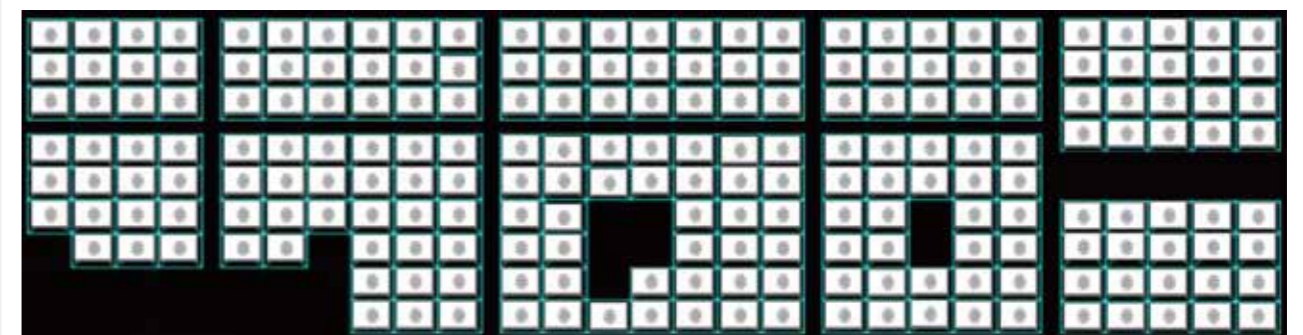
### The main interface of the computer group control system

Type	Total	Running	Stop	Failure	Off line
All	215	0	215	0	0
Group	10	0	10	0	0

Program (F) User (U) Mode (M) Operation (O) Help (H)

Zoom in Zoom out Start Stop Speed

Failure Running Stop Off line Signal state



Layout of the sample cleanroom

## KLC-FUDC

- 1 Intelligent control**  
Use remote automatic control system and intelligent control to achieve a perfect match of mechanical components and electronic control systems.
- 2 Energy saving**  
DC direct current smooth voltage wave line to save energy.
- 3 Easy start and stop**  
Start-up current is only 1/5 AC fan, and can start up many fans at the same time; Good breaking performance.
- 4 Small calorific value**  
DC fan with high performance of small calorific value, which can reduce the calorific value of work area further.
- 5 Large airflow and use in series**  
DC FFU is a ceiling unit with motor inside, used for turbulent and laminar flow clean room. It has feature of modularizing, the average air



## AC FFU KLC-FUAC

- 1 Multi-speed levels adjustment**  
The design of multi-speed levels, which has advantages of no maintenance, little vibration and low noise.
- 2 Strict quality control**  
Before leaving factory, QC department will scan and test each by particle counter for quality guarantee based on international standard ISO14644-1. It can adopts group control which decreased rate of breakdown.
- 3 Small calorific value**  
High performance of small calorific value, which can reduce the calorific value of work area further.



### Production parameter

Notice: KLC test data as below, actual data of using depending on site conditions

Model	FUDC-1	FUDC-2	FUDC-3	FUDC-4	FUDC-5	
Module size (WxLxHmm)	575x875x375	575x1175x375	615x1225x375	875x1175x375	1175x1175x415	
Air chamber material	Galvalume / aluminum / stainless steel					
Air flow (m³/h)	800-900	1000-1100	1100-1200	1600-1700	2200-2300	
Air velocity (m/s)	0.35 ~ 0.55					
Total pressure(Pa)	210	210	210	210	210	
Power (W)	80	85	95	150	183	
Weight (kg)	26	36	39	41	44	
Noise dB (1m below the HEPA filter)	55-63					
Vibration (mm/s)	0.2-0.7					
Power supply	220V 1PH 50/60Hz(380V 3PH 50/60Hz/110V 1PH 50/60Hz)					
Control mode	Single control/touch screen small group control/computer					
Options	DOP inject port / DOP sample port / differential pressure drop test port / differential pressure drop alarm device					
HEPA filter	Size (WxHxDmm)	570x870x69	570x1170x69	610x1220x69	870x1170x69	1170x1170x69
	Efficiency	99.99%0.3µm				
	Frame	High quality anodized aluminum				
	Initial pressure drop	110Pa@0.45m/s±15%				
	Trait	PU foam endless gasket				

### Production parameter

Notice: KLC test data as below, actual data of using depending on site conditions

Model	FUAC-1	FUAC-2	FUAC-3	FUAC-4	FUAC-5	
Module size (WxLxHmm)	575x875x375	575x1175x375	615x1225x375	875x1175x375	1175x1175x415	
Air chamber material	Galvalume / aluminum / stainless steel					
Air flow (m³/h)	800-900	1000-1100	1100-1200	1600-1700	2200-2300	
Air velocity (m/s)	0.35 ~ 0.55					
Total pressure(Pa)	175	185	195	255	200	
Power (W)	85	95	115	235	245	
Weight (kg)	27	37	40	42	45	
Noise dB (1m below the HEPA filter)	55-63					
Vibration (mm/s)	0.2-0.7					
Power supply	220V 1PH 50/60Hz(380V 3PH 50/60Hz/110V 1PH 50/60Hz)					
Control mode	Single control/touch screen small group control/computer					
Options	DOP inject port / DOP sample port / differential pressure drop test port / differential pressure drop alarm device					
HEPA filter	Size (WxHxDmm)	570x870x69	570x1170x69	610x1220x69	870x1170x69	1170x1170x69
	Efficiency	99.99%0.3µm				
	Frame	High quality anodized aluminum				
	Initial pressure drop	110Pa@0.45m/s±15%				
	Trait	PU foam endless gasket				

