



**COMPU-AIRE inc.**

*Specialized Environmental Air Conditioning Systems*



**AYAN NANO**

4 Ton system

**AYAN SERIES**

In Row Cooling System

*The Next Generation*

# AYAN NANO

## In Row Cooling System 4 Ton Capacity

The Compu-Aire Inc. Ayan Nano In Row Unit is the latest addition to the Ayan In Row line. This new unit is designed to create an efficient and modern cooling system, without sacrificing space and specifications. This unit has been designed to be green friendly, by using a high efficiency scroll compressor with EC fans, making it the latest innovation for the customer's specific cooling needs.

This unit has been designed to provide cooling in a horizontal direction, creating a new way to position the unit. The individual unit can be positioned between the racks, creating a more even dissipation of extreme heat from the servers.

We have compiled data from various case studies of data centers that enabled us to design an efficient and modern cooling system.

### KEY CONSIDERATIONS

- Elimination of hot spots
- Ensure stable inlet temperatures at servers
- Eliminate air short cycling
- Higher heat ratio

### WHY AYAN NANO?

- Reliability
- Performance
- Advanced temperature control
- Remote monitoring

### FLEXIBILITY

By creating a unit with horizontal cooling, this prevents the mixing of hot and cold air, creating a more efficient cooling unit.

This allows the unit to run to its best capabilities, allowing for improved air conduction, since the cold air is transported through the side outlets, and throughout the entire facility.

### FEATURES

- Scroll compressor
- High pressure switch
- Low pressure switch
- Condenser coil
- Sight glass
- Filter/dryer

### IDEALLY SUITED FOR

- Supplement cooling
- Industrial process control centers
- And many sensitive electronic applications

Scan QR with  
your smartphone  
Need the APP? Get it at [getscanlife.com](http://getscanlife.com)



# Features

## CABINET

All exterior panels are constructed of reinforced furniture grade steel and shall be insulated with 1", 1.5 lbs. density insulation.

The decorative panels are also painted. Front access is made easy for servicing via well insulated access panels.

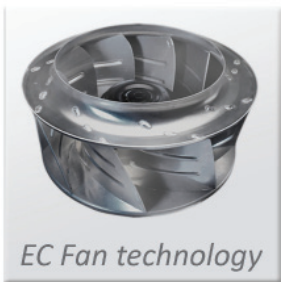
The cabinet has decorative front and side panels, which can be color coordinated with the décor of the computer room data center.

## COIL

The cooling coil is provided with high efficiency fins and a larger coil face area. The coil has been designed to provide the maximum sensible heat ratio required by data centers and, at the same time, minimizing energy used in air circulation. The flow of refrigerant is controlled by an externally equalized valve.

## FULLY INSULATED CABINET

The Compu-Aire Ayan Nano cabinet is constructed of 14 gauge heliarc welded tubular steel for strength and protection. A 1" thick, 1.5lb density insulation is utilized.



## EC FAN TECHNOLOGY

The evaporator sections are configured for draw-thru air pattern to provide uniform Air Flow over the coil face area. Each fan is a cassette type complete with a variable speed high efficiency

EC motor directly driven by the controller with 0-10 VDC output for precise air flow volume control. Plug fans do not require belt replacement or service and are rated for 40,000 hours of operation under full load conditions. The cassette type design provides the user a simple replacement, allowing for minimum down time during service.

## FILTERS

A filter rack is an integral part of the unit, and is located within the cabinet. The filters are serviceable from the back. The filters are 30% efficiency MERV 8 based on ASHRAE standard 52-76.

## LOW AMBIENT OPERATION

### FAN CONTROL

Fan control will automatically be cycling fans in sequence to maintain operable head pressure, as ambient temperatures lower.



## PGD1 GRAPHICAL DISPLAY

The System 2200 Plus Advanced Microprocessor is the latest 32-byte microprocessor, and consequently the calculation power and operation processing speed have been significantly increased.



The pGD1 controllers has a plastic case enclosure that ensures a high index of protection and reduces the risk of electrostatic discharges. The structure of the pGD1 allows connection to other keypad modules, which are in turn easily custom.

## STANDARD FEATURES

- Stand alone panel
- Graphical color touch screen display
- Smooth keypad
- N.C & N.O relay for common or selectable alarm output
- Adjustable alarm delay
- 7-day time clock with night setback schedule
- Nonvolatile storage memory for setup information
- Auto restart on power lost
- Anti-compressor short cycling logic
- Alarm and trend logs with time stamp

## OPTIONAL FEATURES

- Remote start/stop
- P-LAN network lead/lag, redundancy and auto changeover
- Customized user monitoring sensor
- Pressure transducers
- Leak detection & pump fail alarms
- Smoke alarm

## Technical Data

<b>Model CKE-432 AYN (Air Cooled)</b>		
110°F DB, 72°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	55,500	54,700
105°F DB, 70.8° WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	54,500	53,700
100°F DB, 69° WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	53,500	52,700
95°F DB, 67.8 °F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	52,060	51,378
90°F DB, 66.2°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	51,500	50,750
85°F DB, 64°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	50,500	49,750
80°F DB, 67°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	49,600	47,850
80°F DB, 62.8°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	49,600	48,350
75°F DB, 61.1°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	46,300	45,600
72°F DB, 62.8°F WB 50% RH Entering Air		
Total BTU/HR   Sensible BTU/HR	43,400	41,500
<b>Fan Data</b>		
Fan Size	8.66"	
Number of Fans	5	
Fan Motor HP (each)	0.19	
CFM(L/s)	2,250	
<b>Coil Data- High Efficiency Copper Tubing Aluminum Fins</b>		
Face Area Ft2(m2)	3.83	
Rows	4	
<b>Compressor Data-Heat Pump Duty Scroll R-407C</b>		
Size	5	
EER	14	
<b>Filter Data-30% Efficiency Based on ASHRAE 52-76</b>		
10x 20x 2	3	
Efficiency	MERV 8	
Effective Area Ft2 (m2)	17.1	
<b>Piping Connection Data-All Sizes in Copper OD</b>		
Liquid Line	5/8"	
Suction Line	3/4"	
Condensate Drain	3/4"	
<b>System Dimensions</b>		
Length	46.00"	
Width	12.00"	
Height	72.00"	
<b>Unit Weight LBS</b>	350	

Air Cool data shown, other cooling options available.

**Solid**  
**Smart**  
**Eco-friendly**  
**Innovative**

Reduce your energy consumption  
without compromising capacity



www.compu-aire.com