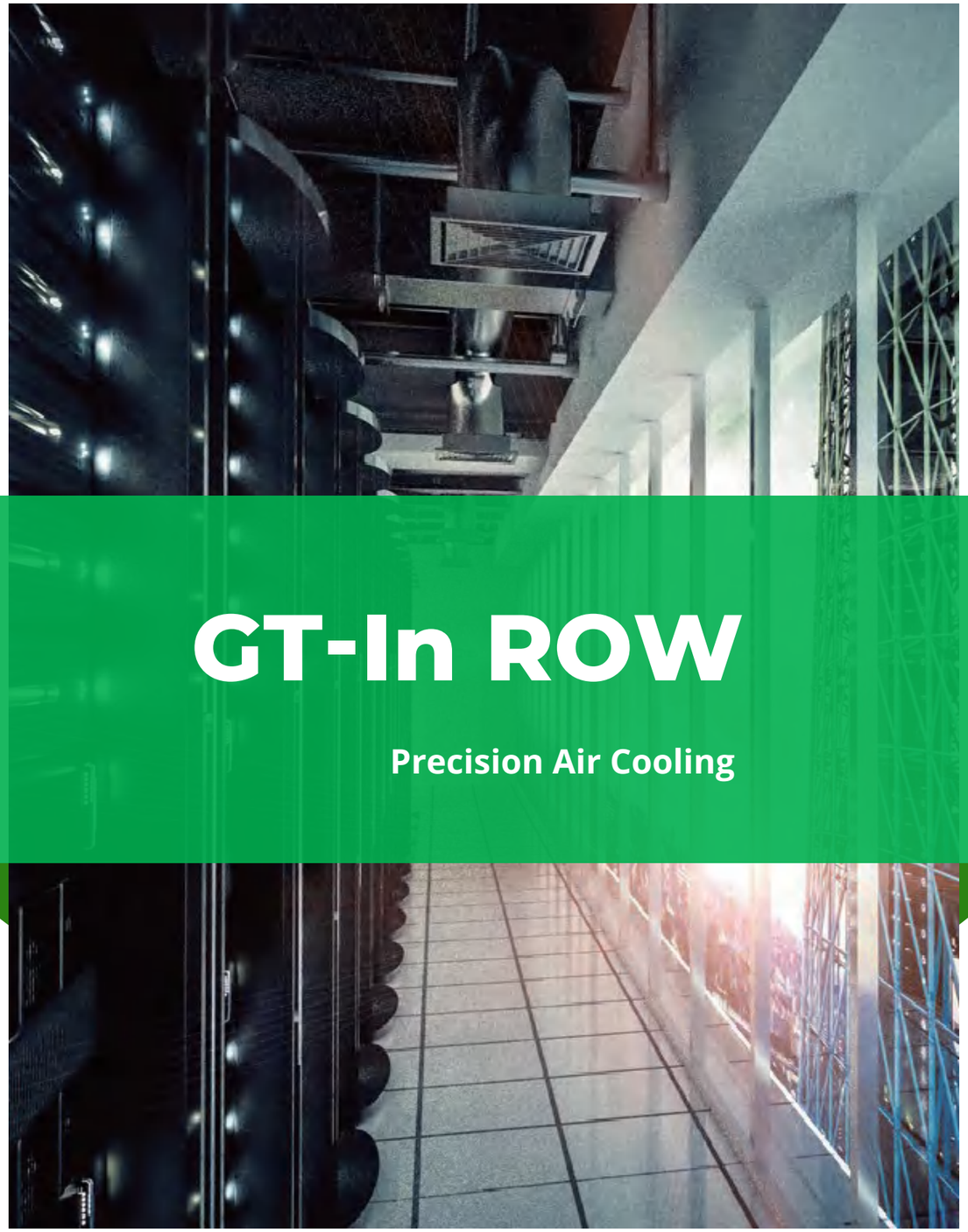


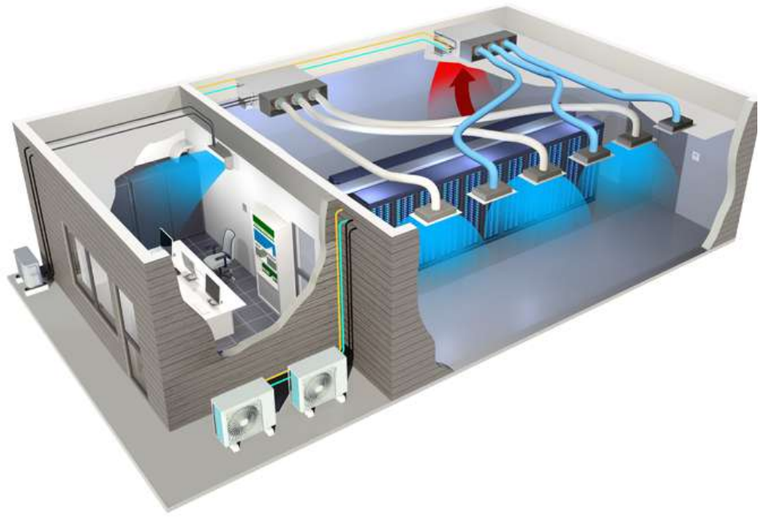
GT-In ROW

Precision Air Cooling

EFFICIENT COOLING SOULTION FOR MODULARIZED DATA CENTER

Efficient cooling solution for modularized data center

- High heat density data centers
- container data center
- modularized data centers
- Improving cooling system EER
- reducing data centers PUE
- Matching cold/hot aisle deign



- Clos to Heat Source No Rasied Floor or Limited Floor Height
- Energy Efficiency Requirement Dynmaic Heart Load
- Constantly Expansion Increasing Heat Density
- Virtualization Increasing IT Demand
- Cloud ComputingHigh/Integrated Sever/Blade Sever

Energy Efficiency Requirement | High integrated Server/RladServer | Cloud Computing | Virtualization

GT-In Row is an adaptive row-based coo|ing system placed closetothe heat source and ideal for rack level cooling solution for data center

GT-IN ROW UNIT INTRODUCTION

INTRODUCTION

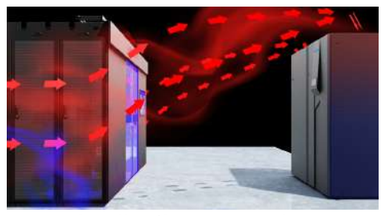
Designed for high-density data centres and micro-module rooms, it adopts a row-level near heat source cooling solution, which significantly shortens the airflow path and improves energy efficiency by 30%+. The whole series is equipped with dual inverter technology (inverter compressor + EC fan), which supports stepless adjustment of 12-60kW cooling capacity and accurately matches dynamic loads.

APPLICATIONS

- Single rack with power larger than 3kW
- High heat density computer room
- Modular DC
- Container type DC
- DC with low PUE
- Hot spot reconstruction

7 inch touch screen

EC fan



Application scenarios

GT-IN ROW UNIT CHARACTLSTLCS

ADVANCED CONTROLLER

7-inch colour touch screen, real-time monitoring of operating status.
PID accurate temperature control (± 0.5), to avoid competition operation.
32 units of group control (rounds/backup/avoiding competition).
Security: water leakage alarm, power protection, over-temperature protection
Failure self-diagnostics + multilevel password privileges.
Communication interface: RS485 (ModBUS) / optional TCP/IP, SNMP.

EFFICIENT EC FAN SYSTEM

EC centrifugal fan, backward inclined blade design, lightweight and energy efficient; brushless DC motor, noise as low as 45dB(A).

HIGH EFFICIENCY COMPRESSOR SYSTEM

Inverter compressor: R410A environmental refrigerant, soft start protection;

Low load support dehumidification function, anti-condensation.

PTC auxiliary heating: semiconductor ceramic heater, multi-stage temperature control.

Wet film humidifier: low-energy design, support on-site flushing.

ELECTRONIC EXPANSION VALVE

Dual inverter system: inverter compressor + inverter EC fan work together.

Refrigeration capacity 30%-100% stepless adjustment, with electronic expansion valve to precisely control the refrigerant flow.

Full dry working condition operation, maximise energy saving.

EC fan supports 0-100% stepless speed regulation, reducing energy consumption by 40%.

Soft start technology reduces grid impact.

MODULAR COMPATIBLE DESIGN

Same size as standard cabinets (300mm/600mm width).

Support stand-alone installation or embedded in cabinet rows.

Can be customised to be embedded in the middle of each brand's cabinets.

TECHNICAL DATA OF GT-IN ROW SERIES

Model	012	025	030	040	050	060
Total Cooling capacity (kw)	12.6	25.6	30.6	42.9	51.1	63.0
Sensible Cooling Capacity(kw)	12.6	25.6	30.6	42.9	51.1	63.0
Air Flow Rate m³/h	2850	5080	5250	8580	10600	11600
Fan Type	EC Fan					
Quantity of Fans (pcs)	4	6	6	2	3	3
Compressor Type	DC Variable Frequency Compressor					
Expansion valve Type	Electronic Expansion Valve					
Refrigerant Type	R410A					
Heating Capacity (kw)	3.0	4.5	4.5	6.0	6.5	6.5
Humidifier Capacity (kg/h)	3.0	3.0	3.0	3.0	3.0	3.0
Power Supply	380V/3N-50Hz					
Single Cooling Power Supply FLA (A)	19.0	23.2	29.2	30.1	34.8	43.8
Constant Temperature and Humidity Power Supply FLA (A)	22.9	27.9	34.0	37.6	42.0	51.0
Net weight (kg)	200	225	235	305	335	350
Dimension: W*D*H (mm)	300*1200*2000	300*1200*2000	300*1200*2000	600*1200*2000	600*1200*2000	600*1200*2000
Conventional Outdoor Unit						
Outdoor Unit Model (Nominal condition)	FA020APN	FA040APN	FA046APN	FA058APN	FA078APN	FA090APN
Quantity of Fans(pcs)	2	1	1	1	2	2
Net weight (kg)	49	135	139	150	176	185
Dimension: W*D*H (mm)	830*330*1245	1376*980*738	1576*1274*748	1776*1274*748	2176*1274*738	2376*1274*748
Centralized Outdoor Unit(Not one-to-one correspondence)						
Outdoor Unit Model (Nominal condition)	FA046AVN	FA058AVN	FA068AVN	FA078AVN	FA090AVN	FA098AVN
Quantity of Fans (pcs)	1	1	1	1	1	1
Net Weight (kg)	140	150	166	176	186	196
Dimension: W*D*H (mm)	1098*1098*1684	1098*1098*1684	1098*1098*1774	1098*1098*1774	1298*1098*1774	1298*1098*1774

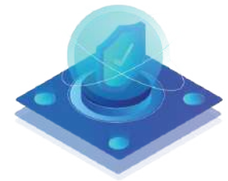
Note:
Standard working conditions: indoor return air dry bulb temperature 37°C, relative humidity 24%, outdoor dry bulb temperature 35°C;

· Flexible Embedding

Same size as standard cabinet (300mm/600mm), support front/ side air supply, rear/side return air customisation, seamlessly compatible with various brands of cabinet layout.

· Intelligent control

7-inch touch screen + 32 units of group control,
PID algorithm to achieve ± 0.5 accurate temperature control,
RS485/SNMP multi- protocol remote management.



· Reliable energy saving

Full dry working condition operation, EC fan energy saving 40%,
PTC heating + wet film humidification start on demand,
to ensure safety and high efficiency all year round.

· Customised service:

Size/colour matching/pipe routing on demand,
providing highly adaptable and zero-compromise cooling solutions for your server room.