

CLOUDER IOT | VRF CONNECT / HVAC INTELLIGENCE

Spend less on HVAC stay ahead of breakdowns.

Clouder IoT | VRF CONNECT gives integrators, facility managers, and HVAC teams one real-time dashboard for VRF and VRV systems. Monitor every unit 24x7, reduce wasted electricity, and catch faults before they become downtime.

Up to 30% potential electricity savings, depending on site conditions and control policy.

FIRST COMMISSION / RENAULT OFFICE, SECTOR 32

Core features

SIX ACTIVE

01 Continuous AI Monitoring

Continuous remote AI monitoring catches faults before they occur, drastically reducing failure rates, preventing breakdowns, and cutting downtime.

02 Smart Maintenance Reminders

Receive automatic notifications when air filters need changing, coils require cleaning, or scheduled service intervals are reached.

03 Automatic Scheduling

HVAC accounts for up to 70% of total electricity bills. Smart scheduling winds down vacant zones and prevents unnecessary AC runtime.

04 Plain-English Error Alerts

Get SMS and email alerts when unexpected parameters appear, translated by AI into simple, clear repair instructions.

05 Weather-Adaptive Controls

Automatically adjust setpoints and operation modes based on weather forecasts, outdoor temperatures, and utility rates to optimize efficiency.

06 Increased Machine Lifespan

Fixing faults early and maintaining fail-safe safety boundaries protects compressors from strain, significantly increasing VRF machine lifespan.

EVERY SCREEN IN THIS CATALOG APPEARS ONCE.

CLOUD STORAGE / CENTRAL MONITORING

Give every customer a clearer answer.

Cloud storage and central monitoring through a dashboard on laptop or mobile keep every indoor and outdoor unit visible in one operating view.

Use the signals that explain system health, not just the room temperature.

- COMPRESSOR CURRENT
- EVAPORATING TEMPERATURE
- CONDENSING TEMPERATURE
- AMBIENT TEMPERATURE
- REFRIGERANT PRESSURE
- FILTER STATUS
- EEV VALUE
- SUCTION TEMPERATURE
- LIQUID TEMPERATURE
- GAS TEMPERATURE

FIRST COMMISSION /
RENAULT OFFICE, SECTOR 32



BETTER SERVICE STARTS WITH BETTER CONTEXT

Increase VRF machine lifespan by fixing faults before they occur. Lower failure rates, prevent breakdown probability, and reduce downtime.

03 / PLATFORM / TELEMETRY

See the whole site.

One real-time dashboard keeps indoor and outdoor units, room temperatures, controls, and recent trends together for 24×7 monitoring from a laptop or mobile device.

PLATFORM / DASHBOARD

LIVE SITE VIEW

1:33:14 pm

Clouder IoT VRF CONNECT

ALARMS

Terrace VRF Site - TR7K4M

MULTISITE

DASHBOARD

VRV Outdoor Unit 1
Terrace - 6.2°C

VRV Indoor Unit 1
Office Zone A - 23.0°C

VRV Indoor Unit 2
Office Zone B - 22.6°C

VRV Indoor Unit 3
Conference Room - 21.9°C

VRV IDU 4
Server Room - 23.0°C

SENSOR READINGS

ROOM TEMP
23.0 °C

LIQUID TEMP
15.8 °C

GAS TEMP
33.3 °C

PIPE DELTA T
17.5 °C

CONTROL

AC Power Command

Set Temperature
22°C

Operation Mode
COOL

Fan Speed
HIGH

Swing / Louver
AUTO

EQUIPMENT STATUS

AIR TEMPERATURE STATUS
NORMAL
23.0 °C • SET 22°C • ACTIVE

LINEAR EXPANSION VALVE (LEV)
185.4 / 480 steps

Airnet Address
1

AC Unit Power
POWER ON

Thermostat State
STANDBY

LEV Valve steps
185.4 steps

Pipe Delta T (Gas - Liq)
17.5°C

HVAC Malfunction
NORMAL

Operation Mode
COOL

Fan Speed Step
HIGH

TREND GRAPH

24 HOURS

7 DAYS

30 DAYS

FOCUS · C

ERRORS OFF

Y AXIS UNITLESS · C

36.0 C

27.0 C

18.0 C

9.0 C

0.0 C

19 Aug, 12:49 pm

19 Aug, 01:32 pm

5/5 ONLINE

0 ALARMS

admin

One operating surface.

Read the site, select a unit, compare the trend, and make an approved change from the same place.

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03 / 12

PLATFORM / SCHEMATIC

TELEMETRY OVERLAY

X NOT CONFIGURED

OUTDOOR UNIT SCHEMATIC

TELEMETRY

PHYSICAL LOCATOR

SYSTEM CURRENT

11.30 A

Status: Active Load

TELEMETRY OVERVIEW

Outdoor Ambient: 32.4°C

High Pressure (unverified): 2.92 MPa

Low Pressure (unverified): 0.81 MPa

CURRENT TREND

30 samples

The graph displays the current trend over a 60-second period. The y-axis represents current in Amperes (A), with markers at 10.6A and 12.4A. The x-axis shows time from -60s to now. The current starts at approximately 11.5A, rises to a peak of 12.4A at -30s, then drops to a trough of 10.6A at -10s, and finally rises back to approximately 11.5A at now.

SHOW LIVE VALUES

☒

PIPELINE LEGEND

- HIGH TEMP, HIGH PRESSURE GAS
- HIGH TEMP, HIGH PRESSURE LIQUID
- LOW TEMP, HIGH PRESSURE GAS

The schematic diagram illustrates the refrigerant circuit of the outdoor unit. It features three Indoor Units (IDU 1, IDU 2, IDU 3) connected to a central outdoor unit. The circuit includes a compressor (ACC), two condensing coils (INV.1, INV.2), and various expansion valves (Y2E, Y2S, Y3E, Y3S, Y4E, Y4S). Pressure and temperature sensors are distributed throughout the system, with labels such as R1T, R2T, R3T, S1PH, S2PH, S3PH, and S1MPH. The diagram uses color-coded lines to represent different states: pink for high temperature/high pressure gas, red for high temperature/high pressure liquid, and blue for low temperature/high pressure gas. A legend on the left explains these color codes. The diagram also shows a physical locator for the outdoor unit, with a status of 'X NOT CONFIGURED'.

See the circuit, not just the number.

Trace pressure, temperature, and valve values through the active circuit before opening the panel.

05 / CONNECT THE SCREEN TO THE MACHINE

Save on repairs.

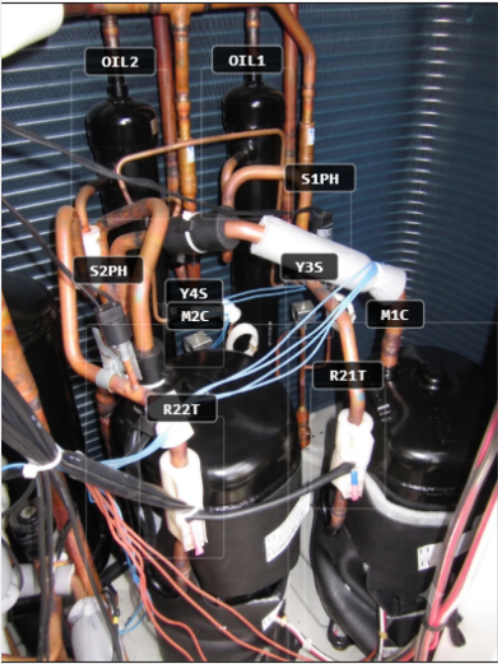
The physical locator pairs the drawing with a photo of the equipment, so a technician can move from a live value to the physical component without guesswork.

SOLUTION / HARDWARE
PHYSICAL LOCATOR

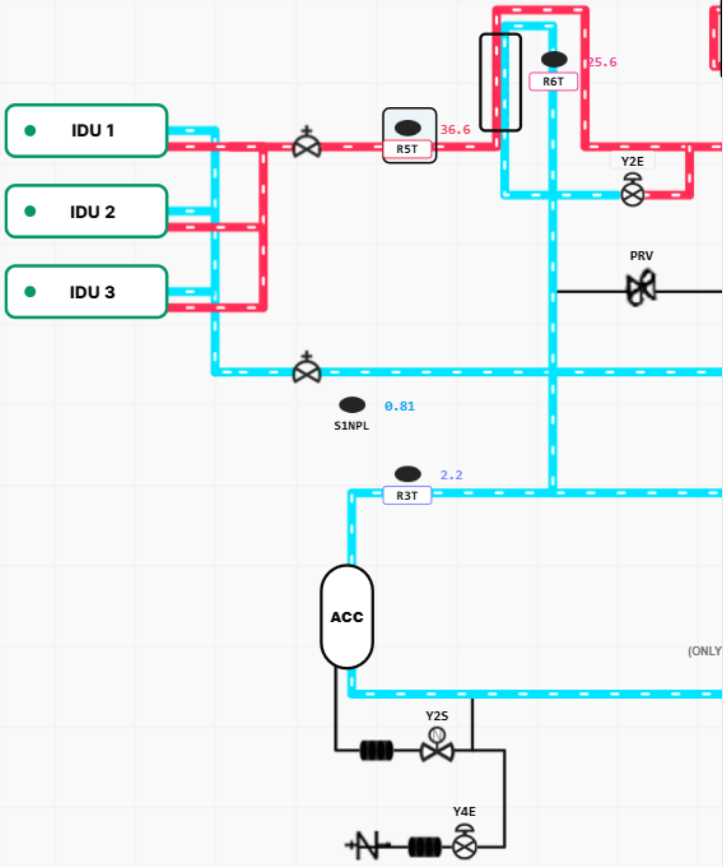
X NOT CONFIGURED

OUTDOOR UNIT SCHEMATIC

TELEMETRY
PHYSICAL LOCATOR



COMPRESSORS
VALVES & SENSORS



See the machine too.

Compare the diagram with the physical unit and find the marked sensor, valve, or compressor before the work begins.

06 / AI, IN ONE SPECIFIC PLACE

Our AI predicts faults. Before they happen.

Increase the lifespan of VRF machines by fixing faults before they occur. Continuous AI monitoring drastically reduces failure rates, prevents breakdown probability, and minimizes costly system downtime.

AI / LIVE MONITOR

LIVE DATA ATTACHED

AI MONITOR

tell me about my system.

NEW

tell me about my system.

AI

System Overview – VRV IDU1 (snapshot @ 2026-08-09 13:46 GMT+5:30)

Parameter	Value	Interpretation
Error Code	0	No fault reported
Operation Mode	0	Typically "Cooling" (model-specific)
Power Command	1	Unit is commanded ON
Set Temperature	22 °C	Desired room temperature
Room Temperature	23.5 °C	Slightly above setpoint
Suction Temp	23.5 °C	Evaporator side temperature
Gas Temp	34.9 °C	Compressor discharge temperature
Liquid Temp	20.9 °C	Condenser side temperature
Pipe ΔT	14 °C	Temperature drop across pipe (gas → liquid)
EV Opening	186 pls	Expansion valve partially open (range-dependent)
Fan Speed	2	Medium speed (range-dependent)
Swing Direction	5	Current swing setting

TARGET VRV IDU 1

MONITOR

RUN SWEEP

TEST

Ask anything about the selected system...

GPT-05S 120B

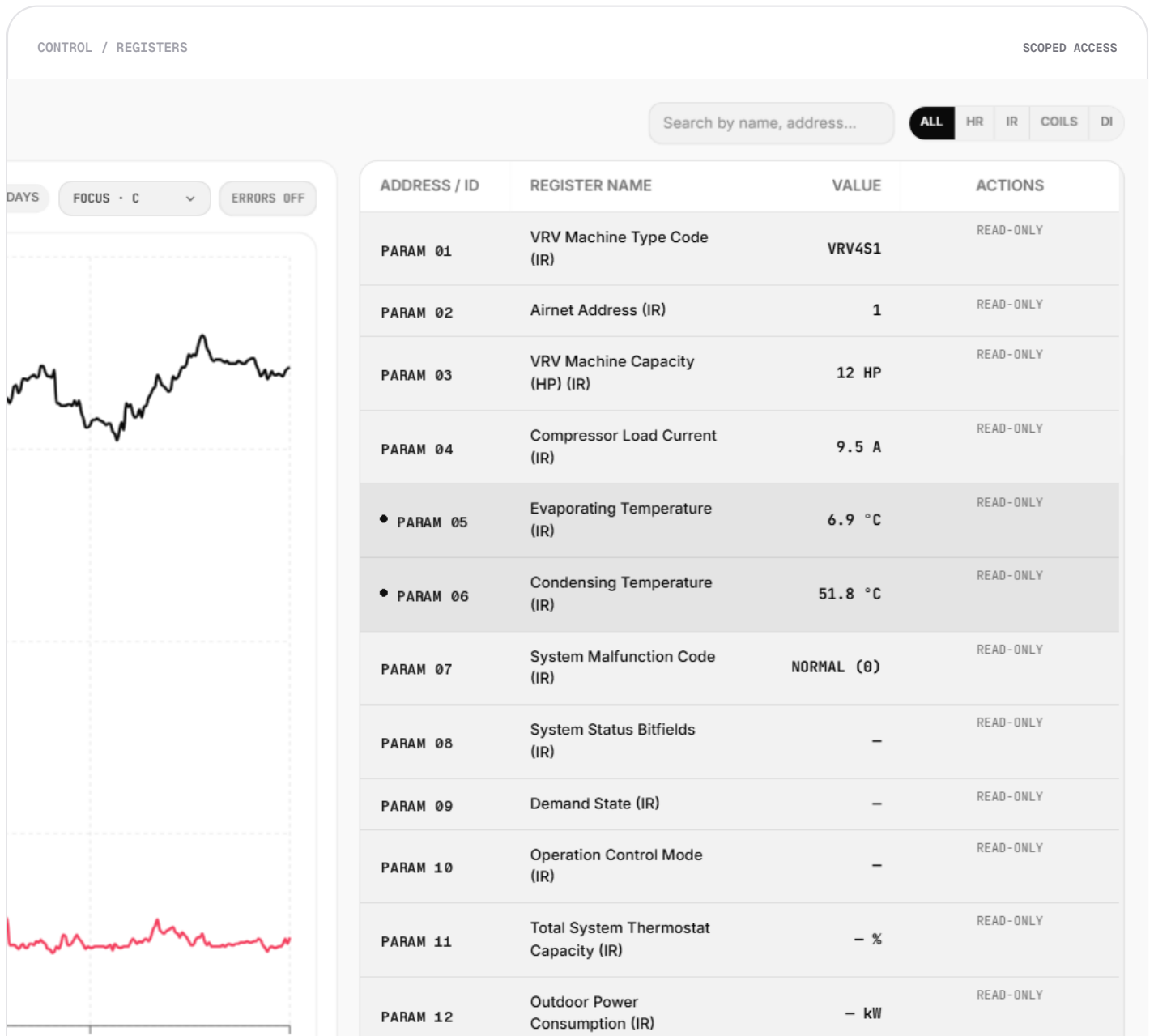
SEND

A check without the extra digging.

The answer uses the selected unit's live operating snapshot, not a blank chat window.

07 / CONTROL / REGISTERS

Monitor the settings that matter.



Monitor and control any approved parameter.

Room temperatures, surrounding rooms, setpoints, power, current, pressure, evaporating and condensing temperatures, valve position, alarms, trends, occupancy signals, and energy use can be brought into one operating view.

08 / CONTROL / ALARMS

Turn signals into alarms.

Rules that react early.

Set thresholds and custom automations that trigger alarms when a VRF/VRV parameter moves outside its expected range. Review active events, history, and the rule that caused each alert.

CONTROL / ALARMS

RULES / HISTORY

ALARMS

ACTIVE (0)

HISTORY

RULES

Toggle rules on/off. Thresholds can be edited — press Enter to save.

☒	CRITICAL	VRV Machine Fault (Error Code > 0)	>	0
☐	WARNING	Suction Temp High (>30°C)	>	30
☐	WARNING	Liquid Temp High (>60°C)	>	60
☐	WARNING	Gas Temp High (>60°C)	>	60
☐	WARNING	EVP Temp High (>35°C)	>	35
☐	WARNING	Condenser Temp High (>65°C)	>	65

Build alarms around the site.

Set critical and warning thresholds for temperatures, pressure, compressor faults, and other signals. Rules can notify the team, trigger an approved automation, and leave an event history for follow-up.

REPORTS / LOGS / TERMINAL / AUTOMATION

Keep the work in one place.

Clouder IoT brings the tools around the live system into one operating surface, so teams can move from a reading to a decision without switching context.

REPORTS

Export maintenance records and clear client handoffs.

LOGS

Review commands, alarms, and activity when the reason matters.

TERMINAL

Use deeper diagnostic tools when a site needs a closer check.

CUSTOM AUTOMATIONS

Build schedules, occupancy rules, weather responses, and alerts.

AI-ASSISTED AUTOMATION

The AI can help create a rule, explain it, and leave approval with the team.

ONE OPERATING SURFACE / MANY WAYS TO ACT



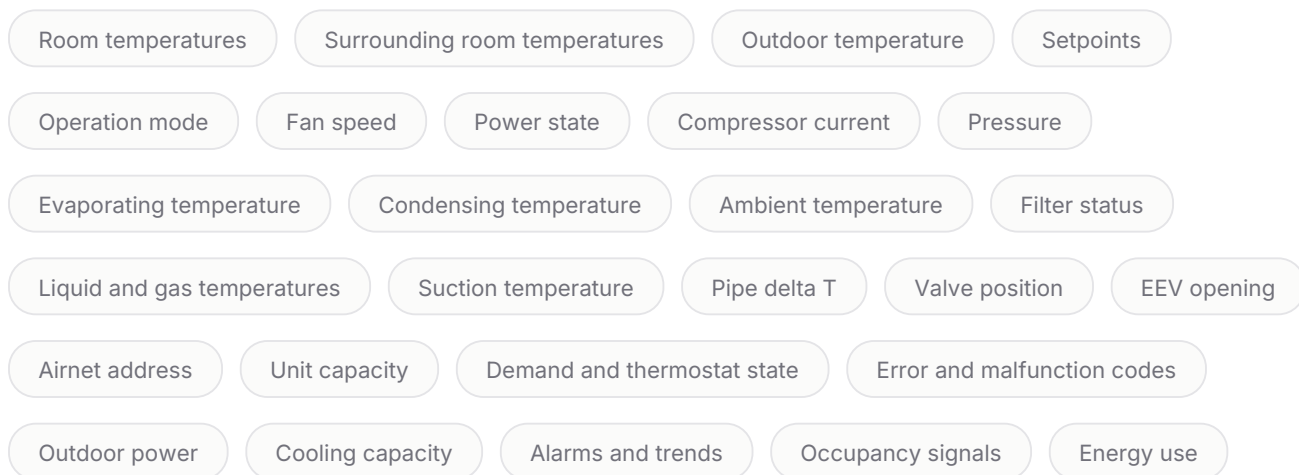
TOOLS THAT STAY CLOSE TO THE MACHINE

Read, reason, automate, and leave a verified record.

10 / WHAT THE PLATFORM CAN SEE

Every useful signal. One clearer picture.

Exact availability depends on the equipment and sensors connected at each site. Signals can include compressor current, evaporating and condensing temperatures, ambient temperature, refrigerant pressure, filter status, EEV position, and liquid, suction, and gas temperatures.



Frequently asked questions.

How does VRF CONNECT save up to 30% on bills?

HVAC is the main guzzler of electricity, accounting for up to 70% of total commercial power bills. VRF CONNECT centrally manages setpoints, enforces weather-adaptive rules, and automates occupancy schedules to eliminate wasted cooling during vacant hours.

How does early fault detection extend equipment life?

Fixing faults before they escalate and enforcing fail-safe safety boundaries protects compressors, coils, and valves from avoidable strain, significantly increasing the operating lifespan of VRF/VRV machines.

What is the environmental and sustainability benefit?

Optimizing refrigerant cycle performance reduces grid energy consumption, while predictive maintenance minimizes failure rates and cuts down the volume of discarded scrap parts and burnt-out compressors sent to waste.

How does remote AI monitoring prevent breakdowns?

Continuous measuring of compressor current, evaporating and condensing temperatures, refrigerant pressure, and EEV values detects sensor drift and refrigerant restrictions before cutouts occur, avoiding emergency shutdowns.

Can our team manage all indoor and outdoor units remotely?

Yes. Integrators and facility managers can monitor, control, and service every unit 24x7 through a single real-time dashboard on laptop or mobile app, with instant SMS and email alerts.

Which HVAC architectures and brands are supported?

VRF CONNECT is built for commercial VRF/VRV systems (Daikin, Mitsubishi, Toshiba, LG, etc.), interfacing via direct controller integration, Modbus TCP, and BACnet with zero disruption to existing infrastructure.

12 / CONTACT

Let's talk about your site.

Tell us what you are building, what you need to see, and where your team needs more control. We will route you to the right engineer within two business days.

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Clouder IoT | VRF CONNECT

A CLEARER OPERATING SURFACE

Visibility for every VRF site.

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