

Seamless Control

What is different about Hub Automation

Cloud Cover

ClimateHub products automatically configure Cloud Cover access whenever connected to a network. They find other HubAutomation products, set up the local graphical user interface, detect the type of air conditioner connected and install unit specific diagnostics. Cloud Cover set up is also automated: all that is needed is a registration process for security reasons and you can access your system from anywhere at any time.

Cloud Cover Key Features:

- **Detects the unit connected and installs diagnostic software specific to the unit brand.**
- **Provides a remote service portal so technicians can diagnose system faults before attending**
- **Reduces the number of visits a technician needs to fix your air conditioner**
- **Automatically sends alarms and notification to extend system life**

Touchscreens, Touchpads, Room controllers and Gateways



HubAutomation allows the building designer, building occupant or building owner to choose how they interact with their heating and cooling system. Our Surface series is the worlds lowest profile touchscreen and sensor. Our Capacitive Touch series utilise smartphone glass technology and is integrated into a standard light switch form factor. If your vision for your home does not match the look and feel of our Capacitive Touch series and the three mm profile of our DOT sensor is not quite discreet enough, the ClimateHub can be integrated with lighting and voice control systems.

Proprietary Algorithms

ClimateHub products not only provide a smart device gateway and individual comfort targets for each room, they also improve the way the air conditioning system operates. HubAutomation is the only Australian manufacturer that provides high level comfort and energy strategies across all types of heating and cooling systems: VRV/VRF, Split Ducted, High Wall Split, Cassette, Hydronic and more.

Unique to HUB:

- **VRV/VRF demand aggregation**
- **VRV/VRF Mode selection enhancement**
- **Expanded airflow range for three speed fan systems**
- **Airstream mapping and ESP control**
- **Refrigerant Stream Mapping and supply air injection**
- **Hydronic interlock and balancing slider**
- **Detects other Hub products and automates network links**

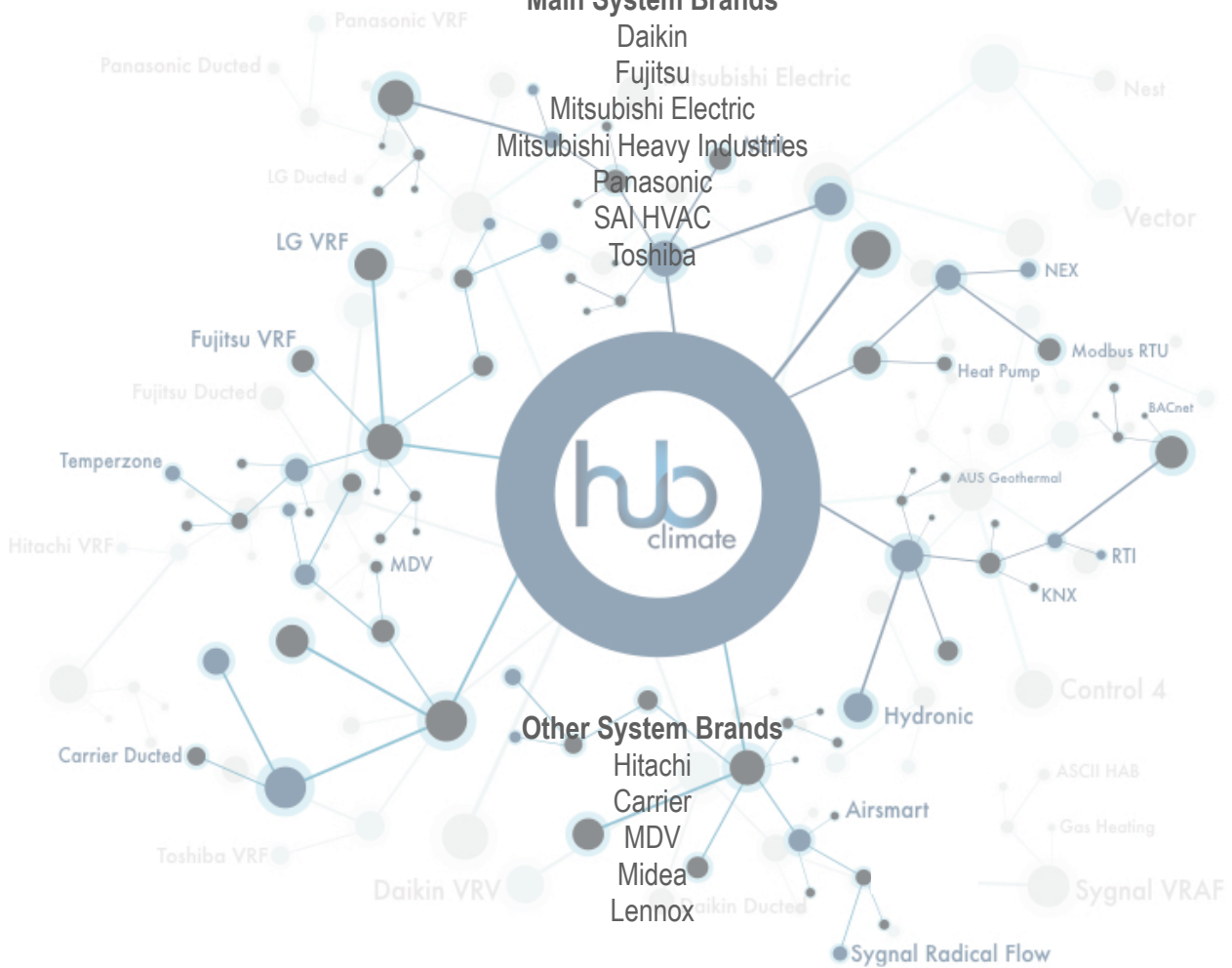
ClimateHUB Works With

System Types

Concealed Ducted Split Systems
High Wall Split Systems
Cassette Split Systems
VRV Systems
VRF Two Pipe Systems
VRF Three Pipe Systems
VRAF Systems

Main System Brands

Daikin
Fujitsu
Mitsubishi Electric
Mitsubishi Heavy Industries
Panasonic
SAI HVAC
Toshiba



Other System Brands

Hitachi
Carrier
MDV
Midea
Lennox

Other Control Systems

Control 4
RTI
AMX
Nest
Vector
NEX
KNX
Dali
Modbus RTU
BACnet

Three Speed Fan Split Ducted Unit

Global Screen



- Multi-zone Full Temperature Control (a setpoint in every room)
- Dynamic Energy Recovery (thermal banking to reduce energy use)
- Electronic Zone Labelling
- Proportional Capacity Calculation
- Proportional Airflow Calculation
- Easy Set Global Commands
- Heat, Cool, Ventilation, Fireplace and Auto Mode
- Global and Zone Time Schedules
- Supply Air Injection (Refrigerant Flow Control)

Room / Zone Screen



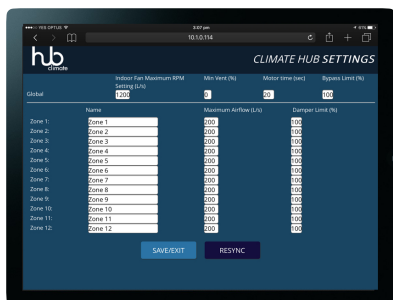
- Dedicated Room Temperature Target
- Dedicated Room Airflow Target
- Room Airflow Display
- Two Dedicated Time Schedules
- Proportional Airflow Calculation

Time Schedules



- Event-based On/Off
- Seven Day Schedule A
- Seven Day Schedule B
- Two Dedicated Time Schedules

Commissioning Screen



- System Airflow Adjustment
- Minimum Airflow Adjustment
- Actuator Rotation Time Adjustment
- Supply Air Scale Adjustment
- Electronic Zone Labelling
- Room Peak Flow and Airflow Scale Adjustment

HUB Proprietary Technologies for Three Speed Fan Systems

Heating & Cooling Demand

Conventional multi-zone temperature control systems measure the room temperature, typically modulating the room airflow over a proportional band to adjust the temperature in the room closer to the setpoint. ClimateHUB determines the size of each room, generates a cooling demand and a heating demand for every zone. The heating and cooling demand is then aggregated, resulting in a mode selection strategy that monitors every room of your home, not just a single sensor at the return duct.

Airflow Demand

During the commissioning process a maximum airflow is set for each room (peak flow). ClimateHUB includes the peak flow value in the calculation to determine the precise airflow required for each room. The system wide airflow is modulated to meet aggregate airflow demand. ClimateHub does not dump or spill energy laden conditioned air, ClimateHub reduces system noise at low airflows.

Supply Air Injection

ClimateHUB is designed for electronically commutated indoor fan motors combined with DC Full Wave Inverter outdoor units. When a HUB plant control module (PCM) is connected ClimateHUB utilises Supply Air Injection to achieve variable refrigerant and air flow control. The Supply Air Injection system is a capacity control strategy unique to HUB and not available on any other multi-zone full temperature control systems.

Dynamic Energy Recovery

The largest consumer of energy in a direct expansion vapour compression heating & cooling system is the compressor. With DC full wave inverter units compressor speed is modulated when the heating or cooling demand reduces. When all zones are at their target temperature the compressor is cycled to the off state. When cooling or heating demand increases the compressor is cycled to the on state and the process continues. Dynamic Energy Recovery when activated keeps the compressor in the off state for longer periods by utilising the central area of the home as a thermal bank. As perimeter rooms increase or decrease in temperature air is transferred from the centre of the home into the areas where heat is being gained or lost.

Control Your System Remotely

HomeHUB connects your home to a secure server so you can control your home's climate from any location that has internet access. You can create a portfolio of your properties bringing your holiday home, your office and your home together onto a single interface.

Cloud Cover

Preventative maintenance is important for making sure your climate control system gives you decades of trouble free operation. Your air conditioning professional would normally schedule a preventative maintenance each year and this is often a condition of the product warranty. Providing access to your home is inconvenient. Cloud Cover monitors your system performance and run time, enabling services to be scheduled only when necessary. Cloud Cover can reduce

Two Pipe VRF

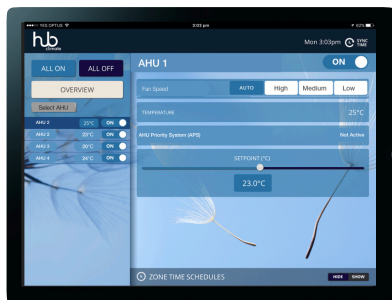
the number of services required over the life of the system by 80%. Cloud Cover also notifies you immediately if a fault occurs. Cloud Cover brings peace of mind and unsurpassed convenience.

Global Screen



- Capacity Mapping
- Global Mode Selection
- Energy Run Timer
- Electronic Zone Labelling
- Proportional Cooling Capacity Calculation
- Proportional Heating Capacity Calculation
- Easy Set Global Commands
- Global and Zone Time Schedules
- All On / All Off Function

Two Pipe VRF AHU Screen



- Fan Speed Control
- Temperature Target / Setpoint
- Two Start Event Time Schedules
- Two Stop Event Time Schedules

Three Pipe VRF

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Three Pipe VRF AHU Screen



- Mode Selection
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HUB Proprietary Technologies for VRF/VRV Systems

Electronic AHU Labelling

VRF & VRV systems are designed for slab-on-slab commercial office applications. Typically these systems are set up by a building engineer, facility manager or a technician. The use of VRF/VRV systems in a home presents a number of challenges including a central controller and a smart device gateway. ClimateHUB solves both problems by bringing all indoor units together on to a single interface. Electronic zone labelling allows each indoor unit to be named individually to clients requirements.

AHU Priority System

The design of VRF & VRV systems limits the capacity ratio between the indoor units and the outdoor unit. In a residential home often the system designer will push the capacity ratio to the limit to provide air conditioning to all of the rooms at the lowest possible capital and running costs. Unfortunately VRF & VRV systems have no way of managing the system refrigerant flow when the outdoor capacity is not sufficient to meet the demand of the active indoor units. HUB's proprietary AHU Priority System (APS) monitors all active indoor units. If the required capacity demand exceeds the capacity of the outdoor unit the ClimateHUB APS is activated. ClimateHUB's APS function places low priority indoor units on hold until the higher priority room temperatures approach setpoint.

Capacitive Touch Controllers

VRF & VRV systems are designed for commercial use. The wall controllers supplied by the manufacturer are bulky and built to a budget price. ClimateHUB provides a stylish capacitive touch interface to replace the factory controller. A range of options are available from single button controllers for guest and children's rooms to touchscreen controllers that act as a central controller.

Security Interface

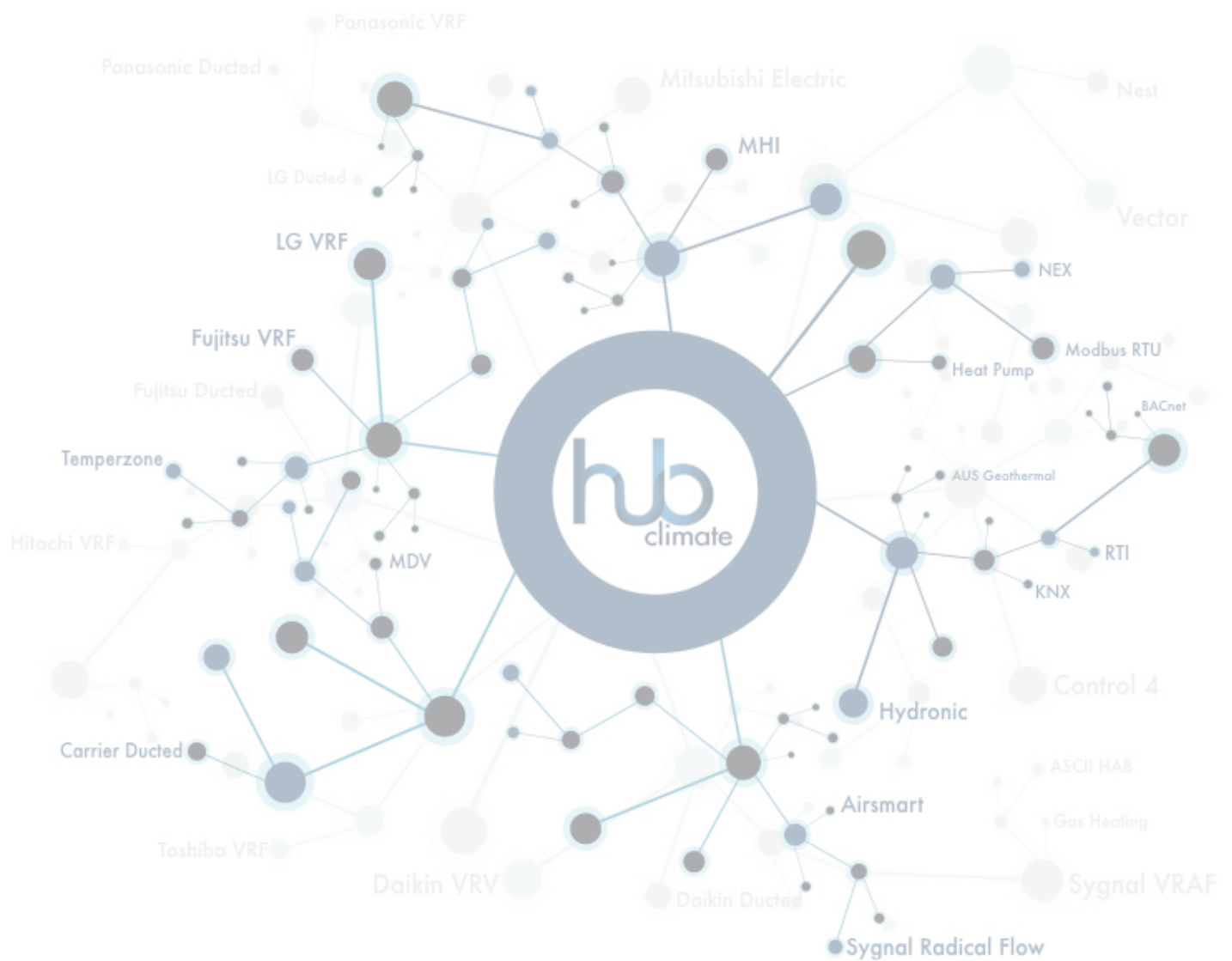
ClimateHUB has a number of off the shelf interface options that link your climate control system to your security system. When you arm your security system your air conditioning will automatically turn off, conserving energy and providing peace of mind.

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