The intelligent Touch Manager (iTM) is an **advanced multi-zone controller** that provides the **most cost-effective** way to control and monitor the Daikin VRV system.

The 10.4” LCD touch screen is easy to use with different **screen views** to include the floor plan layout view and **icon menus** for system configurations. It is also easy to use with standardized remote **Web access from your PC**. It can manage a total of 650 **management points** consisting of up to 512 **Daikin indoor unit groups** (up to 1024 indoor units) along with general equipment control/monitoring with Digital Inputs/Output (Di/Do), Analog Input/Output (Ai/Ao) and Pulse Input (Pi) optional devices.

The new V2.0 software meets all of your control requirements such as
- Independent **Cool and Heat setpoints** or **Single setpoint** in the occupied period (when the unit is On)
- Independent **Setback setpoints** in the unoccupied period (when the unit is Off)
- Weekly Schedule with **Optimum Start** and **Timed Override**
- Auto Changeover with four configurable methods and a **tighter changeover deadband** (min 2°F)
- Fully accessible through Web; provides Alert and Error emails
- **0.1°F room temperature** display and storage of up to 500,000 **history items**
- Interlock and Emergency stop for facility management

The iTM can be wall mounted or flush mounted (all mounting brackets included) with **easy commissioning and system configuration** capabilities such as automatic registration for indoor units and preset tools for off-site work. All data can be imported or exported with a USB Flash drive.

You will find this truly a **ONE for ALL**...Advanced Multi-Zone Controller
Easy Operation and Configuration

The easy to understand icon and intuitive menu will enable even a novice user to be an expert in managing the VRV system.

List view

Designed for simplicity, List view provides a quick view of overall status and essential information in a list format. Using the sorting function, the indoor units operating under the same conditions and status are identified for comparison and assessment.

Icon view

Area / Unit Detailed Settings

List view

A special feature utilizes building floor plans to provide a visual representation of system equipment. The users can visually locate any installed equipment on the floor plan without having to memorize equipment names.

Layout view

Easy Engineering

The system configuration can be done through Preset tool off-site then imported to the iTM via the USB port at the site. This feature makes engineering easier and more manageable.
The iTM V2.0 extends the Auto Changeover capabilities based on cooling or heating demand. The changeover is evaluated by how much the room temperature is deviated from the cooling or heating setpoint. For example, when the room temperature exceeds the primary changeover deadband from the cooling setpoint, iTM V2.0 initiates a change from the heating mode to the cooling mode.

The changeover deadband can be configured to the minimum of 1°F to a maximum of 4°F.

**Auto Changeover** is applicable to both VRV **Heat Pump** and **Heat Recovery system**. The iTM V2.0 provides four changeover methods to meet a variety of expectations in your project. Fixed, Individual, Average or Vote methods can be specified in the changeover group with targeted indoor units as well as Primary / Secondary Changeover deadbands.

**Fixed method**

- Changeover is evaluated with the **representative indoor unit**.
- Changeover affects all indoor units.
- Good for prioritizing the representative indoor unit for the Heat Pump system (or under the BS Box in Heat Recovery system).

**Individual method**

- Changeover is evaluated with, and affects **each indoor unit** individually.
- Good for **Hotel / Nursing home** application with the Heat Recovery system.

**Average method** *(Weight 0 to 3 on each indoor unit is multiplied in averaging)*

- Changeover is evaluated with the average of **room temperature and setpoints**.
- Changeover affects all indoor units.
- Good for **Open office** application with Heat Pump system (or under the BS Box in Heat Recovery system).
Vote method (Weight 0 to 3 on each indoor unit is multiplied for the demand)

- Option available for heating override if there is an indoor unit which the heating demand exceeds (H_SP – (PCd + SCd))

New

- Changeover is evaluated based upon total cooling demand and total heating demand. If the total cooling demand is greater than the heating (like the figure left), the iTM V2.0 changes the indoor units in the changeover group to cooling mode.
- When the changeover group is in cooling mode the total cooling demand will be decreased, at that point the total heating demand may become greater than the cooling demand and change the mode to heating (a guard timer applies).
- The setpoints can be different in each indoor unit within the changeover group. The demand is calculated based on the setpoints in comparison to room temperature for each indoor unit. The demand within the Primary Changeover deadband (PCd) is considered as no demand.
- Good for the Heat Pump system (or under the BS Box in Heat Recovery system) as pseudo simultaneous cooling and heating operation.

Schedule

Weekly Schedule with dual setpoints for the occupied period and Setback setpoints for the unoccupied period provides year round schedule programming.

- Up to 100 schedule programs can be created with up to 20 events per day.
- 7 day, 5+2 (Weekday + Weekend), 5+1+1 (Weekday + Saturday + Sunday), 1 (Everyday) weekly patterns are available with Annual scheduling that provides 5 special day programs for holiday scheduling or events outside the weekly schedule.
- Special day programming can be specified on calendar as a specific day (like Jan 1st) or a floating day (like 1st Monday in September).
- Timer Extension offers 30 to 180 minutes (configurable) Override in the unoccupied period.
- Optimum Start maintains the room temperature at the setpoint at the scheduled event time.
Remote Monitoring / Maintenance

• The Web function enables remote management for the Daikin VRV system with other general equipment integrated into iTM that can be accessed from your PC (*).

• All operations and system configurations which you can do on the iTM touch screen can be done through Web access.
  - Up to 4 administrators and 60 general users can be registered.
  - Screens and operation accessible to general users can be restricted.

• Automatic Alert/Error e-mail enables prompt response by service persons based timely and precise knowledge of what happened in the system at the remote site.
  - Up to 10 e-mail addresses can be set.
  - The SMTP server authentication method is selectable from no authentication, POP before SMTP, and SMTP-AUTH.

(*) Flash Player is required.

Tenant Billing (PPD Option)

iTM PPD (Power Proportional Distribution) option records all the operation duration, room temperature, electronic expansion valve opening ratio data, etc. Based on the recorded data, the energy consumption of the VRV system is proportionally calculated for each indoor unit. The calculated data can be used for tenant billing.

Easy to output PPD data
PPD data can be download in CSV format to a PC or USB flash drive.
Integration of General Equipment

The integration of non-Daikin equipment will bring the equipment into iTM schedule / manual operation as well as Web functional remote management platform and Alert/Error e-mail notification.

- ON/OFF operation and status monitoring
- Get Alert/Error e-mail upon malfunction
- Manage with remote accessibility

Interlock Variety

The iTM offers monitoring and control that extends beyond simply starting and stopping connected units. It also enables the iTM to control the HVAC and ancillary equipment through interlock control such as occupancy control and demand response ventilation.

**Example 1** HVAC interlock based upon room occupancy status

Key control systems and occupancy sensors are employed to detect room occupancy status and automatically perform setback or stop operations for unoccupied rooms depending on settings.

**Example 2** Ventilation control

Ventilation equipment is controlled depending on the indoor CO₂ levels. Air conditioning load caused by excess ventilation is reduced for better balance to save energy while maintaining appropriate indoor air quality.

Emergency stop for localized fire protection areas

The iTM offers options to select areas or the whole system to interlock with the fire alarm system and to perform an emergency stop.
Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Intelligent Touch Manager (iTM)</th>
<th>ITM Plus Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>DCM601A71</td>
<td>DCM601A72</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC 24V 60Hz</td>
<td>AC 24V 60Hz</td>
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<tr>
<td>Power consumption</td>
<td>23W maximum</td>
<td>23W maximum</td>
</tr>
<tr>
<td>Operating conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surrounding temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity</td>
<td>15% to 85% RH (non condensing)</td>
<td>15% to 85% RH (non condensing)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>9.57 x 11.42 x 1.97</td>
<td>5.87 x 6.30 x 2.41</td>
</tr>
<tr>
<td>Accessible units</td>
<td>Max. number of indoor unit</td>
<td>64 addressed indoor unit groups (maximum 128 indoor units)</td>
</tr>
<tr>
<td></td>
<td>Max. number of outdoor unit</td>
<td>10</td>
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<tr>
<td>Interface</td>
<td>F1F2 (Daikin DIII-NET communication)</td>
<td>1</td>
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<tr>
<td></td>
<td>100Base-TX (Ethernet communication)</td>
<td>1 (RJ-45)</td>
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<tr>
<td></td>
<td>USB port (for flash memory drive)</td>
<td>1 (2 to 32 GB)</td>
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<tr>
<td></td>
<td>RS-485 (for ITM Plus Adapter connection)</td>
<td>1 (2-wire polarity sensitive)</td>
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<tr>
<td>Input terminals</td>
<td>Di (Digital input for forced shutdown)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Di/Pl (Digital/Pulse input)*</td>
<td>3</td>
</tr>
<tr>
<td>EMC certification</td>
<td>FCC Part 15 Class B</td>
<td>FCC Part 15 Class B</td>
</tr>
</tbody>
</table>

* Pulse input from kWh meter requirements: 1 pulse to 1KWh or 10KWh. Pulse width must be between 40-400 msec. Non voltage, normally open semi-conductor type.

Options for intelligent Touch Manager

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Software</td>
<td>DCM002A71</td>
<td>Power Proportional Distribution (PPD) **</td>
</tr>
<tr>
<td>Interface Adapters</td>
<td>KRP928BB2S</td>
<td>For connection to Daikin Mini-Split system (connect to Indoor Unit)</td>
</tr>
<tr>
<td>Digital input (DI) unit</td>
<td>DEC101A51-US2</td>
<td>8 sets of Operation status input and Alarm input</td>
</tr>
<tr>
<td>Digital input/output (DIO) unit</td>
<td>DEC102A51-US2</td>
<td>4 sets of Control output, Operation status input and Alarm input</td>
</tr>
</tbody>
</table>

** The power proportional distribution (PPD) feature supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin VRV system. Because input to the PPD includes measured pulses in the refrigerant system and because the VRV system includes a number of variables, including the operating temperatures and pressures, piping lengths, heat exchange rates, and so forth, no meter-type apportionment of individual user consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology and is applied to the many variables in the VRV system.