

MITSUBISHI ELECTRIC
HEATING & AIR CONDITIONING

Light Commercial Solutions

All-electric, all-climate heating and cooling



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Heat Pump Solutions for Light Commercial Applications

Mitsubishi Electric's all-climate heat pump technology is an optimal solution for Light Commercial applications, offering individual zoning for tailored comfort, efficient operation for cost savings, and superior air filtration for a healthier environment, all in an eco-friendly package.

Manage your costs and comfort with zoned control

Unmatched Quality, Uncompromising Control

Enjoy superior comfort control with our intelligent and efficient systems. In addition to being quiet, our systems provide extraordinary service life for a lower cost of ownership.

Create Comfort Zones

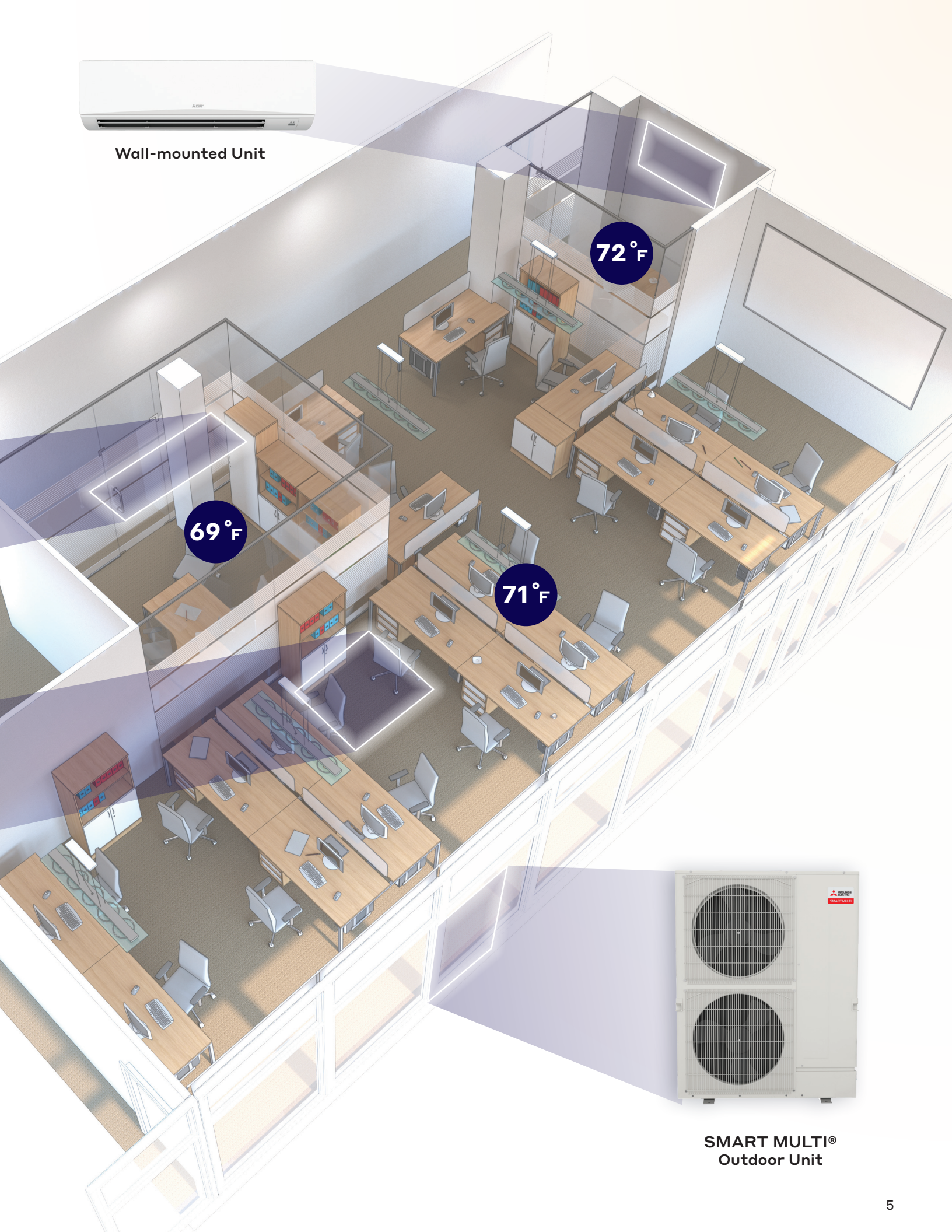
Assign a reception area, private office, conference room or warehouse to a different “zone” so each space is always comfortable. Customize the set point for each area and the SMART MULTI® will quietly maintain the temperature while using the least amount of energy needed. Infrequently used and non-occupied spaces can be conditioned only when in use for additional energy savings.



One-way
Ceiling-recessed

Four-way
Ceiling-recessed

A more efficient and environmentally friendly way to cool and heat your light commercial projects.


Wall-mounted Unit
72 °F
69 °F
71 °F
SMART MULTI®
Outdoor Unit



How It Works

The essential components of the SMART MULTI system are the outdoor unit, indoor units, and the comfort controls. The system operates by transferring heat to and from the outdoor unit to one or more indoor units. The units are connected by pipes containing refrigerant, a substance that absorbs heat.

In cooling mode, the refrigerant absorbs heat inside the space and produces colder air by transferring refrigerant from the indoor units to the outdoor unit, where the heat is expelled.

In heating mode, the process is reversed. Refrigerant absorbs heat from the outside air and provides warmth by transferring the refrigerant from the outdoor units to the indoor units. All-climate heat pumps, such as SMART MULTI, can reach up to 300-400% efficiency. They achieve this by generating three to four times the energy in heating and cooling than they use in electricity.

The SMART MULTI outdoor unit is equipped with an inverter that enables it to quickly change the amount of power it uses and the amount of refrigerant it transfers to and from the indoor units. This allows it to only use the precise amount of power needed to reach and maintain a preferred temperature.

All-Climate Comfort

With our Hyper-Heating INVERTER (H2i®) technology, SMART MULTI can operate in outdoor temperatures as cold as -13° F. H2i systems are well-suited for climates in the northern half of the United States, and are available in 36K, 42K and 48K capacities.







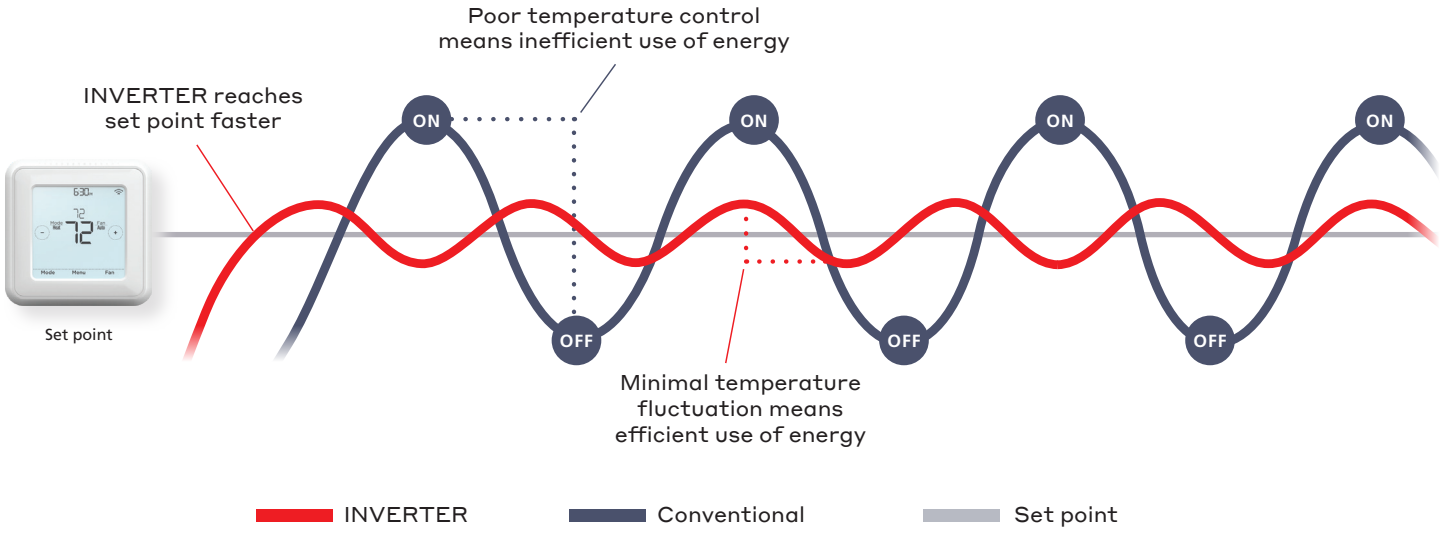


The Inverter Advantage

Mitsubishi HVAC systems operate at ultra-quiet sound levels and use minimal energy to maintain each zone's set point. The outdoor unit's INVERTER-driven compressor varies fan speeds and the amount of refrigerant delivered to the indoor units, so the capacity and energy use match the real-time conditioning needs of the zones. As conditioning demands fluctuate with occupancy, activities and outdoor temperatures, the INVERTER-driven system ramps up and winds down as needed to keep indoor temperatures steady. The continuous operation of Mitsubishi HVAC systems fans also helps distribute air, eliminate hot and cold spots and prevent the need to blow air at high velocities. This method provides more precise comfort control, quieter operation and greater energy efficiency than conventional systems. Traditional systems use a fixed-speed compressor, which noisily cycle the unit on and off whenever the room dips below desired temperatures. This system relies on an all-or-nothing philosophy—with the compressor running at either zero or 100 percent. This can lead to unpleasant and energy-intensive temperature swings as the system strains to maintain a constant temperature.

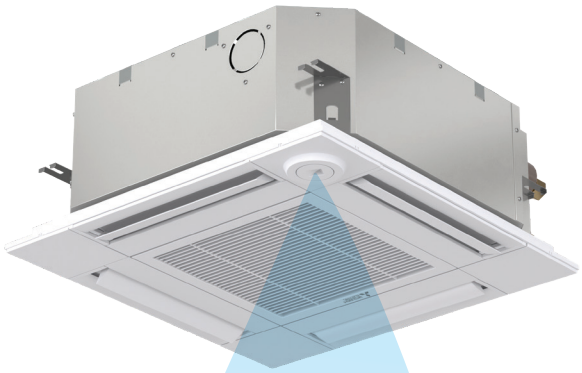


INVERTER vs. Conventional System Operation



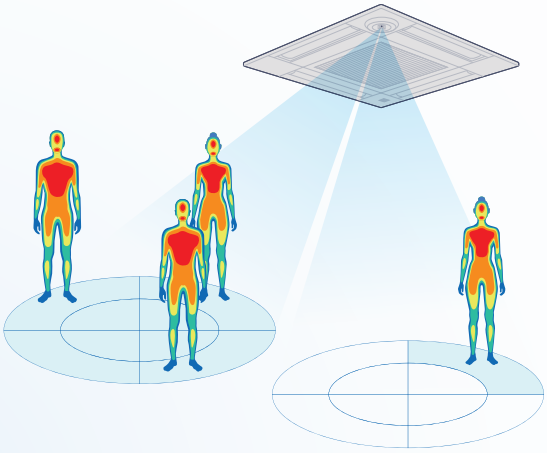
3D i-see Sensor®

Available with select indoor unit models, the 3D i-see Sensor increases the sensitivity of the system and gives you opportunities to further customize comfort in your space. The sensor scans each room to produce a thermal profile that includes heat signatures based upon size, temperature and movement. The 3D i-see Sensor can detect and eliminate cold or hot spots and can determine whether a room is occupied.

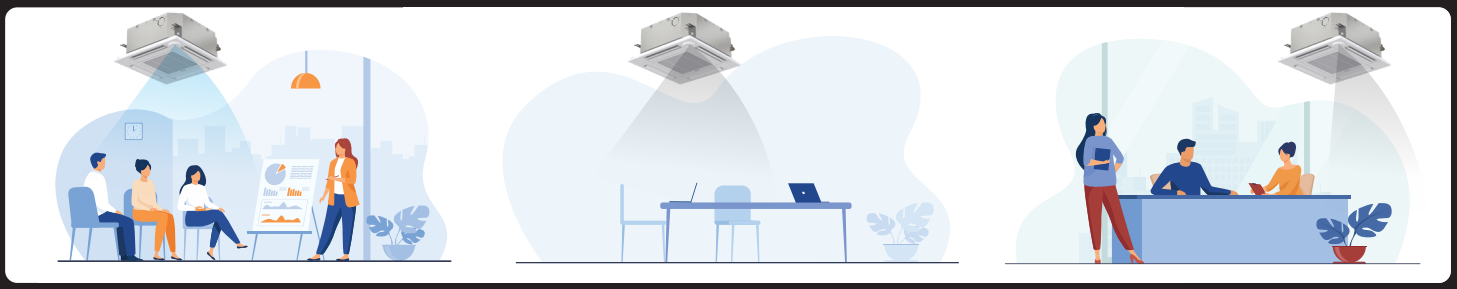


Advanced Occupant Detection

Select ceiling-recessed indoor unit models are equipped with sensors that rotate a full 360° in three-minute intervals. This allows the units to detect human body temperature and use an algorithm that calculates the number of people in the room as well as their positions. The 3D i-see Sensor maximizes comfort by automatically adjusting its output based on occupancy.







Direct Airflow

Set your indoor units to send airflow directly toward occupants.

Absence Detection

When no one is in the room, the 3D i-see Sensor can direct your indoor units to enter an energy-saving mode.

Indirect Airflow

This setting is useful when the occupant does not wish to have air blowing directly on them.



Understanding Zones



We offer both single and multi-zone systems. With single zone equipment, one outdoor unit connects to one indoor unit. This option is ideal if you only need to heat and cool a single space.

With multi-zone equipment, three-phase SMART MULTI® outdoor units can connect up to 12 M- and P-Series indoor units or 30 CITY MULTI indoor units. The single-phase SMART MULTI outdoor units can connect up to 8 M- and P-Series indoor units and 12 CITY MULTI indoor units. This option is perfect if you need cooling and heating in multiple spaces with different functions, such as a front office versus a kitchen or an office versus a conference room.

Each zone is served by its own indoor unit. Indoor units come in a variety of forms including wall-mounted units, floor-mounted units, ceiling-recessed units and ducted options.

Wall-mounted units tend to be the most popular, but a floor-mounted unit could be an attractive option for an office that has windows, but no wall space. A high-performance air handler could replace an older system, such as a central system or boiler that previously cooled or heated an open space.



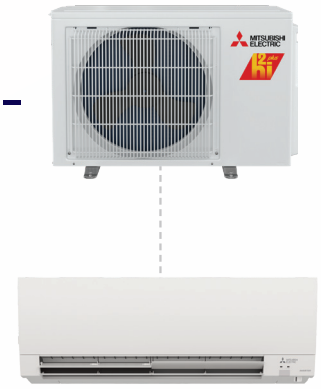
Single-zone



Multi-zone

A single-zone system is ideal if you only need cooling and heating in a **single zone.**

One outdoor unit connects to one indoor unit.



Multi-zone systems are designed for cooling and heating **multiple spaces.**

Three-phase SMART MULTI can connect to as many as 12 M- and P-Series indoor units and up to 30 CITY MULTI units, while Single-phase SMART MULTI® connects to as many as 8 M- and P-Series indoor or 12 CITY MULTI® indoor units. Connectable capacity is dependent on the outdoor model number.

SMART MULTI with Branch box and M- & P-Series Indoor Units



SMART MULTI with CITY MULTI Indoor Units





M-Series Single-zone Indoor Units



MSZ-FS
Wall-mounted Unit



SVZ
Multi-position Air Handler



MSZ-GS Model
Wall-mounted Unit



MFZ
Floor-mounted Unit



MSZ-JP 115V
Wall-mounted Unit



SLZ
Ceiling-recessed Unit



MSZ-WR, MSZ-HM
Wall-mounted Unit



SEZ
Horizontal-ducted Unit



MLZ
EZ FIT® Ceiling-recessed

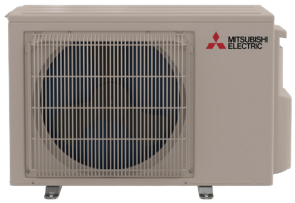


PEAD Mid-static
Horizontal-ducted Unit

M-Series Outdoor Units

Cooling Only

MUY





Heating Pumps

MUZ-GS
MUFZ-KJ
SUZ
MUZ-HM
MUZ-JP
MUZ-WR





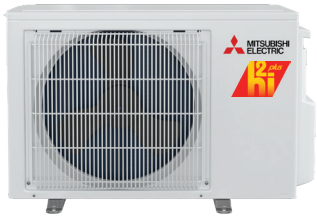
Hyper-heating INVERTER® Heat Pumps

MUZ-FS
MUZ-GS
SUZ













P-Series Single-zone Indoor Units



PKA

Wall-mounted Unit



PEAD Mid-static

Horizontal-ducted



PCA

Ceiling-suspended Unit



PLA

Four-way Ceiling-recessed



PAA

Cased Coil



PVA

Multi-position Air Handler

P-Series Outdoor Units

Cooling Only



PUY 12/18



PUY 24/30



PUY 36/42

Heat Pumps



PUZ 12/18



PUZ 24/30



PUZ 36/42

Hyper-heating INVERTER® Heat Pumps



PUZ-HA24NHA1



PUZ30/36/42

Reliable Systems For Light Commercial Buildings

Designed to meet the needs of light commercial and residential applications, these single-zone systems are perfectly suited for mechanical/electrical areas where critical cooling is needed.



Indoor Unit Features

Single-zone

One outdoor unit connects to one indoor unit and provides comfort in one zone.

Multi-zone

One outdoor unit connects to up to thirty indoor units and provides comfort in multiple zones.

3D i-see Sensor®

The 3D i-see Sensor® scans each room to produce a complete thermal profile that includes heat signatures based upon size, temperature and movement.

Nano-platinum Filter

This filter has a large capture area and incorporates nanometer-sized platinum-ceramic particles and is designed to neutralize microbial concentrations while deodorizing the circulating air.

Swing Mode

An indoor unit with this capability can move air throughout the room like an oscillating fan.

Powerful Mode

Powerful Mode temporarily drops or raises the set temperature for 15 minutes so that automatic fan speed adjustments made possible by the INVERTER will more quickly bring your room to your desired temperature.

Econo Cool

Econo Cool adjusts the amount of air directed towards occupants based on the air-outlet temperature.

Outdoor Unit Features

Flash Injection

As temperatures drop outside, the compressor speeds up to maintain indoor comfort. The flash injection process supplies a small amount of cooler refrigerant back to the compressor, reducing excess heat from increased speeds; allowing it to run faster and produce high heating performance. This also enables the system to achieve set points faster, maintain efficiency, and recover quickly after defrost cycle.

Hyper-Heating INVERTER®

Hyper-Heating INVERTER® models provide heating even with ambient outdoor temperatures as low as -13°F, producing up to 100% heating capacity at 5° F. These units offer year-round comfort even in extreme climates.

INVERTER-driven Compressor

Our energy-efficient INVERTER-driven compressor can vary its compressor speed and refrigerant flow to produce the precise capacity needed to reach and maintain the desired temperature set point. A conventional compressor turns on at full power to reach the desired set point, then shuts off. This on/off operation uses more energy and results in room temperature fluctuations.

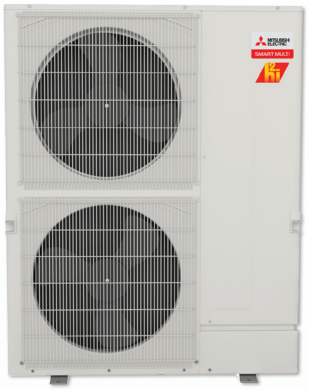
Blue Fin

Particularly beneficial in coastal areas, this anti-corrosion treatment applied to the aluminum fins of the heat exchanger of the outdoor unit prevents the corrosion caused by salt, sulfur, and other airborne contaminants that impacts efficiency and performance. Blue Fin coatings are rated, per ASTM B117 Standard, for a duration of 2,000 hours.





SMART MULTI®
Outdoor Units



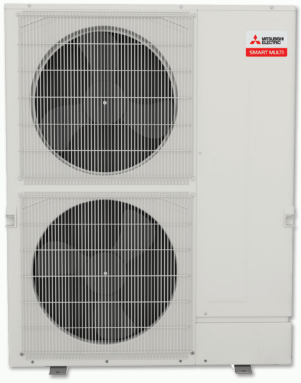
MXZ-SM H2i®

The SMART MULTI (MXZ-SM) outdoor unit lineup includes Hyper-heating INVERTER® (H2i) technology. SMART MULTI is a single-phase heat pump ideal for residential and light commercial applications including banks, churches, schools, retail centers, and more.

Key Features

- 100% heating capacity at 5° F
- Up to 78% heating capacity down to -13° F utilizing flash injection technology
- ENERGY STAR® certified units
- Base pan heater standard on all models
- Blue Fin condenser coating standard on all models
- Available in 36,000, 42,000, and 48,000 BTU/H capacities

Low ambient operation requires the use of low ambient accessories such as a WB-PA3 Wind Baffle.



MXZ-SM

SMART MULTI (MXZ-SM) systems are single-phase outdoor units with inverter technology, offering an ideal fit for residential and light commercial applications. Featuring best-in-class efficiency ratings and ENERGY STAR certified units, SMART MULTI systems are designed to deliver operational cost savings and long-term performance. The systems use an integrated controls network and cool or heat up to 12 CITY MULTI® or up to 8 M- and P-Series individual zones with a variety of indoor unit styles.

Key Features

- Single-phase 208/230V operation for use in light commercial and residential applications
- Systems available from 36,000, 48,000, and 60,000 BTU/H
- Blue Fin condenser coating standard on all models
- Extended heating operating range down to -13º F
- Extended cooling operating range down to 5º F
- Connect up to 12 indoor units, allowable indoor units will vary based on CITY MULTI or M- and P-Series

Low ambient operation requires the use of low ambient accessories such as a WB-PA3 Wind Baffle.





MXZ-SM***TAM

SMART MULTI® (MXZ-SM***TAM) systems are three-phase outdoor units with inverter technology, offering an ideal fit for light commercial applications. Featuring best-in-class efficiency ratings and ENERGY STAR® certified units, SMART MULTI three-phase systems are designed to deliver operational cost savings and long-term performance. These new units come in 6-, 8-, and 10-ton capacities.

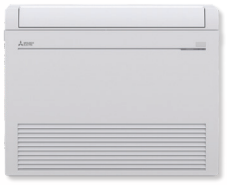
Key Features

- Three-phase 208/230V operation for use in light commercial and residential applications
- Systems available from 72,000, 96,000, and 120,000 BTU/H (6-, 8-, and 10-ton)
- Blue Fin condenser coating standard on all models
- Extended cooling operating range down to 5º F * (requires wind baffles)
- Connect up to 23 indoor units on the 6-ton and 30 indoor units on the 8- and 10-ton system

M- & P-Series Indoor Units that are Connectable to SMART MULTI®



MSZ-FS
Wall-mounted Unit



MFZ
Floor-mounted Unit



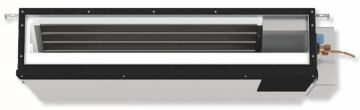
MSZ-EF
Wall-mounted Unit



SLZ
Ceiling-recessed Unit



MSZ-GS Model
Wall-mounted Unit



SEZ
Horizontal-ducted Unit



MLZ
EZ FIT® Ceiling-recessed



PEAD
Horizontal-ducted Unit



PLA
Four-way Ceiling-recessed



PAA
Cased Coil



SVZ
Multi-position Air Handler

CITY MULTI® Indoor Units that are Connectable to SMART MULTI®



PLFY-EP NEMU-E
Ceiling-recessed



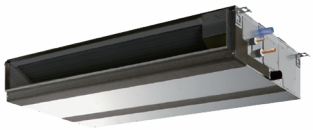
PLFY-P NFMU-E
Ceiling-recessed



PMFY-P NBMU-E
Ceiling-recessed



PEFY-P NMSU-E
Ceiling-concealed Unit



PEFY-P NMAU-E3
Ceiling-concealed Unit



PEFY-P NMHU-E2, PEFY-P NMHSU-E
Ceiling-concealed Unit



PEFY-P NMHU-E-OA
Ceiling-concealed Unit



PKFY-P NLMU-E
Wall-mounted Unit



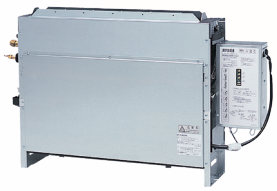
PKFY-P NKMU-E2
Wall-mounted Unit



PCFY-P NKMU-E
Ceiling-suspended Unit



PFFY-P NEMU-E
Floor-standing Unit



PFFY-P NRMU-E
Floor-standing Unit

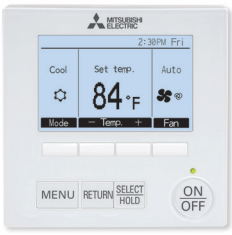


PVFY-P NAMU-E1
Multi-position Air Handler



PEFY-AF1200CFMR-E
Dedicated Outdoor Air System (DOAS)

Controls



Deluxe MA Controller

PAR-40MAAU

Use the Deluxe MA zone controller to adjust mode, fan speed, airflow, and many more advanced settings. Temperature sensing can be configured to read at the controller or the indoor unit. This controller also features scheduling capabilities and an easy-to-navigate screen.

- Controls up to 16 zones
- Large easy-to-see back lit LCD with two display modes: Full or Basic
- Interlock and control Lossnay units
- Controls air direction (vane direction and ventilation)
- Dual set point functionality



kumo touch™

MHK2

The kumo touch wireless remote controller can be mounted onto any wall, without the need to pull a wire toward hard-to-reach locations. Set custom schedules and easily change mode between Cool, Heat, Dry and Fan.

- Wireless RedLINK remote controller and receiver
- Large, back lit, easy-to-read touchscreen display
- Fahrenheit or Celsius
- Dual set point control with system change over
- Works with Wireless Interface 2 on all CITY MULTI®, P-Series, and M-Series indoor units



Simple Ductless Wired Controller

PAC-SDW01RC-1

This low cost remote controller is a perfect choice for multi-family applications. It features a color screen, is programmable, has temperature and humidity sensing. The SDW works with existing thermostat wire (50 foot max), making this a valuable time saver when replacing controllers.

- Three buttons and a dial
- Wired communicating connection
- Standard operation commands
- Auto DRY function (COOL -> DRY -> COOL)



Touch MA Controller

PAR-CT01MAU-SB

The Touch MA zone controller boasts a 180 options touchscreen user interface that is simple to use. Personalize the home screen with a company logo.

- Controls up to 16 indoor units
- Back lit LCD
- On/Off timer: turns on and off daily at a set time
- Bluetooth® app for users & installer



Simple MA Controller

PAC-YT53RAU

Use the Simple MA remote controller to adjust mode, fan speed, airflow, and more. Temperature sensing can be configured to read at the controller or the indoor unit. This controller allows group operation for up to 16 indoor units.

- Operation modes of Cool, Heat, Dry, Fan, Auto, Ventilation, and Setback (depending on connected equipment)
- Back lit LCD



works with the Google Assistant · works with alexa · Works with IFTTT

Download on the App Store · GET IT ON Google Play

kumo® cloud

kumo cloud is an app-based control interface managed from a smartphone or tablet. Adjust room temperature, set schedules, view alarms, and much more. kumo cloud uses a patented algorithm to automatically change the system from to heating mode and back to cooling mode based on surveying each zone.

- Compatible with all indoor units
- Requires the Mitsubishi Electric Wireless Interface (PAC-USWHS002-WF-2)
- Easy to connect the device to your router using the kumo cloud app
- Intuitive settings for simplified use:
  - Group units together
  - Organize groups into sites
  - Batch command units
- Error and filter status pop-up
- Advanced functions settings for M- and P-Series equipment



kumo station®

PAC-WHS01HC-E

kumo station expands the capabilities of kumo cloud to allow homeowners and building managers to manage cooling, heating, humidification and ventilation based upon ambient conditions and personal comfort preferences. The equipment controller, with outdoor air temperature monitoring, integrates with third-party equipment including two-stage auxiliary heaters, humidifiers, dehumidifiers and ventilation equipment.

- Four outputs to control auxiliary heat, humidifier, dehumidifier, ERV or HRV
- Controls one or two stages of supplemental heat
- Wireless Interface 2 required to connect to kumo cloud
- 24 VAC power supply required. Supplied by others
- Compatible with kumo cloud 2.6 or later

Control interfaces



Wireless Interface 2

PAC-USWHS002-WF-2

This device allows for a Mitsubishi Electric indoor unit to communicate with to the kumo cloud app and web service.

- Connection via Wi-Fi network
- Connected to indoor unit by CN105
- One Wireless Interface required per connected indoor unit



Wireless Temperature and Humidity Sensor

PAC-USWHS003-TH-1

The sensor relays temperature and humidity to the app, allowing the interface that connects to your unit allows you to control the system through the kumo cloud app. One wireless sensor can be configured for each wireless interface.

- One wireless remote sensor per Wireless Interface 2
- Connects via Bluetooth Low Energy with Wireless Interface 2
- Battery powered (up to 1 year battery life)
- Push notifications when battery is low through kumo cloud app



Outdoor Air Temperature Sensor

C7089U1006/U

This device works with the kumo station® to sense outdoor air ambient temperature.

- Set outside air temperature limits to control backup heat and heat pump staging
- Wire length can be a maximum of 200 ft (60.9 m) with field supplied 18/2AWG wire
- Operating Ambient Temperature Range: -40° F to 120° F (-40° C to 49° C)
- Wire length 60 ft (18.3 m) in the box



IT Extender

PAC-WHS01E-E

Adding the IT Extender to the indoor unit CN105 connection extends the connection by 50 feet.

- Allows for a CN105 device to be located in a better location for strength or visibility
- Operating Ambient Temperature Range: 40° F to 120° F (-40° C to 49° C)
- Works with kumo station, Wireless Interface 2, and USNAP Interface

CITY MULTI® Controls

Centralized Controllers



EW-50

The EW-50A is the Expansion Controller that operates and monitors up to 50 indoor units via a web browser when added to an AE-200 Main Central Controller network. A single network, comprised of one central controller and three expansion controllers, can manage and monitor a maximum of 200 different indoor units.

- E W-50A can be a Master Controller or Expansion Controller
- Master Controller can operate and monitor up to 50 indoor units
- Expansion Controller can expand an AE-200A to operate and monitor up to 50 additional indoor units through the touch screen or web browser
- Network up to three EW-50A to one AE-200A to allow the AE-200A to manage up to 200 indoor units



AE-200

The AE-200 combines the power of a touch screen with the remote capabilities of an internet browser interface. The AE-200A is our most capable central controller for managing your CITY MULTI®, P-Series, M-Series, and peripheral systems.

- AE-200A is the Master Controller
- Master Controller can operate and monitor up to 50 indoor units
- Expansion Controllers can expand an AE-200A to operate and monitor up to 50 additional
- Network up to three AE-50A or EW-50A to one AE-200A to allow the AE-200A to manage up to 200 indoor units

Zone Controllers



Smart ME Controller

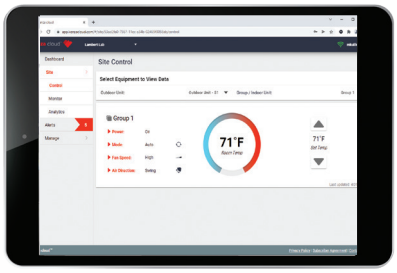
PAR-U01MEDU-J

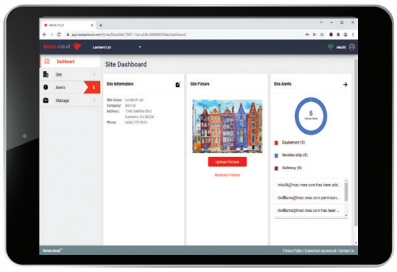
The Smart ME features basic functions such as operating and monitoring air conditioning units and schedule-control functions. This controller has four built-in sensors (temperature, humidity, occupancy, brightness), enabling integrated system control.

- Intuitive back lit touch screen
- Group control up to 16 indoor units in a single zone
- Supports dual set point and setback functions
- Color glow status indicator LED bar

Commercial Cloud Connected Controls

kenza cloud™

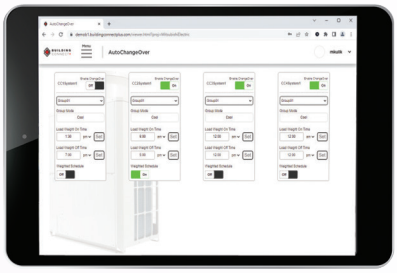


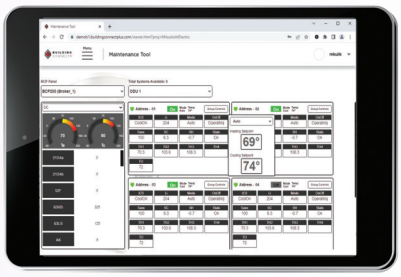


Introducing an Internet of Things (IoT) solution for light to medium commercial spaces where a central controller is not typically needed, but cloud access for monitoring and basic control is required. Introducing kenza cloud, a simple M-NET-direct to cloud architecture to monitor your CITY MULTI® equipment.

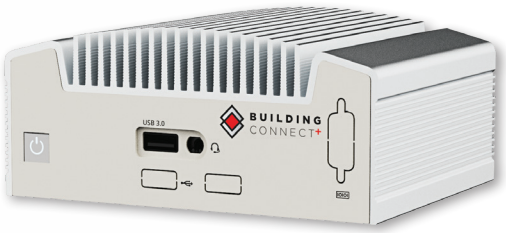


BUILDING CONNECT+





A cloud-based integration platform and intuitive graphical interface allows for secure web connectivity and system access without the need for special tools or software programs by the installing contractor.



BCP-200

Seamlessly connect up to:

- 200 VRF indoor units
- 10 BACnet devices
- 4 Central Controllers


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