

# APPLYING VRF AND THIRD-PARTY HVAC SYSTEMS

The rising cost of energy, coupled with modern construction requirements, has accelerated a worldwide drive toward more sustainable building. Consequently, the demand for [Variable Refrigerant Flow](#) (VRF) systems has increased as more facility managers, building owners and engineers recognize how their facilities will struggle to achieve energy efficiency and sustainability targets without high-performance mechanical systems.



## SYSTEM INTEGRATION

Both new construction and retrofit projects often call for VRF systems to be applied with complementary or legacy third-party equipment, requiring facility managers to manage systems from multiple HVAC manufacturers.

In recognition of this fact, VRF manufacturers offer equipment to support better integration with third-party equipment. For example, Mitsubishi Electric offers linear expansion valve (LEV) kits to connect the expansion coils of third-party air handlers to VRF condensers. Such a kit would be useful in an application where a facility uses a [CITY MULTI® VRF system](#) and a [PremiSys® Dedicated Outdoor Air System](#) (DOAS) from Mitsubishi Electric, but has special ventilation requirements that necessitate use of an air handler to support supply-air control.

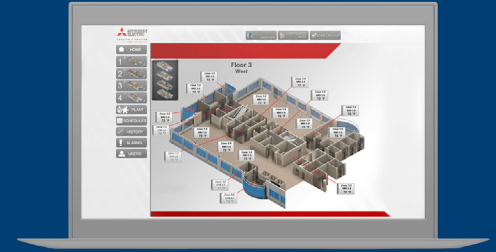
## UNPRECEDENTED CONTROL

For greater control and insight into the operation of both VRF and third-party HVAC equipment, Mitsubishi Electric also provides the building management system (BMS) for a facility. Building owners and facility managers can expect peak performance of VRF systems along with top-quality control, more efficient operation and a higher level of information available at greater speed due to the manufacturer's access to the largest number of VRF system points. And through the VRF controls, facility managers are able to streamline their management of complementary HVAC equipment including boilers, chillers, auxiliary heating systems and ventilation systems.

To learn more, read our latest White Paper, [Applying VRF and Third-Party HVAC Systems](#).

# UNPRECEDENTED CONTROL WITH DIAMOND CONTROLS™

Today's building owners and facility managers demand comprehensive control. Fortunately, it's now easier than ever to have high-level control right at your fingertips. Diamond Controls™ solutions allows for the integration and management of multiple mechanical systems within a building, or even a portfolio of buildings, of any size, within a single interface. Use of Diamond Controls solutions leads to increased efficiency, improved building operation and simplified facility monitoring. Visit [mitsubishipro.com](http://mitsubishipro.com) to learn more.



## FEATURES

- Multi-system control across multiple spaces within one or more buildings
- High-resolution 3D interface
- Runs on Tridium's Niagara Framework® software
- Superior security measures, including advanced authentication

## UBER ADVANCED TECHNOLOGIES GROUP



### CHALLENGE

Selecting a streamlined HVAC system and controls platform for a multifunctional office space

### SOLUTION

CITY MULTI® Variable Refrigerant Flow technology + Diamond Controls™

### RESULT

An energy-efficient, comfortable office building with ventilation and HVAC tied in to one controls interface

## PROJECT DETAILS

- Located in Pittsburgh, Pennsylvania
- New 110,000-square-foot campus needed zoned conditioning and specialized ventilation for multi-use spaces
- Combination of mechanical systems called for integrated, comprehensive controls platform

**“Mitsubishi Electric was able to provide a single source contact for the VRF system, ventilation equipment and building controls. It's not often you can have one company responsible for all three. It makes for a better overall project whenever that happens.”**

**— Justin Kern, Comfort Supply Inc.**