

FUJITSU

Refrigerant  
**R410A**  
INVERTER

# AIRSTAGE™

VREF

Variable  
Refrigerant  
Flow System

Heat Pump

*J-II* 208/230V, 1-Phase

*V-II* 208/230V, 460V 3-Phase

Heat Recovery

*VR-II* 208/230V, 460V 3-Phase

# AIRSTAGE™

**J-II Heat Pump** 208-230V 1-Phase

**V-II Heat Pump** 208-230V 3-Phase, 460V 3-Phase

**VR-II Heat Recovery** 208-230V 3-Phase, 460V 3-Phase

Airstage VRF systems provide an efficient heating and cooling solution for your entire building, using advanced controls and simple building management integration.



## Multiple Communication Options

- BACnet® Gateway (Software)
- BMS / LONWORKS®
- Modbus Converter
- Internet



VR-II Heat Recovery System shown here.

## Service Tool

UTY-ASGX Software

Extensive monitoring and analysis functions for installation and maintenance.

Control and Monitor Up To  
**100**  
Outdoor units

Control and Monitor Up To  
**400**  
Indoor units



## Third Party Economizer and Filter Boxes

Fujitsu, through associated third parties, provides solutions to building energy consumption as well as indoor air quality. Ask Fujitsu about Economizer solution and Filter Boxes' options for Airstage ducted units.

## Variable Refrigerant Flow Systems

For Small and Large Buildings

- Extensive lineup from 3 to 24 Tons
- Connectable capacity ratio up to 150%
- 45 different indoor units available in 11 styles
- Up to 45 indoor units per one VRF system
- Three outdoor V-Series units may be combined with twining kits to create up to 24 tons
- 10-Year Parts and Compressor Warranty. See Warranty Statement for details.
- Extensive training for Engineers, Architects, Contractors and Distributors

## High Energy Efficiency

**V-II /** UP TO 30.1 SCHE  
**VR-II** UP TO 24.1 IEER

**J-II** UP TO 19.8 SEER  
UP TO 11.4 HSPF



208-230V, 1-Phase		208-230V, 1-Phase		208-230V, 1-Phase		208-230V, 1-Phase		208-230V, 1-Phase		208-230V, 1-Phase		208-230V, 1-Phase		208-230V, 1-Phase	
 AOU36RLAVM		 AOU48RLAVM		 AOU60RLAVM											
3-Phase Power Source: <b>LBV = 208-230V, LCV = 460V</b>															
Outdoor units lineup	V-II Heat Pump					V-II Heat Pump					V-II Heat Pump				
	72,000 BTU (6 Tons) 21.1kW (8HP)	96,000 BTU (8 Tons) 28.1kW (10HP)	120,000 BTU (10 Tons) 35.2 kW (12HP)	144,000 BTU (12 Tons) 42.2kW (16HP)	168,000 BTU (14 Tons) 49.2kW (18HP)	192,000 BTU (16 Tons) 56.2kW (20HP)	216,000 BTU (18 Tons) 63.3kW (24HP)	240,000 BTU (20 Tons) 70.3kW (26HP)	264,000 BTU (22 Tons) 77.3kW (28HP)	288,000 BTU (24 Tons) 84.3kW (30HP)	192,000 BTU (16 Tons) 56.2kW (20HP)	216,000 BTU (18 Tons) 63.3kW (24HP)	240,000 BTU (20 Tons) 70.3kW (26HP)	264,000 BTU (22 Tons) 77.3kW (28HP)	288,000 BTU (24 Tons) 84.3kW (30HP)
	 AOUA72RLBV AOUA72RLCV	 AOUA96RLBV AOUA96RLCV	 AOUA120RLCV	 AOUA144RLBVG AOUA144RLCVG	 AOUA168RLBVG AOUA168RLCVG	 AOUA192RLBVG AOUA192RLCVG	 AOUA216RLBVG AOUA216RLCVG	 AOUA240RLBVG AOUA240RLCVG	 AOUA264RLBVG AOUA264RLCVG	 AOUA288RLBVG AOUA288RLCVG	 AOUA192RLBVG AOUA192RLCVG	 AOUA216RLBVG AOUA216RLCVG	 AOUA240RLBVG AOUA240RLCVG	 AOUA264RLBVG AOUA264RLCVG	 AOUA288RLBVG AOUA288RLCVG
	72,000 BTU (6 Tons) 21.1kW (8HP)	96,000 BTU (8 Tons) 28.1kW (10HP)	120,000 BTU (10 Tons) 35.2 kW (12HP)	144,000 BTU (12 Tons) 42.2kW (16HP)	168,000 BTU (14 Tons) 49.2kW (18HP)	192,000 BTU (16 Tons) 56.2kW (20HP)	216,000 BTU (18 Tons) 63.3kW (24HP)	240,000 BTU (20 Tons) 70.3kW (26HP)	264,000 BTU (22 Tons) 77.3kW (28HP)	288,000 BTU (24 Tons) 84.3kW (30HP)	192,000 BTU (16 Tons) 56.2kW (20HP)	216,000 BTU (18 Tons) 63.3kW (24HP)	240,000 BTU (20 Tons) 70.3kW (26HP)	264,000 BTU (22 Tons) 77.3kW (28HP)	288,000 BTU (24 Tons) 84.3kW (30HP)
	 AOUA72TLBV AOUA72LCV	 AOUA96TLBV AOUA96LCV	 AOUA120TLBV AOUA120LCV	 AOUA144TLBVG AOUA144TLCVG	 AOUA168TLBVG AOUA168TLCVG	 AOUA192TLBVG AOUA192TLCVG	 AOUA216TLBVG AOUA216TLCVG	 AOUA240TLBVG AOUA240TLCVG	 AOUA264TLBVG AOUA264TLCVG	 AOUA288TLBVG AOUA288TLCVG	 AOUA192TLBVG AOUA192TLCVG	 AOUA216TLBVG AOUA216TLCVG	 AOUA240TLBVG AOUA240TLCVG	 AOUA264TLBVG AOUA264TLCVG	 AOUA288TLBVG AOUA288TLCVG

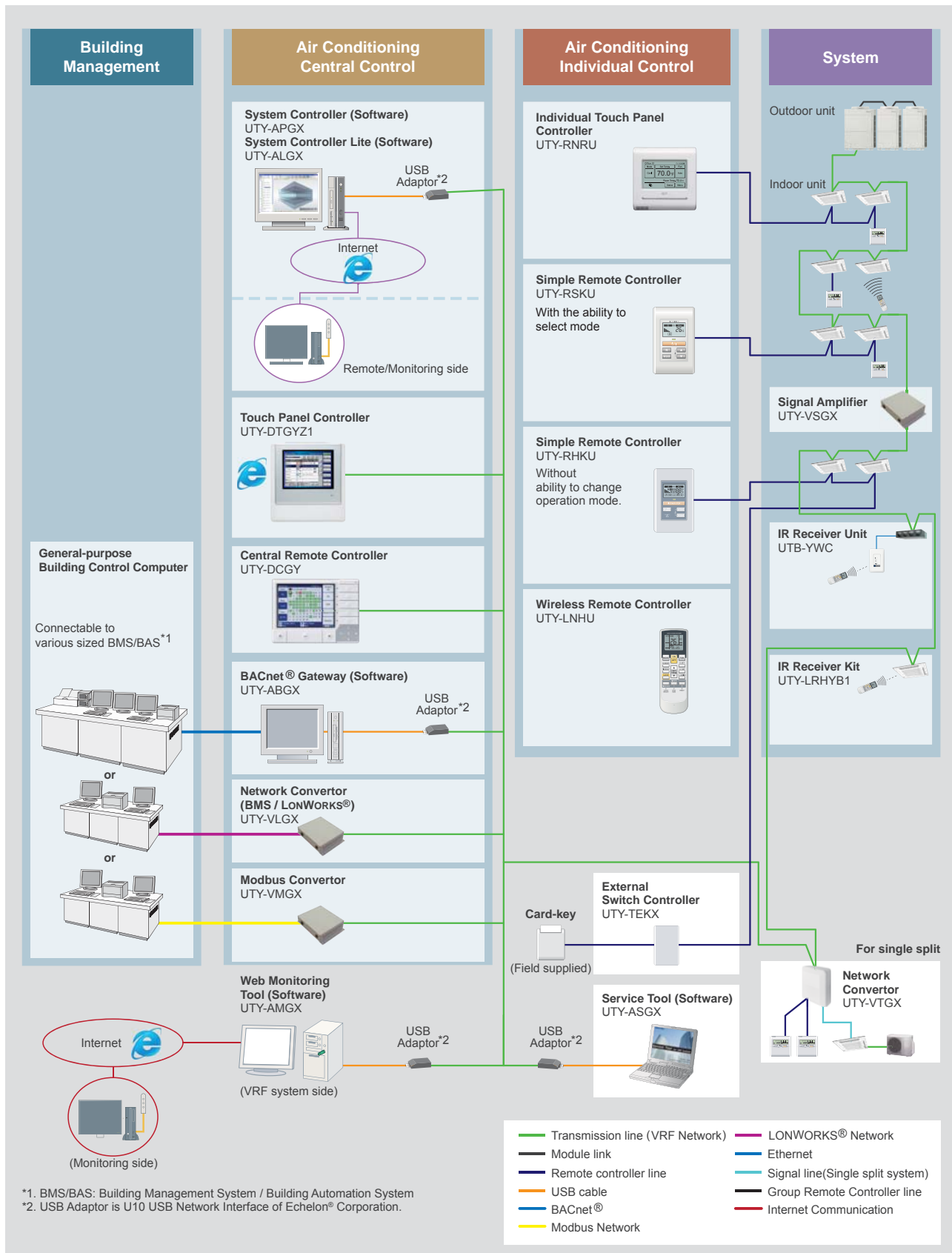
Capacity range (Btuh)	7,000	9,000	12,000	14,000	18,000	24,000	30,000	36,000	48,000	60,000	72,000	96,000
<b>Compact Cassette<sup>1</sup></b>	 AUUA7TLAV	 AUUA9TLAV	 AUUA12TLAV	 AUUA14TLAV	 AUUA18TLAV	 AUUA24TLAV						
<b>Cassette<sup>2</sup></b>					 AUUB18TLAV	 AUUB24TLAV	 AUUB30TLAV	 AUUB36TLAV				
<b>Slim Compact Duct</b>	 ARUL7TLAV	 ARUL9TLAV	 ARUL12TLAV	 ARUL14TLAV	 ARUL18TLAV							
<b>Medium Static Pressure Duct</b>						 ARUM24TLAV	 ARUM30TLAV	 ARUM36TLAV				
<b>High Static Pressure Duct</b>								 ARUH36TLAV	 ARUH48TLAV	 ARUH60TLAV	 ARUH72TLAV	 RUH96TLAV
<b>Vertical Air Handler Units</b>			 ARUV12TLAV		 ARUV18TLAV	 ARUV24TLAV	 ARUV30TLAV	 ARUV36TLAV	 ARUV48TLAV	 ARUV60TLAV		
<b>Floor / Ceiling</b>			 ABUA12TLAV	 ABUA14TLAV	 ABUA18TLAV	 ABUA24TLAV						
<b>Ceiling</b>							 ABUA30TLAV	 ABUA36TLAV				
<b>Compact Wall Mounted</b>	 ASUA7TLAV	 ASUA9TLAV	 ASUA12TLAV	 ASUA14TLAV								
<b>Wall Mounted</b>					 ASUB18TLAV	 ASUB24TLAV						

### Outdoor Air Unit

Airflow Rate (CFM (m³/h))	636 (1,080)	989 (1,680)	1,236 (2,100)
<b>Outdoor Air Unit</b>	 AAUA48TLAV	 AAUA72TLAV	 AAUA96TLAV

1 Compact Cassette Grille UTG-CCGV sold separately. Must order one with each Compact Cassette.  
2 Cassette Grille UTG-LCGV sold separately. Must order one with each Cassette.

## Control System Diagram



# Case Studies



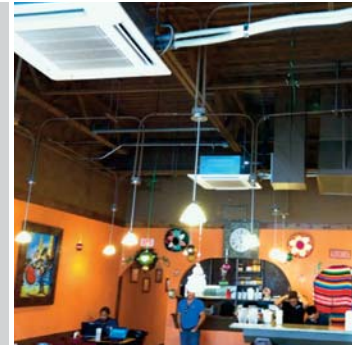
## Restaurant - 8 Tons - Kapolei, HI

### Challenge

- Limited open space for indoor units
- Structural engineer and crane required to remove rooftop unit and install a new system
- Limited space behind the building did not allow the use of a packaged unit on the ground
- Building owners strictly enforces outdoor noise requirements

### Solution

- Airstage VRF systems allow for separate zoning of the dining and kitchen areas resulting in increased energy efficiency
- The contractor was able to locate the outdoor unit on the ground, reducing the cost of the structural reinforcement



## Office Building - 22 Tons - New York City, NY

### Challenge

- The owners needed a more efficient option for conditioning the building
- Limited space - it is a single-level 3,200 square foot area
- With a mid-town Manhattan location, rigging equipment is pricey and not an option

### Solution

- High efficiency and high heat capacity of Airstage equipment
- Lower energy costs and comfortable tenants
- The small footprint of the outdoor units allowed them to be brought up to the 11<sup>th</sup> floor via elevator



## Military Building - 22 Tons - Bakersfield, CA

### Challenge

- Building was served by an aging hydronic system
- Building manager wanted a high efficiency and reliable system
- Little overhead clearance in the indoor spaces

### Solution

- Fully functional system that would reliably replace their problematic chilled water system
- Occupants were especially pleased with the zoning capability
- Quick and easy installation
- Lower utility bills



## Hotel - 122 Tons - Lexington, VA

### Challenge

- The building did not have an existing HVAC system except for a few window AC units.
- Must keep historic façade intact so this ruled out the use of PTACs that would require large exterior penetrations
- The floor-to-floor height of the guest rooms was less than 9 feet

### Solution

- Between VRF and a Water Source Heat Pump (WSHP) system, VRF was found to be significantly less expensive
- Since installation, zero complaints relating to heating and cooling from guests



## Manufacturing Facility - 12 Tons - Clayton, NC

### Challenge

- Year-round cooling was required
- The operations center was located in the interior of a large manufacturing facility and piping had to be run a long distance to the exterior
- Low ceilings made it impossible to use ductwork

### Solution

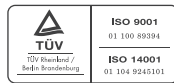
- Airstage can cool down to 5°F without a low-ambient kit to provide year-round cooling
- The inverter compressor and variable capacity of the indoor units ensure that the system can meet the cooling demand in the server room without overcooling other spaces



## FUJITSU GENERAL AMERICA, INC.

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ISO 9001 Certified number : 01 100 89394  
Fujitsu General (Thailand) Co., Ltd.

ISO 14001 Certified number : 01 104 9245101  
Fujitsu General (Thailand) Co., Ltd.



ISO 9001 Certified number : 01 100 79269  
Fujitsu General (Shanghai) Co., Ltd.



ISO 14001 Certified number : 272043  
Fujitsu General (Shanghai) Co., Ltd.



ISO 9001 Certified number : 00608011061R2M  
Fujitsu General Central Air-conditioner (Wuxi) Co., Ltd.

ISO 14001 Certified number : 00609E20454R2M  
Fujitsu General Central Air-conditioner (Wuxi) Co., Ltd.

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