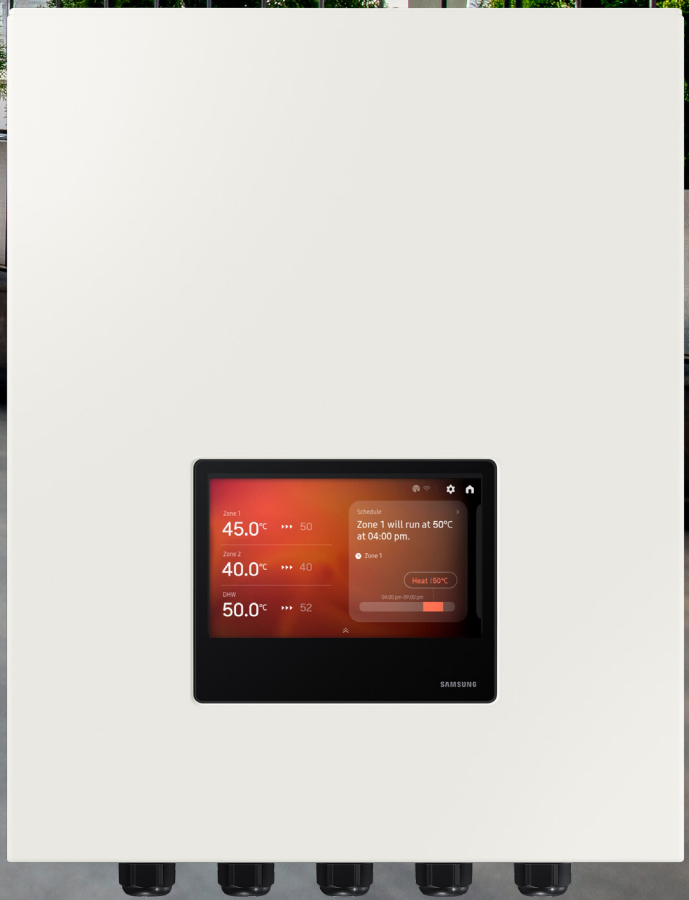
SAMSUNG

Cascade Controller

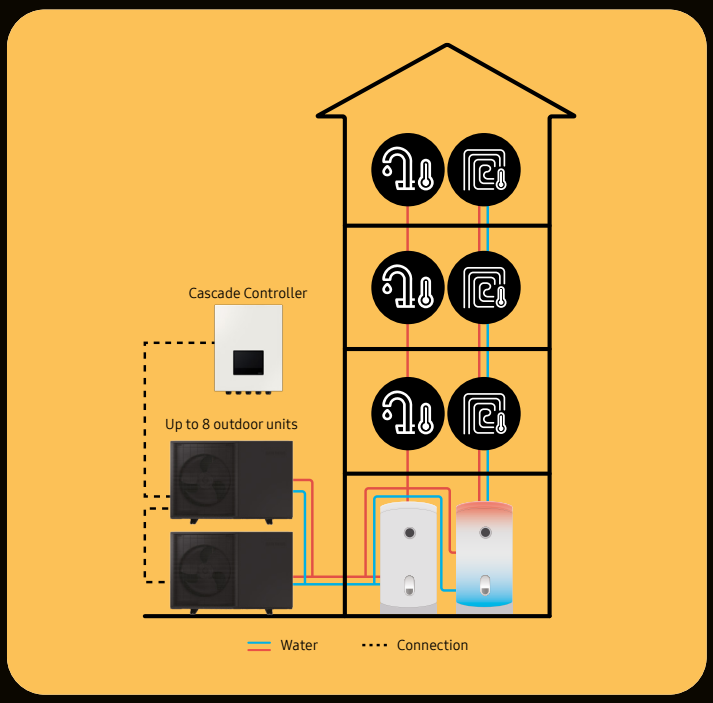


Increased flexibility and seamless adaptation

The EHS Cascade solution[1] can control up to eight EHS units[2] operating simultaneously for increased flexibility and seamless adaptation to heating and domestic hot water demands.

The EHS Cascade Controller starts the unit with the lowest runtime and stops the unit with the highest one. In this way, it helps to balance usage and optimise efficiency across the system. The perfect solution for multi-family homes where HVAC loads can fluctuate a lot.





Improved efficiency

The EHS Cascade Controller offers improved efficiency. It continuously monitors the demand for heating and domestic hot water and adjusts the operation of the EHS units accordingly. This ensures that the correct number of units are running to serve actual needs and prevents underuse or overloading. In addition, the units keep operating in their high-performance range.



User-friendly design

The Cascade Controller and Control Kit share a uniform, professional design and can be tailored to suit specific purposes. The Cascade Controller offers a 7” display, for a comprehensive overview of the Cascade System and effortless monitoring and management.

Seamless integration

The Cascade Controller supports Modbus for seamless integration with other control systems. It is also compatible with EHS Cloud[5] and SmartThings[6] on firmware version ’25.1Q.

AI Home

A large, user-friendly display[3] provides the user with a quick status of all devices within the Cascade System[4]. The interface provides insights into heating and energy usage for effortless system management. Key operational details can be monitored at a glance, including unit operation count, zone control status, operation modes, water temperature, and more. All connected outdoor unit information is displayed on a single screen, providing a comprehensive overview for monitoring the connected units.

Easy management

Registering the Cascade Controller as a SmartThings[9] device, enables users to manage connected outdoor units conveniently and effortlessly. Each outdoor unit uses individual Wi-Fi for OTN communication, for smooth data transmission. R1/R2 and F1/F2 connections enable the controller to seamlessly send and receive OTN information. This enables centralised monitoring and makes system management simpler.

Size



Compact sizing
Width: 380mm
Height: 480mm
Depth: 150mm

Scalable performance

The system supports a maximum capacity of 128kW, ensuring optimal performance for various applications. Up to eight outdoor units from the same model category[7] can be connected for seamless scalability and reliability.

For example:

- R290 Mono 16kW x 8 sets = 128 kW

- R32 HT Quiet 14kW x 4 sets + 8kW x 2 sets = 72 kW

Stable load supply

The Cascade System continues to ensure a stable heat supply even if there is an issue with one of the units. In that case, the system automatically transmits an alert to the Cascade Controller and isolates the affected unit. The remaining units continue operation, uninterrupted. This reduces downtime and ensures a consistent heat supply.

Excellent part-load operation

The Cascade System offers excellent part-load operation, adapting seamlessly to peak demand by operating from 100% to at least 2,5%[8] of the peak load. It provides a stable and reliable load supply, making it ideal for locations with high HVAC load fluctuations, like multi-family homes.

SmartThings

Registering the Cascade Controller as a SmartThings[9] device, enables users to manage connected outdoor units conveniently and effortlessly.

Compatible products:

Outdoor Units



Model	AE***RXYD**	AE***BXYD**	AE***CXYD**	AE***CXYB**

Indoor Units



Model	MIM-E03GN	MCM-D3E0N	MCM-D3E0N

1. [Support EHS Line-up]: 1. R32 Mono HT Quiet + Control KIT; 2. R290 Mono + Control KIT; 3. R290 Mono with Pump; 4. R32 Mono + Control KIT.
2. ClimateHub and Hydro unit are not supported.
3. For full functionality Wi-Fi connection and Samsung account required. Use a separate laptop/computer to create a Samsung Account.
4. All the appliances must be connected to the SmartThings App via a Wi-Fi connection using the same Samsung account.
5. Wi-Fi connection and Samsung SmartThings application account are required. Wi-Fi Kit to be ordered separately. Requires iOS 10.0 or later & Android 5.0 or later.
6. EHS Cloud Service is available for compatible Samsung products only, further terms and conditions apply. A separate Wi-Fi kit may be required for the EHS unit.
7. Applicable models for Cascade system
   - R32 Mono (AE***RXYD**)
   - R32 HT QUIET (AE***BXYD**)
   - R290 Mono (AE***CXYD**)
   - R290 Mono with pump (AE***CXYB**) → No need to MIM-E03GN
8. Connected eight outdoor units.
9. Wi-Fi connection and Samsung SmartThings application account are required. Wi-Fi Kit to be ordered separately. Requires iOS 10.0 or later & Android 5.0 or later.

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Model Name					Cascade Controller	Control Kit
Item Code					MCM-D3E0N	MIM-E03GN
Item	Power Supply			Φ, #, V, Hz	1,2,220-240,50	1,2,220-240,50
	Outdoor Unit Connection			-	2 - 8	×
	Casing	Color		-	Greige	Greige
		Material		-	PCM	PCM
	Packing	Material		-	EPS/BOX	EPS/BOX
	External Dimension	Net Weight		kg	7.1	6.7
		Shipping Weight		kg	11.0	10.6
		Net Dimensions (WxHxD)		mm	380 x 480 x 150	380 x 480 x 150
		Shipping Dimensions (WxHxD)		mm	445 x 605 x 250	445 x 605 x 250
	External Control	Water Pump(1st)	Output	-	AC 230V, 2EA, FIXED	AC 230V (Max 1A), 1EA, INV
		Water Pump(2nd)	Output	-	AC 230V, 1EA, FIXED	×
		Water Pump for 2 Zone(Fixed)	Output	-	AC 230V	×
		Booster Heater	Output	-	AC 230V	×
		Backup Heater(Add)	Output	-	AC 230V	AC 230V (Max 300mA)
		Backup Boiler	Output	-	AC 230V	×
		Valves, 2 or 3way	Output	-	AC 230V	AC 230V (Max 50mA)
		Solar Pump	Input	-	AC 230V	×
		Room Thermostat	Input	-	×	×
		Flow Sensor	Input	-	×	Provided by Samsung
		Mixing valve	Output	-	AC 230V (Max 50mA)	AC 230V (Max 50mA)
		Thermistor	Input	-	Provided by Samsung (7EA)	×
	Function	Wi-Fi Embedded		-	•	×
		Single Wi-Fi Kit		-	×	•
		EHS Cloud		-	•	•
		7 inch Full touch display		-	•	×
		Energy Monitoring		-	•	×
		PV / SG Ready		-	•	×
		2 Zone Control		-	•	×
	Certification	SAFETY		-	•	•
		EMC		-	•	•
	Cascade Function	Away mode		-	•	×
		Silent Mode		-	•	×
		Initial Start-up Control		-	•	×
		I Control (Time Control)		-	•	×
		Backup Boiler	Outside air	-	•	×
			Heating up	-	•	×
		PV Linkage Hz Control		-	•	×
		Energy Measurement	Individual	-	•	×
			Integrated	-	•	×
		Secondary Circulation Pump Control		-	•	×
		Schedule Control		-	•	×
		Simultaneous Heating / Water Supply		-	•	×
		Defrosting Control		-	•	×

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Find your flow.

Learn more about Samsung Climate Solutions at:
samsung-climatesolutions.com

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