

ClimaVision Central Control Unit XR

A powerful wall-mounted system manager that provides in-depth, real-time insight and control.



CCU XR | Part # 7C-CC-K10K-IA

- Local User Interface to system
 - View space temperatures and equipment operating conditions
 - Make scheduling and setpoint adjustments
 - Color coding of alerts for ease of management
- Wi-Fi Gateway to Cloud
- Wireless Commissioning Tool
- VVT/VAV Air Source Equipment Controller
- Gateway to third-party devices (like energy meters) or BAS

ClimaVision Central Control Unit XR

What do you get when you combine a state-of-the-art control supervisor and an applied equipment controller? Answer: the ClimaVision Central Control Unit XR (CCU XR), a removable wall-mounted tablet, on-site user interface for building management, and gateway to the ClimaVision cloud.

Customers appreciate real-time data visualization, zone and equipment-specific performance and status. The elegant and modern design allows the tablet to snap easily and securely into place to the control mote with a spring-based locking slider.

With the CCU XR, get all the features of the base CCU with faster processing speeds, more memory, more inputs, and a drop-proof design.

CCU XR



Part # 7C-CC-K10K-IA

OVERVIEW

The Central Control Unit (CCU XR) is a wall-mounted communication gateway. It connects ClimaVision terminal devices via the local 900 MHz wireless mesh network and connects to Modbus devices via RS485. The data it collects from these devices is then sent to the ClimaVision cloud with a Wi-Fi or LAN connection.

The CCU also acts as a zoned RTU/AHU controller. It aggregates all the terminal zone data to make more informed decisions about how control the air source for optimal comfort and energy savings.

KEY FEATURES

- Controls air sources for VVT and VAV systems.
- The CCU XR can support up to 48 terminal equipment modules for each system.
- Proactive, predictive control in conjunction with Carrier cloud servers; operates connected to the ClimaVision cloud or standalone without an internet connection.
- Acts as a gateway to third-party devices and building automation systems via BACnet or Modbus.
- Intuitive 8" Android-based user interface
- Strong, permanent magnets and metal locking tabs help with feel and secure alignment
- Capable of handling Edge AI algorithm for fast response

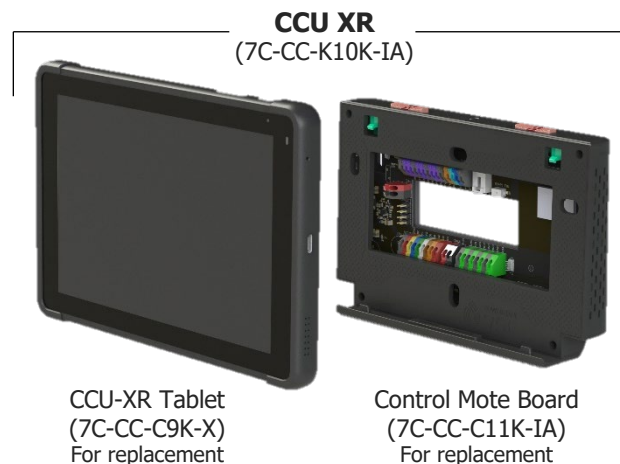
ADDITIONAL FEATURES

- Easy mobile pairing, configuration and settings setup
- Status of zones and ability to adjust parameters
- Schedule and setpoint adjustments
- Alerts with severity color coding

COMPATIBLE APPLICATIONS

- VVT (Air source + system management)
- VAV (Air source + system management)
- Outside Air Optimization (Economizer) with Smart Node
- VVT Bypass Control Director

INCLUDED



CCU-XR Tablet
(7C-CC-C9K-X)
For replacement

Control Mote Board
(7C-CC-C11K-IA)
For replacement



ClimaVision Central Control Unit XR

MECHANICAL

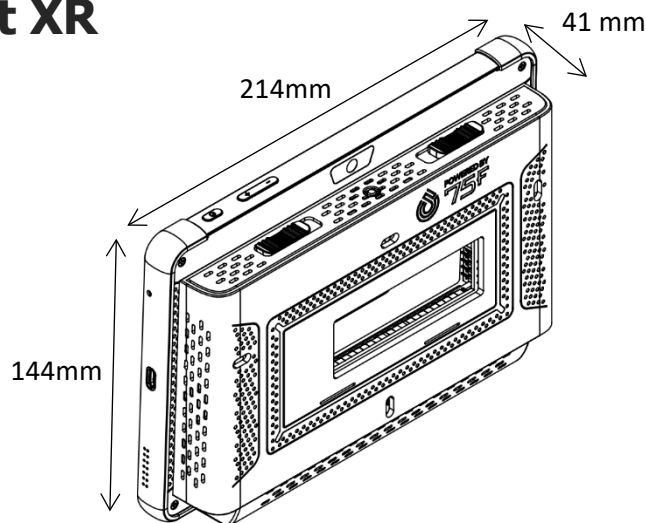
Dimensions	8.4" x 5.7" x 1.6" (214 mm x 144 mm x 41 mm)
Mounting	(2) #8 screws over standard electrical junction box
Screen	8" display, 1280 x 800
Operating Temp	32°F to 122°F (0°C to 50°C)
Termination	Common Pogo Pin termination for USB port and +5V DC power
Microprocessor	Processor 8 core (4 high performance + 4 low power)
HVAC Control	Up to 5 stages of heating/cooling, up to 5 fan stages, 0-10V modulating output for heating/cooling valves (no VFD), and a dehumidifier or humidifier

I/O

Inputs	A. (2) 0-10V analog inputs B. (4) 10k thermistor inputs
Outputs	C. (4) 0-10V or 4-20V mA analog outputs D. (7) 110V@0.3A to 24V@1A relays

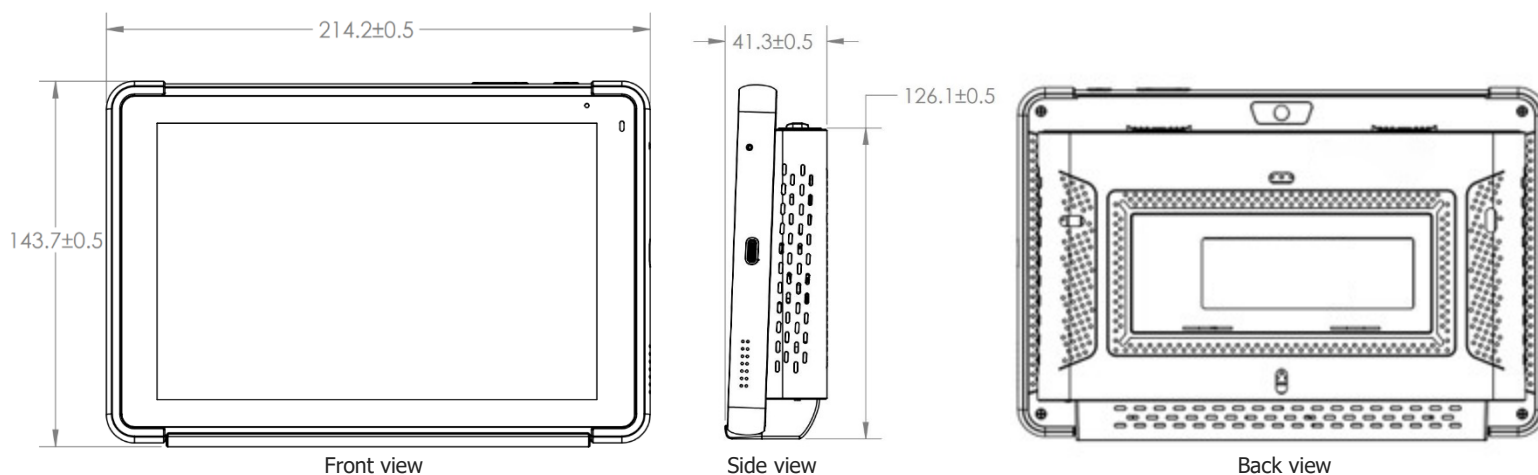
ELECTRICAL

Supply	24V AC/DC +/- 15% 5 VA (typical), 10 VA (max)
Battery	3.7V, 2400mAh, Lithium Polymer



COMMUNICATIONS

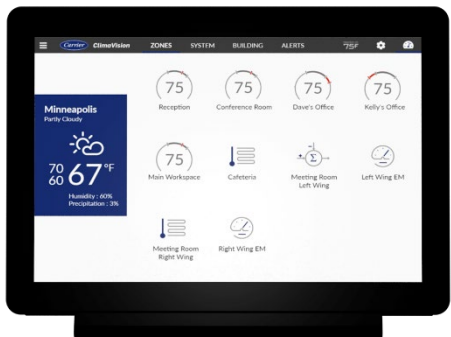
Bluetooth	2.4 GHz; used for pairing ClimaVision devices
Mesh	900 MHz IEEE 802.15.4-compliant; used for device communication on mesh network
Wired	3-wire sensor bus to ClimaVision communicating sensors (Molex connector) 4-wire RS-485 port for wired communication to controllers Ethernet port to connect to a private network or the internet. Also supports BACnet/IP for integration. USB-A port for integration to 3 rd -party devices (requires USB-A to 3-pin terminal adapter)
Wi-Fi	Wi-Fi to connect to internet



ClimaVision Central Control Unit XR

This page highlights the differences between the CCU and the CCU XR

CCU



Standard Android Tablet

Typical Android tablet construction, no protective case
8" display, 1200x800 resolution

Quad-core Cortex

Fair computational power
Suitable for everyday tasks; not capable of intensive AI tasks

2GB System Memory and 16GB Storage Flash.
Connect up to 35 devices

Standard

- (2) 0-10V analog inputs
- (2) 10k thermistor inputs
- (4) 0-10V analog outputs
- (7) 1A relays

Not Compatible

Not designed for heavy computation, making this model unsuitable for intensive tasks like AI training



Case



Core



Capacity



I/O



AI Inference

CCU XR



Extra-Rugged

Scratch-resistant screen
Drop proof from the top of a ladder
8" display, 1280 x 800 resolution

Eight-core Processor (Quad Cortex-A76 + Quad Cortex-A55)

Up to 10x faster processing speeds. Capable of edge AI inference and running demanding tasks efficiently

4GB System Memory and 32GB Storage Flash.
Connect up to 48 devices

Advanced

- (2) 0-10V analog inputs
- (4) 10k thermistor inputs
- (7) 1A relays
- (4) analog outputs
- 10/100 Ethernet port
- No tool connectors

Training in Edge Scenarios

Runs pre-trained AI models and inference on edge scenarios — linear regression, decision trees, or neural networks