

Solutions for Refrigeration and Retail

Controllers for the management of multiplexed refrigerated units





Controllers for the management of multiplexed refrigerated units

The **XM700** series is a family of electronic regulators for the optimized management of refrigerated multiplexed cabinets. It has been developed to guarantee high flexibility and connectivity through Bluetooth® communication system and a dedicated APP. The powerful hardware platform, easy installation mode, and the simple configuration best meet manufacturer, installer and service needs.

Sustainability and energy saving guided the design of this series, which is compatible with natural refrigerants such as A2L/CO2/R290/R600 and features efficient algorithms for different applications.

The Full Touch or Bluetooth® interfaces, the high amount of information available, the ease of cleaning, the intuitive interaction and much more, are just some of the features of this series.





The XM700 family has been designed for remote cases, vertical cabinets, refrigerated counters and is ideal for different types of applications in the retail world, from small shops to discount stores, from supermarkets to hypermarkets. The multiple functions that characterize these controllers also make them suitable for the optimized management of cold rooms.

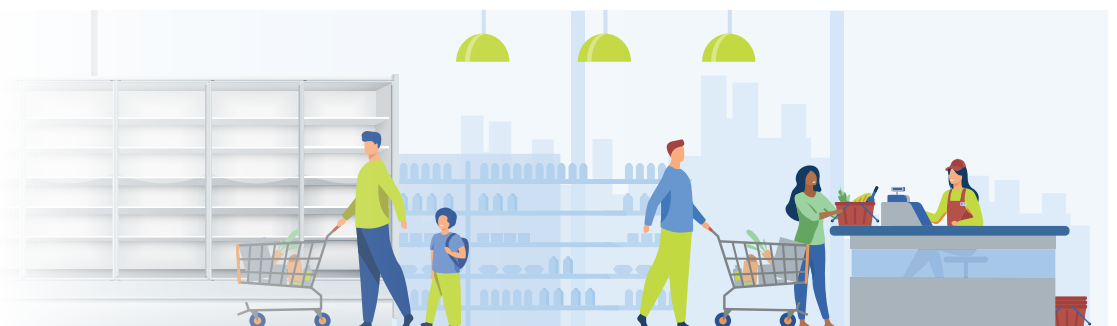
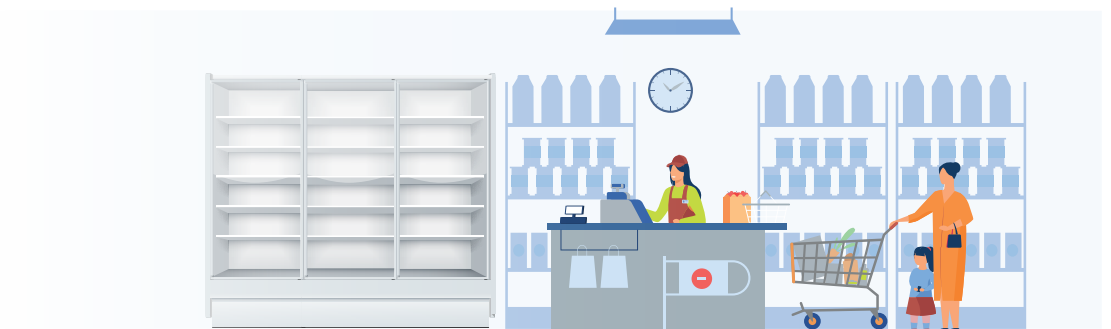
Applications

○ SMALL SHOPS

○ DISCOUNTS

○ SUPERMARKETS

○ HYPERMARKETS

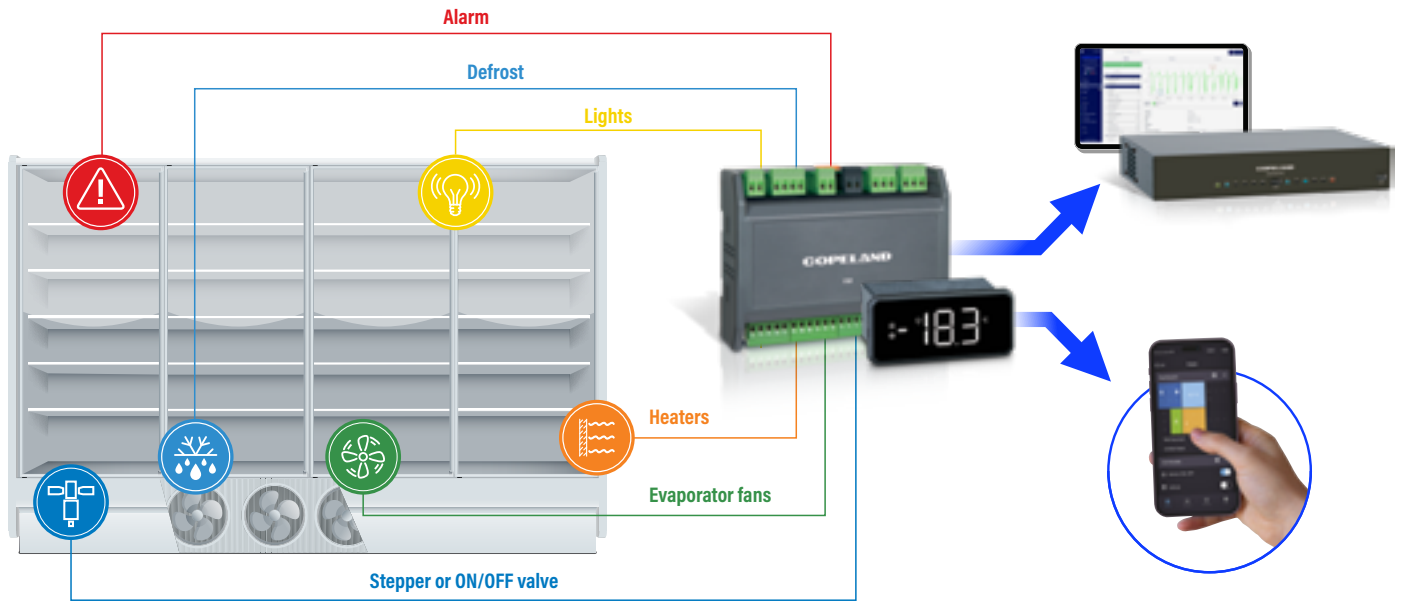


Complete cabinet management

XM700 controllers guarantee an optimized load control (lights, fans, heaters, and more) and high plant efficiency, both using stepper or ON/OFF valves.



The special autocalibration function for stepper valves allows their optimized regulation with improved plant efficiency

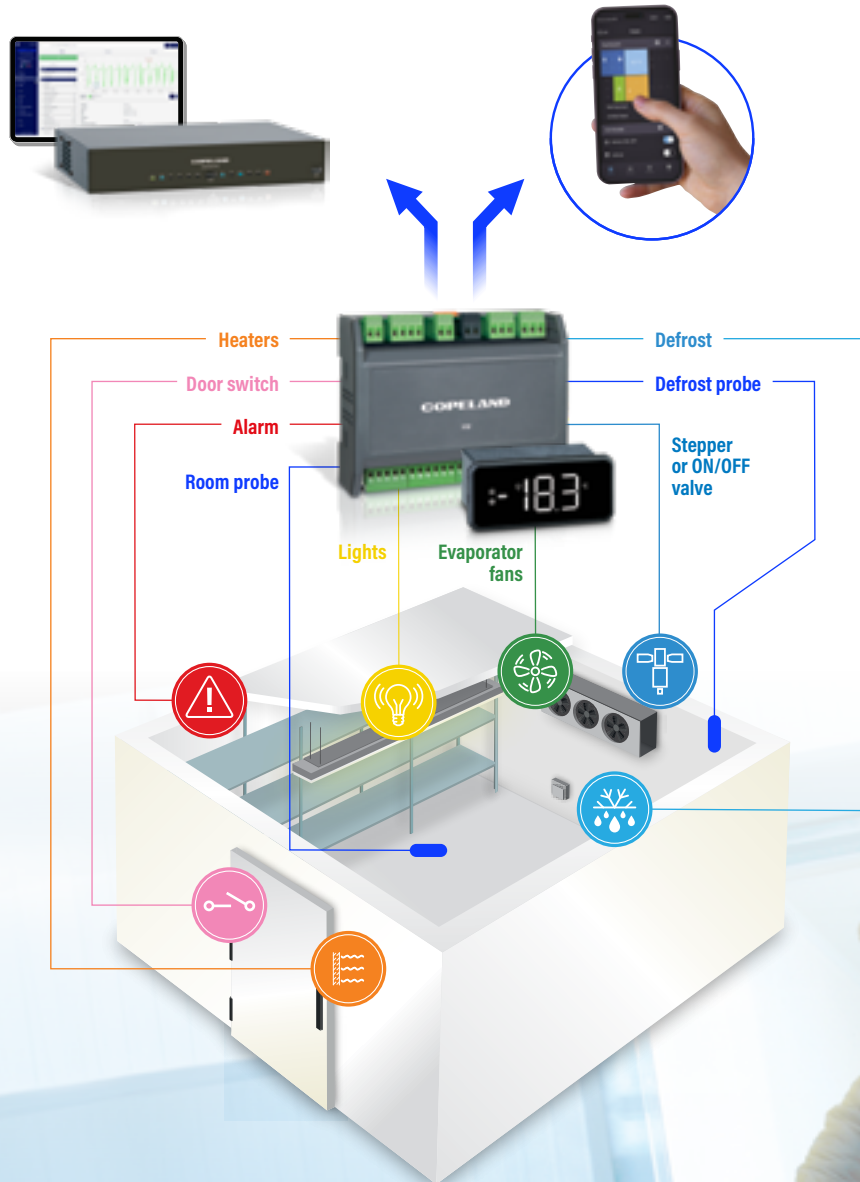


Complete cold room management

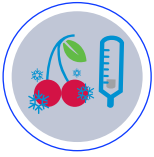
Because of its high-performance hardware and enhanced functions, XM700 is ready to answer most needs of the cold rooms currently on the market.



The special autocalibration function for stepper valves allows their optimized regulation with improved plant efficiency



Main benefits



Food quality

The accurate temperature regulation, display of events and alarm management can help to ensure the highest quality of fresh food.



Homogeneous temperature control

Thanks to temperature regulation determined by the average of one or more probes (up to 3), it is possible to have a homogeneous temperature inside the environment. This special function is highly valued for cold rooms where the temperature results can be different and not homogeneous, affecting the quality of the product.



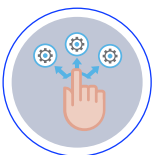
Less commissioning time

The new auto-adaptive algorithm for superheat management simplifies the cabinet setup and improves its performance in terms of temperature stability ensuring optimum food preservation and decreasing energy consumption.



Prompt reporting

A faster communication (38,4k) between controllers and supervising systems allows the cabinet to be monitored in real time ensuring a prompt intervention of the service in case of alarms.



Easy commissioning operations

The controller memory contains several parameter maps (for normal or low temperature, with or without auto-adaptive superheat, and more). The user can select the most suitable one, and quickly set parameters.



Environmentally friendly

With our eco-friendly solutions, innovation and efficiency means respecting the environment by optimizing consumption and reducing pollution, and gas emissions. The energy consumption is guaranteed thanks to the use of modulating loads (fans, lights, heaters, and more) via selectable analogue outputs (PWM, 0÷10Vdc or 4÷20mA).



Protection & hygiene guaranteed

The flat surface is easy to clean for much better hygiene. The IP65 high level of front protection is guaranteed.



Firmware update even remotely

Besides updating the firmware of the controller by using the Wizmate software directly on site, it is possible to execute this operation even remotely, through the XWEB PRO monitoring system. This avoids machine stops, which could result in wasted energy and resources, ensuring the controller is updated with the latest functions and compatible gases.



Energy saving

The "Optimized Defrost Duration" (ODD) algorithm allows defrost termination as soon as the evaporator is clean, reducing its time of up to 20%.



Speed up OEM production line

Thanks to the automatic output testing, the manufacturer can verify correct wiring connections during the production line test.

Synchronized management of functions

For optimized control and functioning of the cabinets, it is possible to connect up to 8 devices per each LAN network. In this way, with a single command, you can obtain:

- synchronized defrosts to ensure the correct temperature management and product preservation;
- the optimization of installation time and costs through a common pressure probe;
- the synchronization of the day/night function (curtains, night set, energy saving, and more) to decrease consumptions;
- timed light switching ON/OFF.



Natural refrigerant compatible

The XM700 series is designed to deal with natural refrigerants such as: A2L, CO₂, R290 and R600. These controllers are already approved according to the EN60335-2-89, and therefore they can be placed where the cabinet design requires without restrictions related to possible refrigerant leakage risk analysis. This results in:

- **reduced time to market:** controllers are not affected by extensive cabinet tests related to the qualification of the electronic controller in a possible explosive atmosphere;
- **cost reduction:** tests related to the qualification of electronic controllers in a possible explosive atmosphere are no longer required and will not be charged to the cabinet manufacturer.



Features



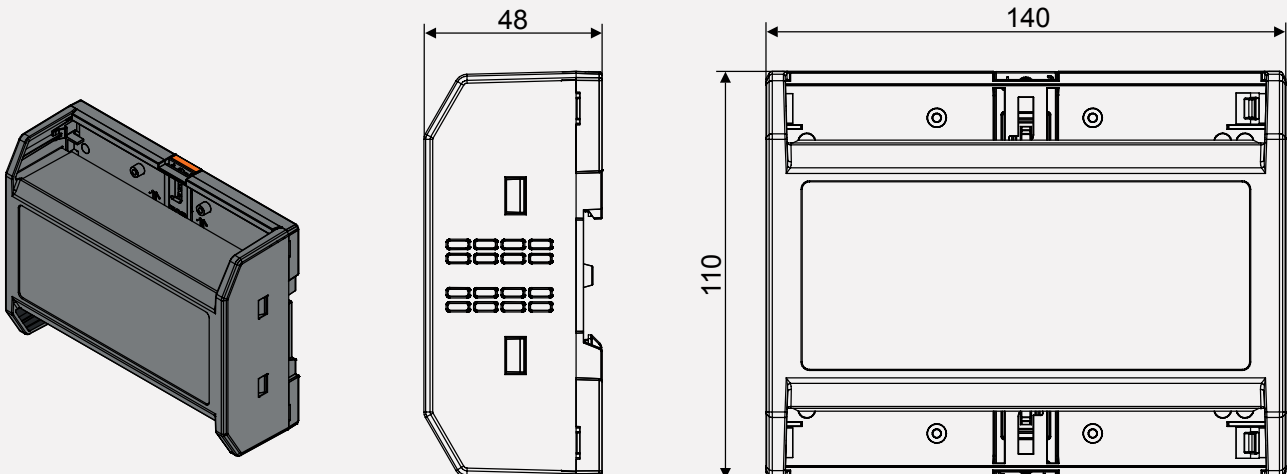
For stepper valves



For ON/OFF valves

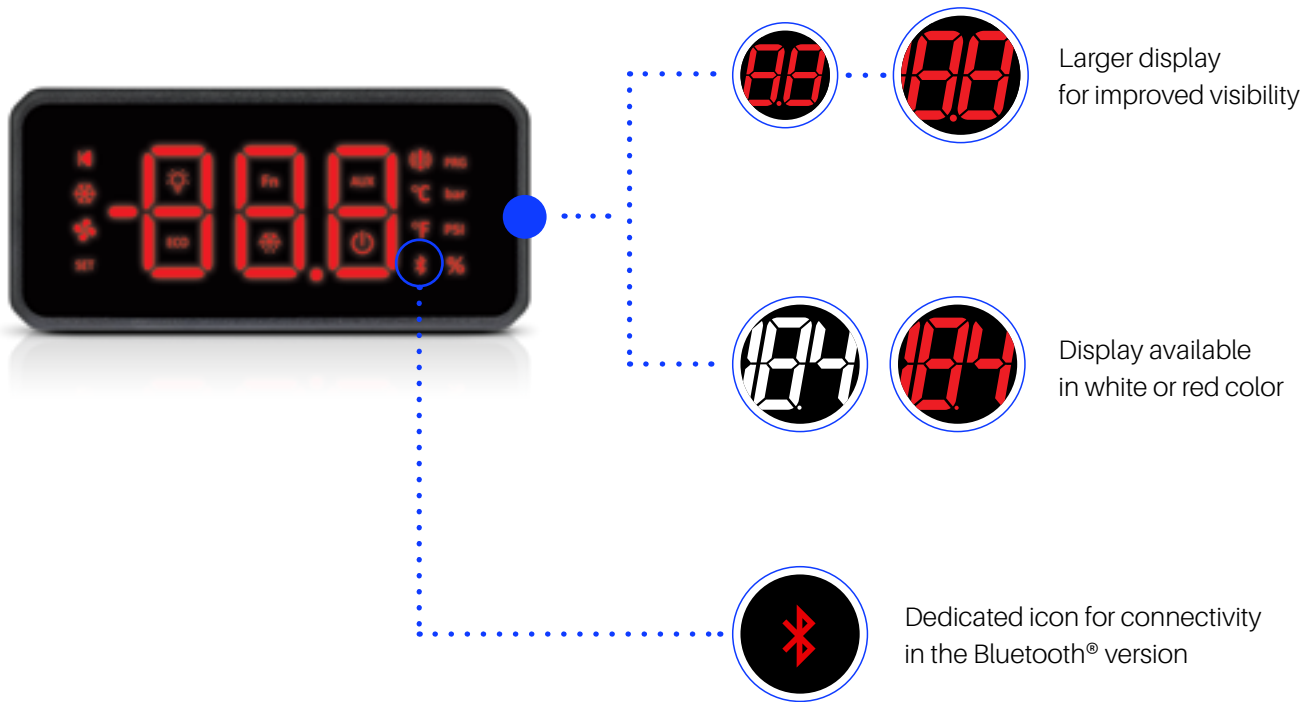
MODELS	XM750D	XM756D	XM759D
Power supply	110Vac, 230Vac or 100÷240Vac	100÷240Vac	110Vac, 230Vac or 100÷240Vac
Probe inputs	2 x NTC/PTC/PT1000/NTC_US + 2 x NTC/PTC/PT1000/NTC_US/DI all configurable	3 x NTC/PTC/PT1000/NTC_US + 2 x NTC/PTC/PT1000/NTC_US/DI + 1 x 0÷5V/4÷20mA all configurable	3 x NTC/PTC/PT1000/NTC_US + 2 x NTC/PTC/PT1000/NTC_US/DI + 1 x 0÷5V/4÷20mA all configurable
Digital inputs	2 x configurable	2 x configurable	2 x configurable
Relay outputs	2 x 16A SPST + 2 x 8A SPST + 1 x 5A SPST all configurable	2 x 16A SPST + 2 x 8A SPST + 1 x 5A SPST all configurable	2 x 16A SPST + 2 x 8A SPST + 1 x 5A SPST all configurable
Hot Key output	present	present	present
0 ÷ 10Vdc output	present	present	present
0 ÷ 10V/4 ÷ 20mA/PWM output	present	present	present
RS485 serial output	client	client	client
LAN output	up to 8 devices	up to 8 devices	up to 8 devices
Driver valve output		stepper (unipolar up to 0,40A)	ON/OFF (triac 8÷30W)
Back-up battery for EEV		internal	
Real Time Clock	present	present	present
Certifications	EN/UL60335-2-89	EN/UL60335-2-89	EN/UL60335-2-89

Dimensions

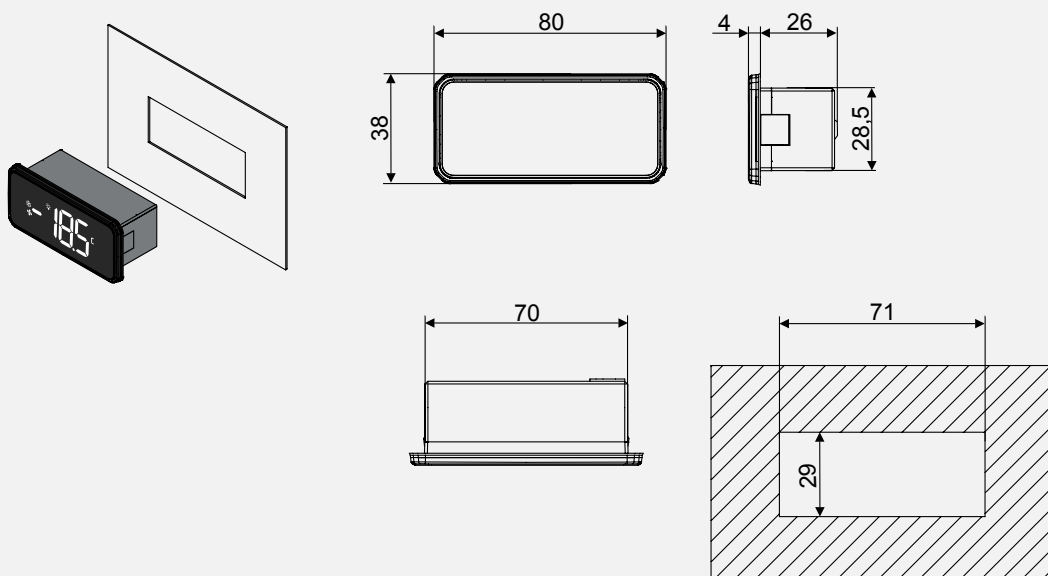


CT760 KEYBOARD

The CT760 keyboard features an innovative Full Touch or Bluetooth® interface with wider display and integrated icons to show data in real time and provide measurement units for clear and continuous monitoring. The keyboard in Bluetooth® version offers an enhanced user experience and a clear App interaction.



Dimensions and cut out



Plant optimization thanks to XeCO₂ system

Complete synchronization between refrigerated cabinets (XM700) and compressor rack (iProRACK) via XWEB PRO system.

XeCO₂

The XM700 controllers, in addition to meeting the needs of small applications, are ideal for supermarkets or hypermarkets. They play a fundamental role in the XeCO₂ system where, because of their special functions, they contribute to optimizing management of CO₂ system efficiency.

- Safer systems thanks to the synchronization among compressor racks, cabinets, and monitoring systems
- The reduction of short cycles during the night protects compressors, which can help reduce wear and lower maintenance calls and costs
- Maximum efficiency thanks to dynamic superheat management, with cost reduction and COP improvement
- Active compressor protection against flood infiltration and high discharge temperature
- Quick and easy installation thanks to pre-configured maps
- Smart function updates directly from the monitoring system
- High efficiency whether using a stepper or a ON/OFF valve



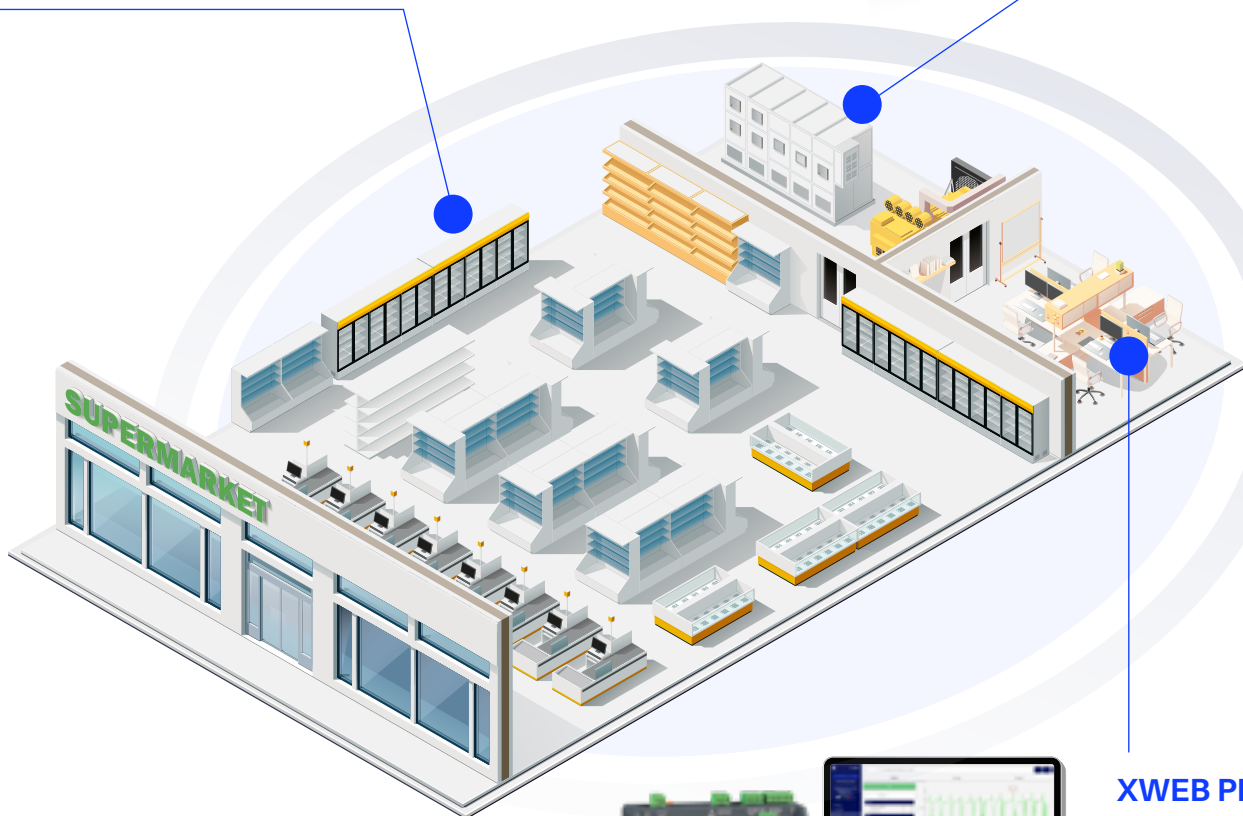
XM700

High performance multiplexed cabinet controllers



iProRACK

Controllers for transcritical booster racks



XWEB PRO

Advanced controlling and monitoring systems

Dedicated App

Through Bluetooth® communication and the App, available for both iOS and Android, interaction with refrigeration units is even more immediate. It is now possible to check cabinet operation in real time via the user interface available on your mobile device (smartphone, tablet), thus expanding functionality and usability. It will therefore be possible to have full control of the unit to which you connect, and the configuration, control and maintenance activities will be even more simplified. The App provides complete reporting with graphs and statistics, allows you to view messages relating to the status of the refrigerated cabinets (presence of alarm conditions), and identifies users in order to manage user access and permission levels securely and centrally.

- Ready to be used in a few minutes
- Advanced machine status display and analysis
- Simplified maintenance and cost reduction



Main accessories



CT760-REP

Remote display in red or white color.



HOT KEY 128K

Key for a quick and easy parameter update.

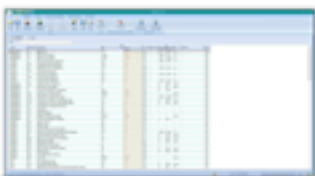


USB type C connector available; please contact Copeland Controls S.r.l.



XJ485USB-KIT

USB to RS485 serial converter.



WIZMATE PROG-TOOL KIT

Programming tool for a quick and easy parameter update.



CAB/CJ15, CAB/CJ30

Connectors for analog outputs.



PROBES

Temperature and pressure probes available for every kind of application.



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Release 2.1 - 1582007600-GB

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