



Embrace the Digital & Intelligent Future

FC210 Series

AI Controller for Merchandiser

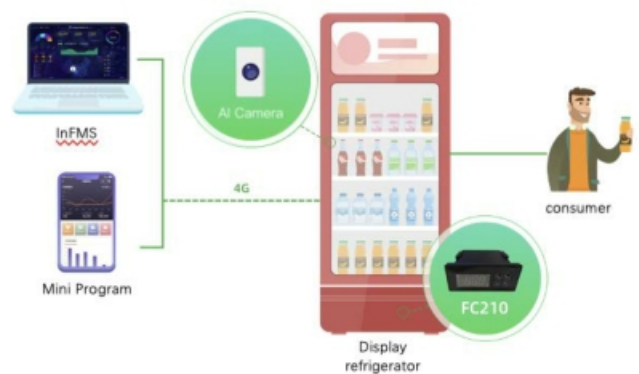
The digital era is pushing traditional retail to enhance overall competency through digital technologies. As an important tool for brands to present themselves, increase product exposure and boost sales from the terminals, merchandisers are facing the pressure of digitalization and intelligent upgrading. The AI merchandiser system developed by InHand Networks, which consists of the controller FC210 and the InFMS management platform, offers customers strong support for retail digitalization.

The FC210 controller works as the brain of a merchandiser, controlling the core parts including compressors, fans, lights, etc. It can also connect to other peripherals such as sensors of inside temperature, temperature & humidity outside the merchandiser, infrared devices, doors, cameras, etc., making the merchandiser a nerve ending that works intelligently in the market and acquires data necessary for decision making.

The FC210 is ideal for brand owners to control and manage merchandisers, organize layout, as well as for freezer manufacturers to upgrade their cabinets.

- Intelligent upgrading of traditional single door merchandisers
- Intelligent upgrading of traditional double door merchandisers
- Analysis of product display

Application



- + Available with 4G
- + Supports OTA
- + Remotely controlled by the platform
- + Refrigeration/energy saving/defrosting modes
- + 3-channel strong current control
- + 5-channel interfaces for weak current sensors
- + 4-button dashboard display

Omnipresent and reliable Internet access capability

Available with 4G (CAT 1) networks, the FC210 delivers reliable communications in both populated commercial centers and remote areas, ensuring business continuity.

Accompanied by InFMS, operation status of merchandisers available anytime anywhere

Faced by demand of merchandiser management, InHand Networks offers a management platform, InFMS, which enables remote management and maintenance of the merchandiser's assets and status. Data of customer traffic, product location, merchandiser operation, etc. are easily viewable from the cloud. The InFMS also enables batch settings of the merchandisers, freeing customers from inefficient offline operations and reducing risks of device loss.

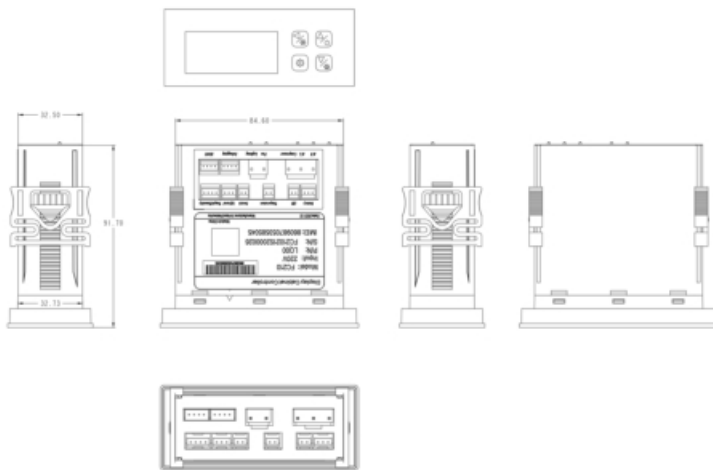
SKU layout analysis, everything is viewable from the cloud

Aided by Computer Vision Recognition Technology (AIoT technologies), data can be easily extracted from images, including numbers of SKU rows, proportions of shelves, out-of-stock rates, etc., improving the efficiency of patrolling.

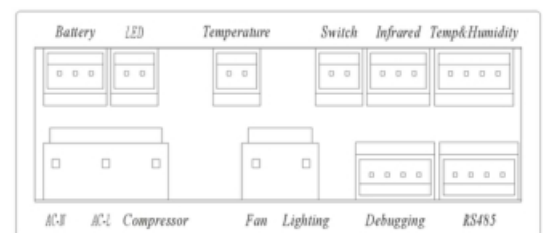
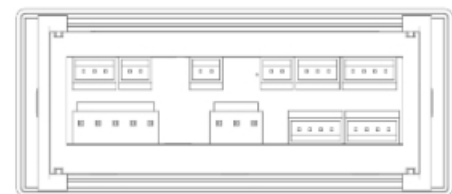
Extensive sensor interfaces, multi-dimensional sensing data acquired

Compared to traditional merchandiser controllers that support only in-cabinet temperature sensors, the FC210 also enables connection to other peripherals, including sensors of customer traffic sensors, door opening status and light status, cameras, etc. making the merchandiser truly intelligent and facilitating business decision-making.

Dimensions (mm)



FC210 Dimensions



FC210 Interfaces

FC210 hardware specifications	
Item	FC210
Hardware platform	
CPU	Cortex-A5 500MHz
MCU	Cortex-M4, up to 120MHz
Interface	
AC-N	
AC-L	3-pin VH terminal block
Compressor	
Fan	
Light Control	2-pin VH terminal block
Temperature Sensor	2-pin XA terminal block
LED Detector	2-pin XA terminal block, up to 2 channels
Temperature & Humidity Sensor	4-pin XA terminal block
Infrared Sensor	3-pin XA terminal block
Door Sensor	2-pin XA terminal block
Backup Battery	3-pin XA terminal block
AI Camera	RS485 x 1
Control Panel	
LED Indicator	3-digit display in white; 5 independent indicators;
Button	Button x 4
Appearance Features	
Installation	Lock mounting, hole: 85mm x 33mm, depth < 100mm
Protection Rating	IP40, IP65 for the LED display
Housing	Plastic
Dimensions (cm)	100 x 43 x 85 (mm)

FC210 hardware specifications	
Ambient Temperature and Humidity	
Storage Temperature	40°C ~ + 85°C
Humidity	5~95% (non-condensing)
Operation Temperature	- 25°C ~ + 70°C (Industrial grade)
EMC Index	
Static	Level 3
EFT	Level 3
Surge	Level 3
Others	
Location	LBS location tracking
Consumption	< 3W
Alarm	Buzzer x 1

FC210 software specifications	
Item	FC210
Network Functions	
Network Type	4G CAT 1
Local Settings	
Temperature Control	Local button setting
Parameter Modification	Local button setting
Encryption Parameter Modification	Verification and setting through buttons
Restore Default Parameters	Supported
Remote Functions	
Basic Info Collection	Merchandiser status data, controller status data, sensor data, image data
Remote Control	Switch of operation modes, temperature setting and correction, setting of fan/ buzzer/ lighting mode, restart, OTA

Ordering Guide

Model	Model code: FC210-<WMNN>-<STD>-<CC>					
	Region (Operator)	Network Type	<WMNN>.Cellular Networks		<STD>	<CC>
FC210-LQ00-STD	China	LTE-Cat.1	4G	FDD: B1/3/5/8 TDD: B34/38/39/40/41 GMS: 900/1800MHz	STD	<NA>
FC210-LQ53-STD	EMEASEA	LTE-Cat.1	4G	FDD: B1/3/5/7/8/20/28 TDD: B38/39/40/41 GMS: 850/900/1800/1900MHz	STD	<NA>
FC210-LQ73-STD	AU/LA	LTE-Cat.1	4G	FDD: B1/3/4/5/7/8/28/66 TDD: B40/38/41 GMS: 850/900/1800/1900MHz	STD	<NA>

About Us

InHand Networks is a global leader of Industrial IoT, with a record of tremendous success following groundbreaking innovation since our inception in 2001.

InHand serves world-class partners and customers with industrial M2M routers, gateways, industrial Ethernet switches, rugged computers and IoT management platforms. We provide IoT solutions for various vertical markets including Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.

Proudly bearing the marks of both Rockwell Automation Technology Partner in Asia-Pacific and Schneider Electric Technology Partner, InHand Networks defines industrial innovation and reliability.



43671 Trade Center Place, Suite 100, Dulles, VA 20166 USA
 T: +1 (703) 348-2988
 E: info@inhandnetworks.com
 www.inhandnetworks.com