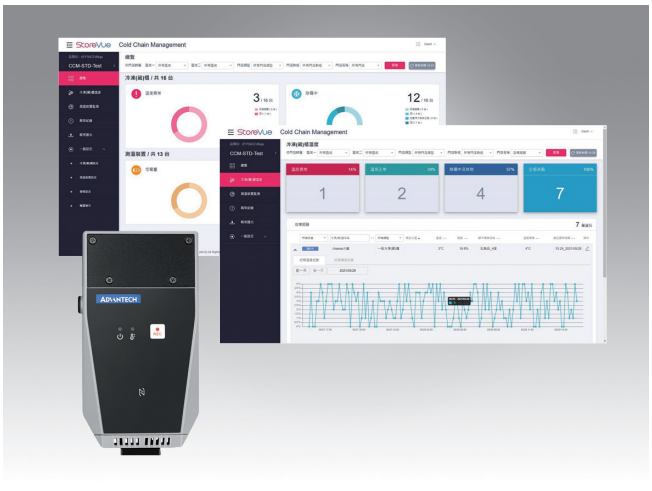
Cold Chain Management

Uninterrupted temperature monitoring solution



Features

- Friendly dashboard design
- Real-time data transmission and alarms
- Supports downloading and exporting various reports
- Complete installation for a field in 15mins
- Cloud and on-premise deployment options
- RESTful API web service for 3rd party system integration
- Wireless data transmission, flexible equipment installation
- Rugged hardware design, suitable for various fields

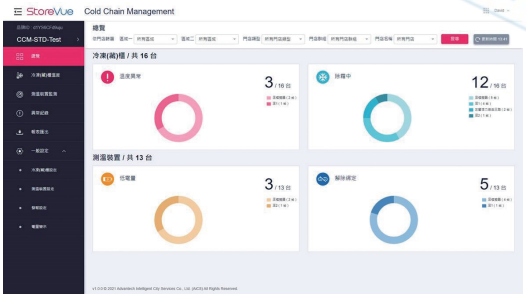
Introduction

A cold chain is a temperature-controlled supply chain. An unbroken cold chain is an uninterrupted series of refrigerated production, storage and distribution activities, along with associated equipment and logistics, which maintain quality via a desired low-temperature range. Advantech's cold chain management solution spans temperature and humidity sensors, gateways, an APP for configuring the sensors and a backend dashboard that displays the data collected along the cold chain and presents a map indicating where the temperature is poorly controlled, leaving stocks at risk of being damaged. The temperature and humidity sensors pass data to a gateway, and the gateway uploads the data to the cloud. Users can use Advantech's cold chain management platform to monitor cold chain situations in different stores simultaneously in real time.

Key Functions

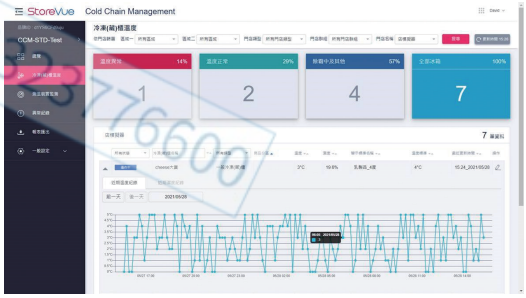
Real-time Dashboard

- Statistics at a glance
- Statistics updated according to your selection
- Easy-to-understand function list



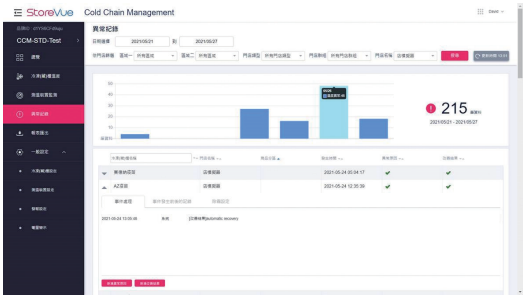
Latest and Historical Data

- Detailed cold chain status list
- Can be sorted according to user's preference
- Display historical data through a line chart



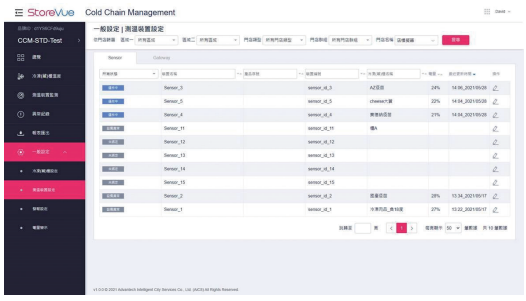
Abnormal Event List

- Statistics at a glance
- Real-time notification and data export
- Root cause response system



Various Setting Functions

- Monitoring point setting
- Equipment settings
- Abnormal event condition setting



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Specifications

Temperature	Measurement Range	-30 ~ 70 °C
	Accuracy Range	± 0.2 °C from 0~90 °C ± 0.3 °C from -30~0 °C
	Resolution	0.01 °C
Relative Humidity	Measurement Range	0 ~ 80% relative humidity
	Accuracy Range	± 2% from 0~100% at 25 °C
NFC	Frequency	13.56 MHz
	Function	Bulk download configuration and sensor data
LoRa	Wireless Technology	Advantech LoRa technology
	Frequency	920 ~ 925 MHz for Taiwan 902 ~ 928 Mhz for US 863 ~ 870 MHz for Europe 470 ~ 510 MHz for China 921~922 MHz for Japan
	Wireless Range	>500 meters (line of sight)
	Topology	Star
Data Storage Capacity		5000 data log readings
LED Indicators		1 x Power status 1 x Alarm
Buttons		1 x Start button
Battery		3V/2400mAh wide-temperature primary (non-rechargeable) battery
Data Transmissions		NFC + LoRa
Mechanical	Mount Options	Fixed by adhesive tape, magnet, fastener, screws
	Dimensions (W x D x H)	123.47 x 65 x 24.5 mm (4.88 x 2.56 x 0.91 in)
	Weight	108 g (0.23 lb)
Environmental	Operating Temperature	-30 ~ 70 °C
	Storage Temperature	-40 ~ 85 °C
	IP Rating	IP65
	Drop Tolerance	4 ft. drop onto concrete
	Certifications	CE, FCC, NCC

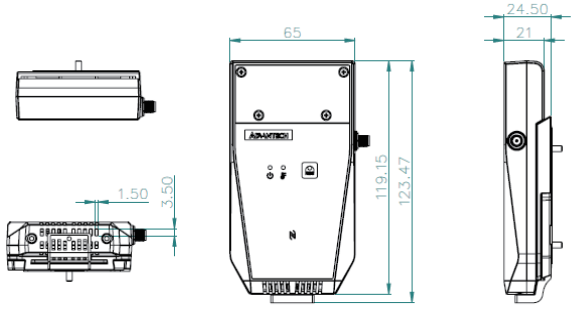
Specifications

General	Storage	8GB micro SD card (default), supports up to 32GB
	I/O	2 x USB 2.0 host 1 x SIM card slot 1 x Micro SD card slot (supports SDHC cards, up to 32GB) 1 x 10/100 Ethernet RJ45 connector 1 x Reset button 1 x Lockable DC jack
	Indicators	Orange: Power and GW status Blue: Uplink status/activity
LoRa	Wireless Technology	920 ~ 925 MHz for Taiwan 902 ~ 928 Mhz for US 863 ~ 870 MHz for Europe 470 ~ 510 MHz for China 921~922 MHz for Japan
	Wireless Range	>500 meters (line of sight)
	Topology	Star
Connectivity	Ethernet	10/100 RJ45 connector
	Backhaul Support	802.11ac/a/b/g/n Wi-Fi (2.4 + 5 GHz) or LTE cat. 4
Power	Input Voltage	9 ~ 20V_{DC} via lockable DC jack
Mechanical	Dimensions (W x H x D)	128 x 156 x 27.8 mm (5.03 x 6.14 x 1.09 in)
	Weight	524 g/1.15 lb
	Mount Options	VESA, wall, desktop, pole, magnet, DIN rail
Certification	EMC	CE/FCC/NCC/CCC*
	EMI	Class B
Environment	Vibration/Shock	10 G, IEC 60068-2-27, half sine, 11 ms duration
	Operating Temperature	-20 ~ 65 °C/-4 ~ 149 °F
	Storage Temperature	-40 ~ 85 °C/-40 ~ 185 °F
	Operating Humidity	90% @ 40 °C/104 °F (non-condensing)

*by project based.

Dimensions

Unit: mm



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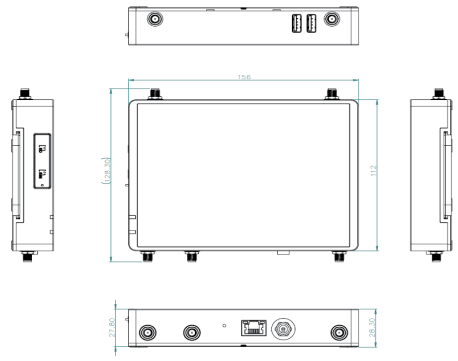

Ordering Information

Part Number	Description
TREK-120CCTW-01E-C	LoRa temp/RH sensor (TW)
TREK-120CCUS-01E-C	LoRa temp/RH sensor (US)
TREK-120CCEU-01E-C	LoRa temp/RH sensor (EU)
TREK-120CCCN-01E-C	LoRa temp/RH sensor (CN)
USM-S62CCG00-E1E-C	Global LoRa gateway (LAN only)

Part Number	Description
USM-S62CCG0W-E1E-C	Global LoRa gateway + WIFI
USM-S62CCG20-E1E-C	Global LoRa gateway + EU LTE
36CSSCCMSR1001	Annual software license fee (Sensor)
36CSSCCMGW1001	Annual software license fee (Gateway)
1700001524	Power Cord (US/TW)