

Advantech

«Решения для транспорта»

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Представительство компании
Адвантек в России*

Enabling an Intelligent Planet

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**ARK - встраиваемые
промышленные компьютеры
– встраиваемые компьютеры**

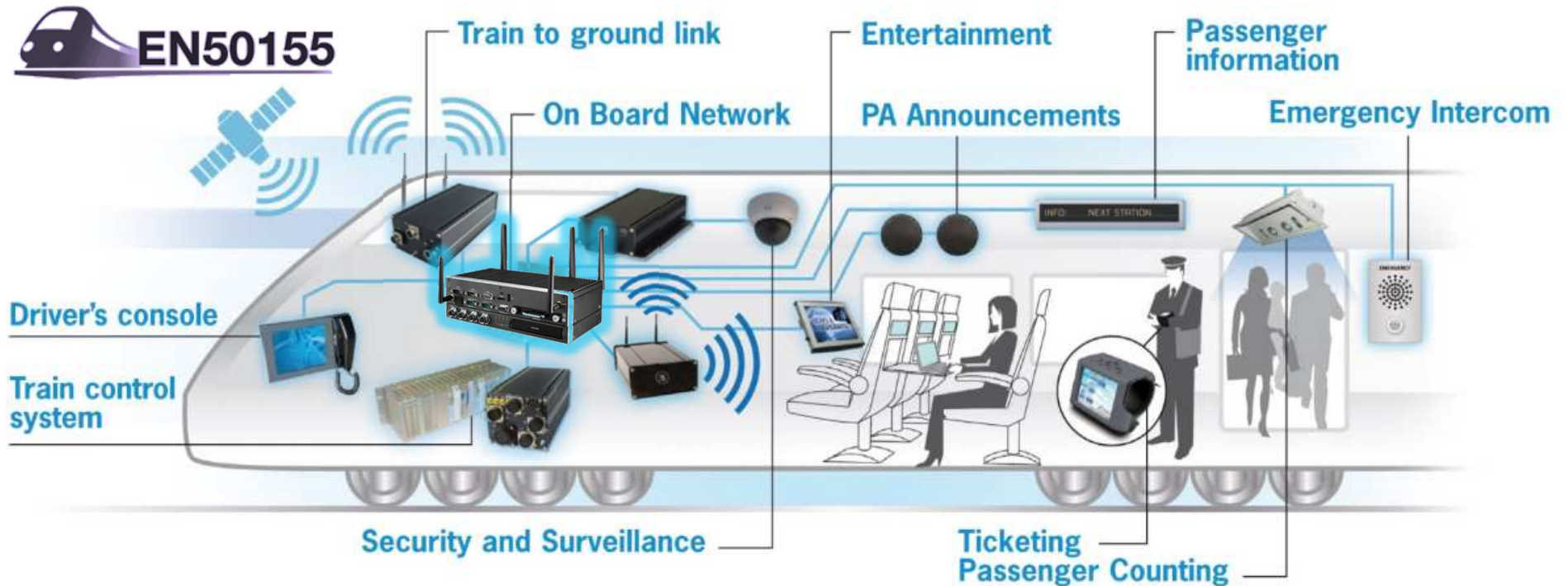
Серия ARK-2231R



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ARK-R область применения – ЖД транспорт



Сетевой видео регистратор



Информационная система



Развлекательная система



Терминалы данных

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ARK-R Продуктовая линейка

Опционально

Основная система

ARK-2231R-S9A1E

Intel Atom **E3845** 1.91GHz QC
- 24Vdc/USB3.0/GbE/COM/HDMI

Q1'17

ARK-2231R-U0A1E

Intel APL-I X7-**E3950** QC
- 24Vdc/USB3.0/GbE/COM/HDMI

Q3'17



Модули расширения

AMK-R100E : 4x GbE PoE+ ports (X-coded),
1x anti-vibration 2.5" drive bay

AMK-R104E : 4x 10/100Mbps PoE+ ports
(D-coded), 1x anti-vibration 2.5" drive bay



AMK-R101E : 8x GbE PoE+ ports (X-coded),
1x anti-vibration 2.5" drive bay

AMK-R105E : 8x 10/100Mbps PoE+ ports
(D-coded), 1x anti-vibration 2.5" drive bay



AMK-R102E : 2x Isolated COM, 16Bit DIO,
1x anti-vibration 2.5" drive bay



AMK-R103E : 4x Isolated COM, 16Bit DIO,
1x anti-vibration 2.5" drive bay

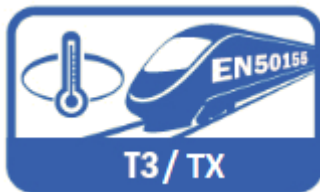


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ARK-2231R Основные особенности

Система предназначенная для применения на подвижном составе с гибкими возможностями по расширению



2017/Q1

Phase In

2023/Q4

Longevity

Excellent Computing/Graphic Power

Support up to 1080p 240fps

Intel Bay Trail E3845/Apollo Lake X7-E3950

DDR3L 1333MHz/DDR3L 1867, Up to 8GB

Flexible I/Os options for specific application

2*GbE, USB3.0, 2*USB2.0, VGA, HDMI, Audio, DIO, 2*COM

NVR Kit: 4/8 GbE PoE+, 1*2.5" drive bay

Terminal kit: 2/4 isolated COM, 16bit DIO, 1*2.5" drive bay

Diversity Communication and Sensor

Built-in: GPS and G-Sensor

Extensible: 3* Mini-PCIe Slots (WLAN, WWAN, BT)

Anti-Vibration/Shock Proof

IEC 61737 Category 1, Class B

DC 24, 48, 72, 110V options

EN50155 S2C1

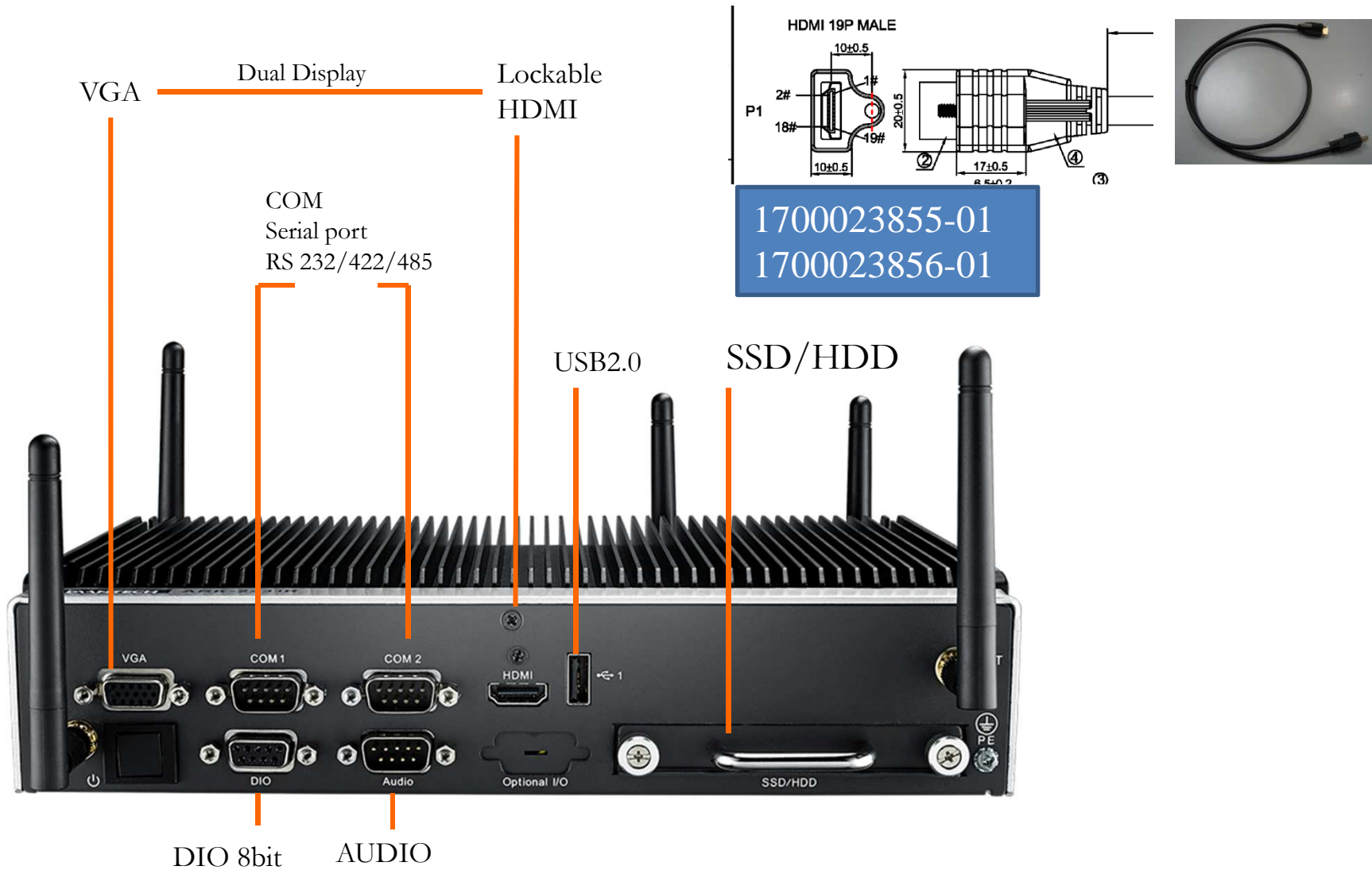
Certification

CE, FCC, CB, UL, CCC, BSMI, EN50155

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Блокируемый дизайн разъема видео выхода



Блокируемый прочный дизайн разъема

XARK-GV-MDR3400

3M WDR Pro Mini Fixed Rugged IP Dome
M12 connector

Remote control:
G/Reset/Power/HDD LED*2/Power LED

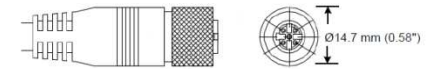
Giga LAN M12 X coded*2

SIM slot

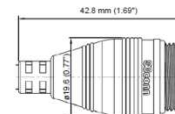


• LAN Connector

1. Waterproof M12 4-Pin Female Connector (for motor vehicles)



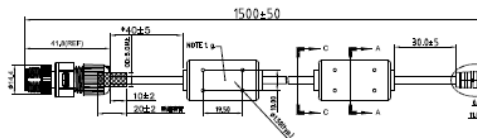
2. Small Waterproof Connector



Power in with M12 D Coded

USB2.0 M12 A coded

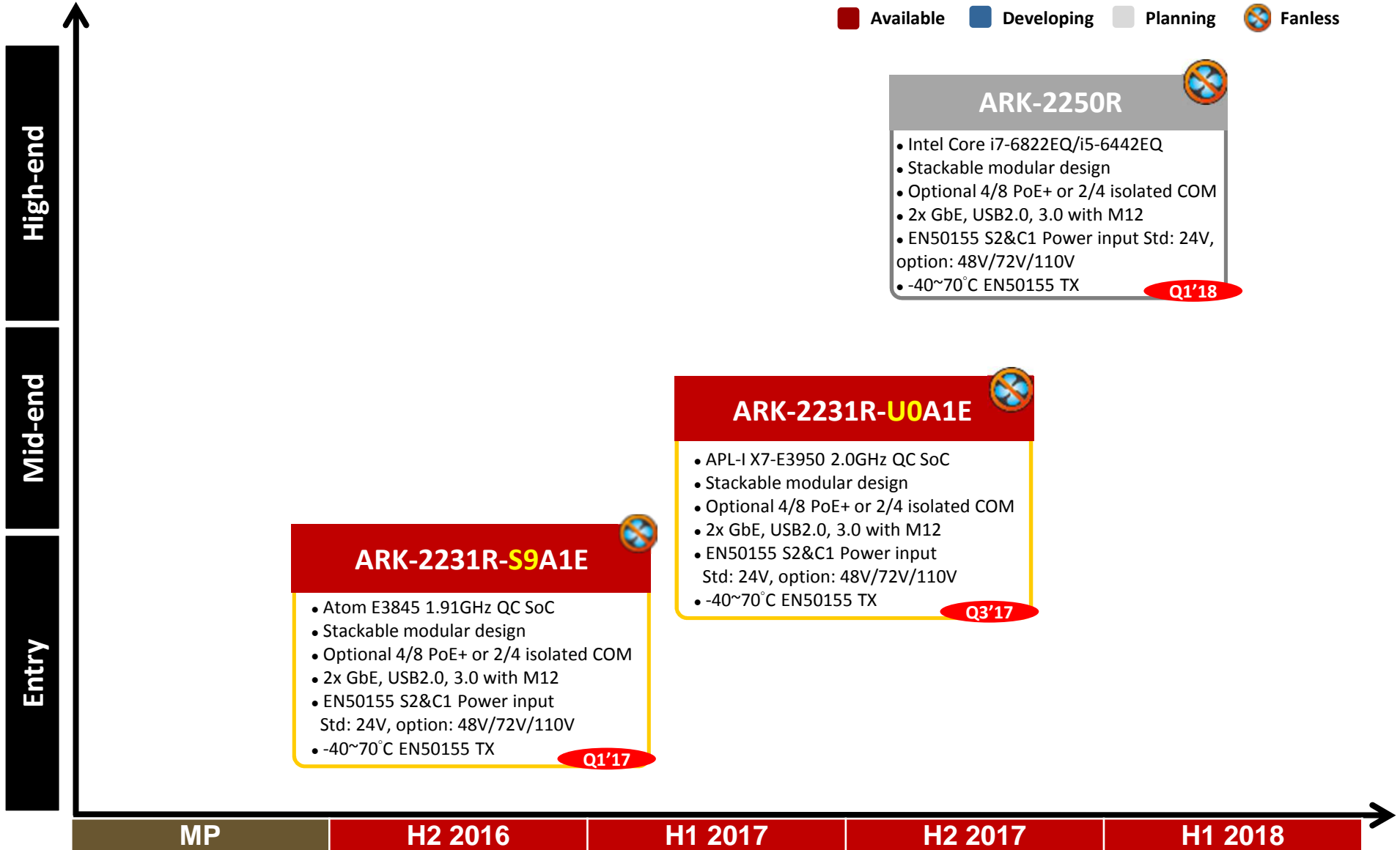
Water Proof USB 3.0 Type A



FSP180-AAAN2-4CI

ARK-R (EN50155) Roadmap

■ Available
 ■ Developing
 ■ Planning
  Fanless



ARK-2231R-S9A1E

- Atom E3845 1.91GHz QC SoC
- Stackable modular design
- Optional 4/8 PoE+ or 2/4 isolated COM
- 2x GbE, USB2.0, 3.0 with M12
- EN50155 S2&C1 Power input Std: 24V, option: 48V/72V/110V
- -40~70°C EN50155 TX

Q1'17

ARK-2231R-U0A1E

- APL-I X7-E3950 2.0GHz QC SoC
- Stackable modular design
- Optional 4/8 PoE+ or 2/4 isolated COM
- 2x GbE, USB2.0, 3.0 with M12
- EN50155 S2&C1 Power input Std: 24V, option: 48V/72V/110V
- -40~70°C EN50155 TX

Q3'17

ARK-2250R

- Intel Core i7-6822EQ/i5-6442EQ
- Stackable modular design
- Optional 4/8 PoE+ or 2/4 isolated COM
- 2x GbE, USB2.0, 3.0 with M12
- EN50155 S2&C1 Power input Std: 24V, option: 48V/72V/110V
- -40~70°C EN50155 TX

Q1'18

MP

H2 2016

H1 2017

H2 2017

H1 2018

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ARK- V область применения – **Автотранспорт**



In-vehicle
Certifications



In-vehicle
Extension



In-vehicle
Power



IP Camera



Graphic
Power

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ARK-2121V \ 2151V \ 2250V Особенности



Sufficient Computing/Graphic Power

ARK-2121V: Intel Atom E3825 Dual Core 1.3GHz

ARK-2151V: Intel Celeron 2980U Dual Core 1.6GHz

DDR3L 1066/1333MHz, Up to 8GB

ARK-2250V: Intel 6Gen i76822EQ 2.0GHz

DDR4 Dual Channels up to 32Gb

Specific I/Os for In-Vehicle Application

Optional: 2* RS-232 (std) OR 2* CANBus 2.0 A/B

Isolated I/Os: 2*RS-422/485, 6*DI/2*DO, power input
2*GbE, 2*USB3.0, 2*USB2.0, 1*VGA, 1*HDMI, Audio in/out

Diversity Communication Abilities

On board: GPS and G-Sensor

Extensible: 1*WLAN and 2*WWAN (**Voice supported**)

Storage Support

1* **Removable** 2.5" Drive Bay (Data store)

1* mSATA (OS store)

2020/2024Q4

Longevity

Isolated In-Vehicle Power

9~36Vdc with 3kV Isolation, Vehicle Power Ignition

Roadmap series ARS-P

Available
 Developing
 Planning

T1: -25~ 55°C

Панельные ПК



ARS-P3800

ES Ready
Q2'16MP

- 38-inch Display, **1920x495 resolution**
- AMD® GX-217GX Dual core processor
- 1xGbE(M12), 1xUSB 2.0 (M12), 1 x RS-232/485, 1x VGA/1x HDMI and Audio
- EN50155 T1

ARS-P2800

- 28-inch Display, **1920x358 resolution**
- AMD® GX-217GX Dual core processor
- 1xGbE(M1), 1xUSB 2.0 (M12), 1 x RS-232/485, 1x VGA/1HDMI and Audio
- EN50155 T1

Мониторы

ARS-P1900

Q1'16 ES
Q4'16MP

- 19-inch Display, 1680x1050 resolution
- TV Tuner support PAL and NTSC
- HDML and DVI input, 1 RS-485,
- Power input 110Vdc
- EN50155 T1



Y2016

Y2017

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Примеры применения

ARK-Vertical Целевые сегменты и применения


Наружное видеонаблюдение ARK-S

- Видеонаблюдение на дорогах
- Управление дорожным движением
- Автоматизированные парковки
- Видеонаблюдение в туннелях \ мостах

Для железнодорожного транспорта ARK-R

- Информационные системы для пассажиров  EN50155
- Информационно-развлекательные Системы
- Видеонаблюдение на борту (NVR)
- Терминалы сбора данных

Для автотранспорта ARK-V

- Внутрисалонное видеонаблюдение
- Информационные системы
- Реклама \ Мультимедиа
- Связь \ Управление
- Мониторинг транспортных средств (Fleet Management) 



Мониторинг транспортных средств (Fleet Management)

Применения

- Внутрисалонное видеонаблюдение, отслеживание, мониторинг транспорта в движении

Системные требования:

- Высокая вычислительная мощность
- Возможность подключения внутрисалонных IP камер
- Съёмный жесткий диск для доступа к видео файлам
- Встроенные функции: GPS и WIFI / 3G
- Возможность работы в суровых условиях

Advantech предлагает: **ARK-V**

- Высокопроизводительный CPU
- 4 x PoE ports с поддержкой IP Камер, до Full HD 30fps прямой трансляции
- Встроенный GPS/GNSS модуль, модули 3G/LTE, Wi-Fi
- 2.5" дюймовый SSD накопитель, с возможностью легкой замены
- Широкий температурный диапазон -40 ~ 60°C



eBus Развлекательная система

Применение

- Отображение информационных сообщений и видео для информирования и развлечения пассажиров

Системные требования:

- Высокая мощность вычислительных и графических возможностей для мультимедиа
- Возможность подключения 2-х экранов с помощью HDMI, VGA
- Отображение сообщений и видео для пассажиров, информирование в реальном времени
- Готовность к вибрации и ударам.

Advantech предлагает: ARK-V

- Выдающийся процессор и графические возможности для потокового медиа
- Блокируемый разъем HDMI кабеля, для избежания случайного высвобождения
- Устойчивость к вибрации и ударам IEC 60721-3-5 Class 5M3



Система видеонаблюдения в туннеле

Применение

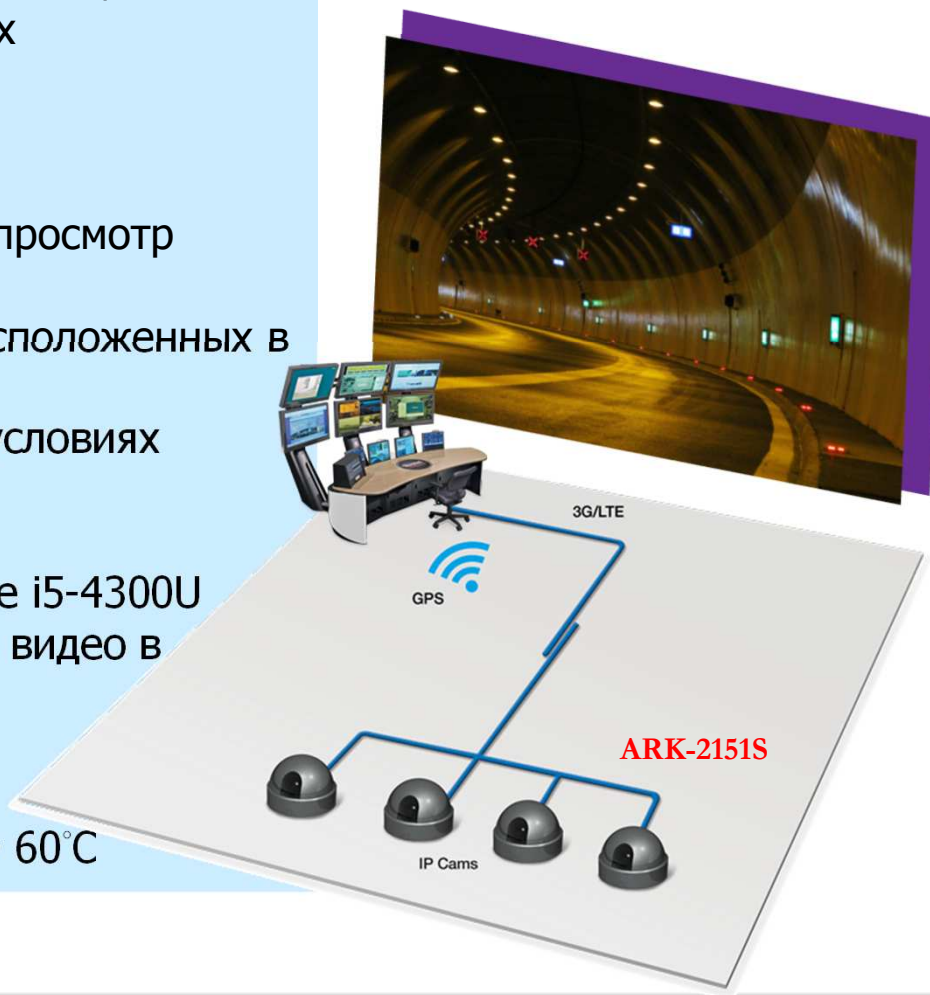
- Мониторинг транспортного потока в туннелях, а также анализа данных о дорожно-транспортных происшествиях

Системные требования:

- Высокая вычислительная мощность для просмотр видео в реальном и аналитика
- Готовность к подключению IP-камер расположенных в туннеле
- Способность работать в экстремальных условиях

Advantech предлагает: ARK-S

- Высокопроизводительный процессор Core i5-4300U вычислительная мощность для просмотр видео в реальном и аналитика
- 4 x PoE ports с поддержкой IP Камер, до Full HD 30fps прямой трансляции
- Широкий температурный диапазон $-40 \sim 60^{\circ}\text{C}$



Система видео наблюдения на подвижном составе

Применение

- Внутрисалонная система видео наблюдения

Системные требования:

- Компактный дизайн, чтобы поместиться в небольшом пространстве шкафа
- Возможность подключения IP камер расположенных в поезде
- Встроенные GPS и WI-FI модули
- Большой объем хранения хранения данных для записи видео
- Сертификат EN50155

Advantech предлагает: ARK-R

- Компактный , модульный, гибкость конфигурации для выполнения требований заказчика
- Поддержка до 8 x PoE
- Встроенный GPS/GNSS , модули с поддержкой 3G/LTE , WI-FI
- Поддержка 2 x 2.5" SSD
- Сертифицирован по EN50155



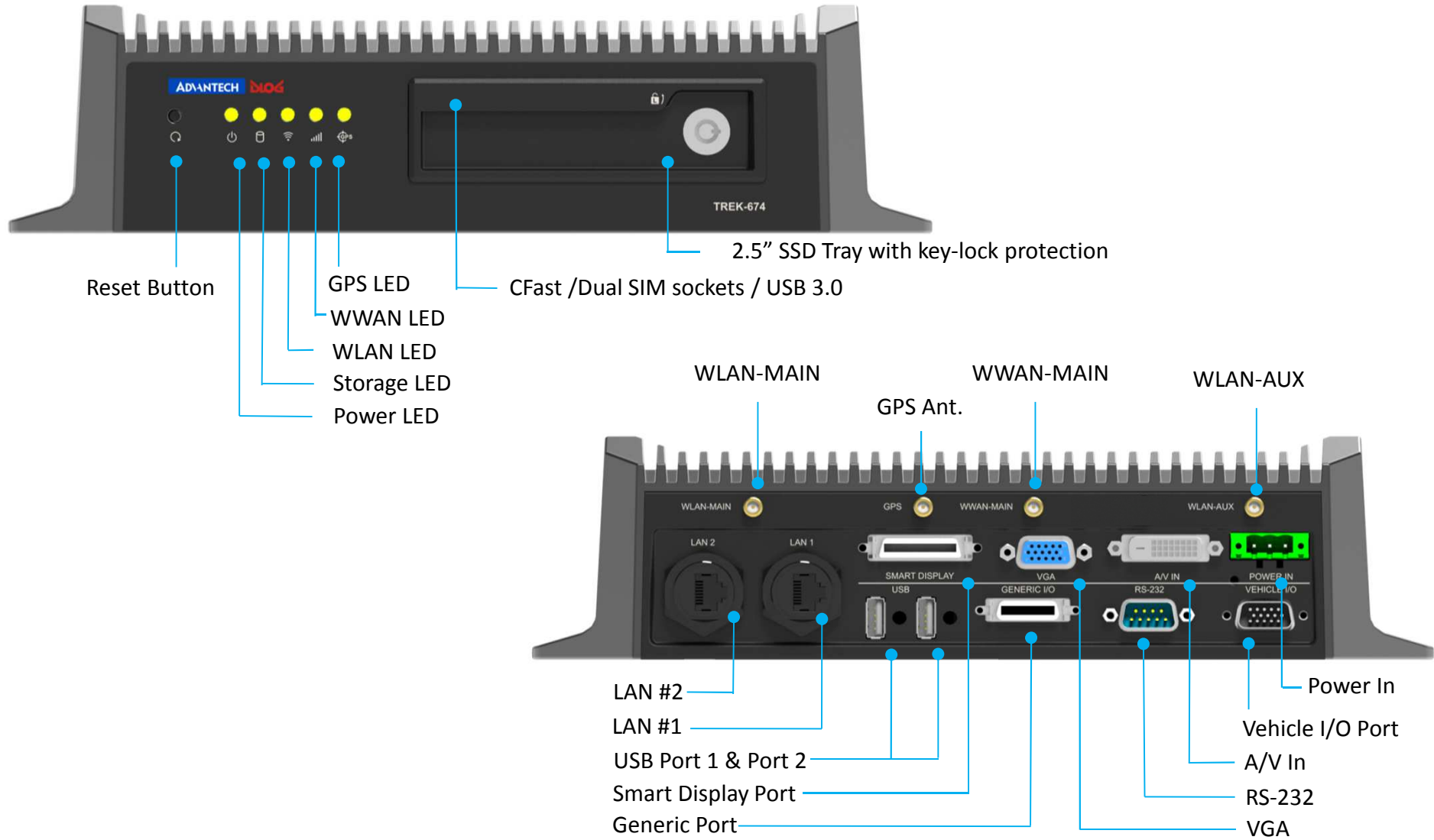
TREK-674

● Особенности продукта

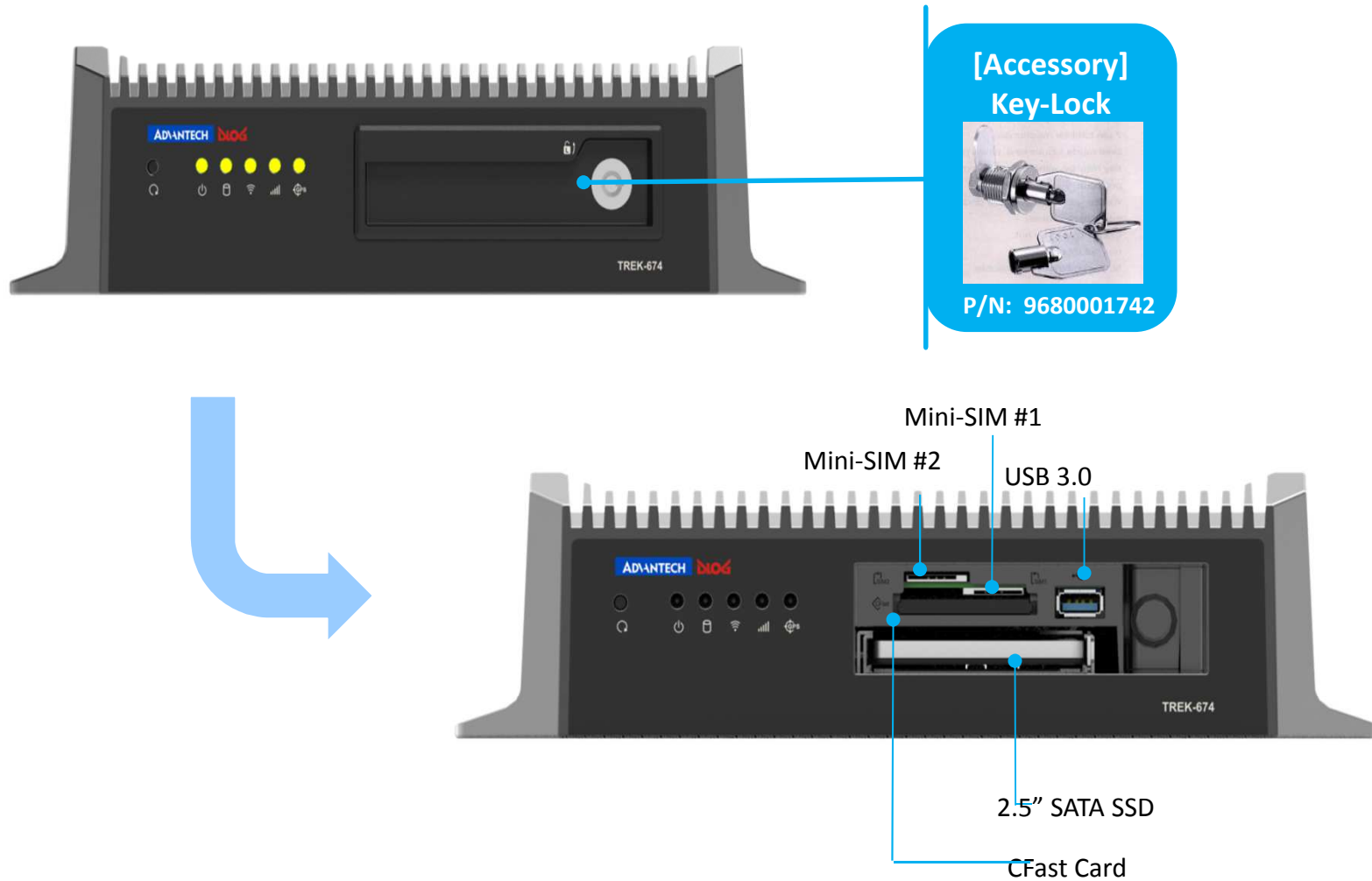


- Intel **Atom E3827** SOC inside
- **One-Cable-Connection** to pair with **TREK In-Vehicle Smart Display** (e.g. TREK-303/306)
- Embedded **Stretch S7 video hardware encoder**, support up to **8-ch** analog video inputs (**H.264, D1 , 30fps/ch.**) and 4-ch audio inputs (G.711)
- External **accessible SSD** tray with key-lock protection
- Vehicle diagnostic interface with configurable protocols support: **CAN (J1939, OBD-II/ISO 15765) and J1708 (J1587)**
- Built-in GNSS, WLAN, Bluetooth and WWAN (**with SIM card**) modules
- **Intelligent Vehicle Power Management**: Ignition on/off delay, wake up event controls and system health monitoring and diagnostic.
- Beyond Vehicle grade Shock and Vibration Standard: **Pass MIL-STD-810G & EN60721-3(5M3) test criterion.**
- Wide working temperature (**-30 ~60° C**)
- 12/24V Car power system compliant (ISO 7637-2 compliant)
- CE, FCC, CCC, **E-MARK(E13).**

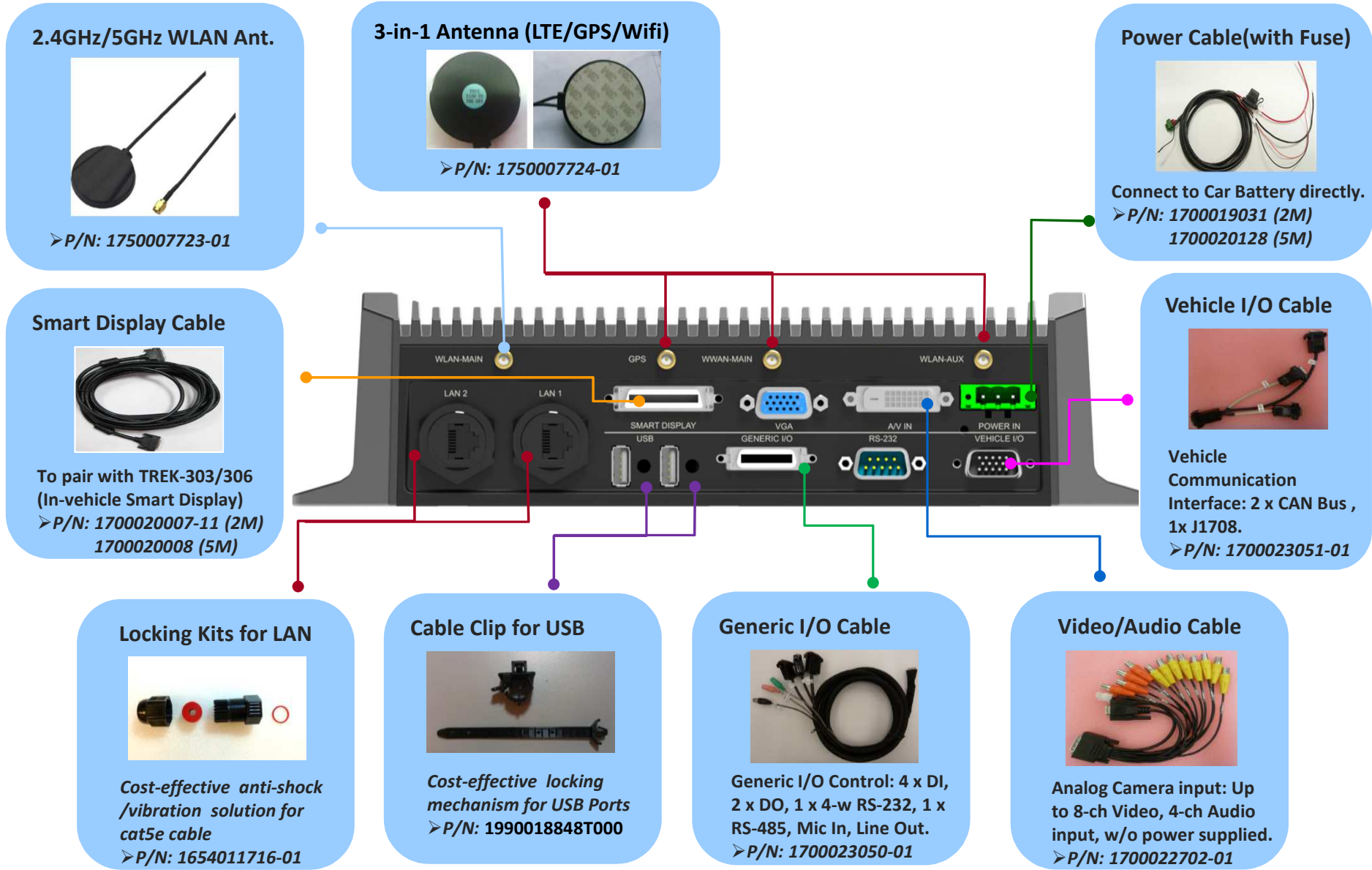
I/O коннекторы



Запираемый отсек для SSD, CFast, и SIM карт



Надежное крепление кабелей и антенн



TREK-688



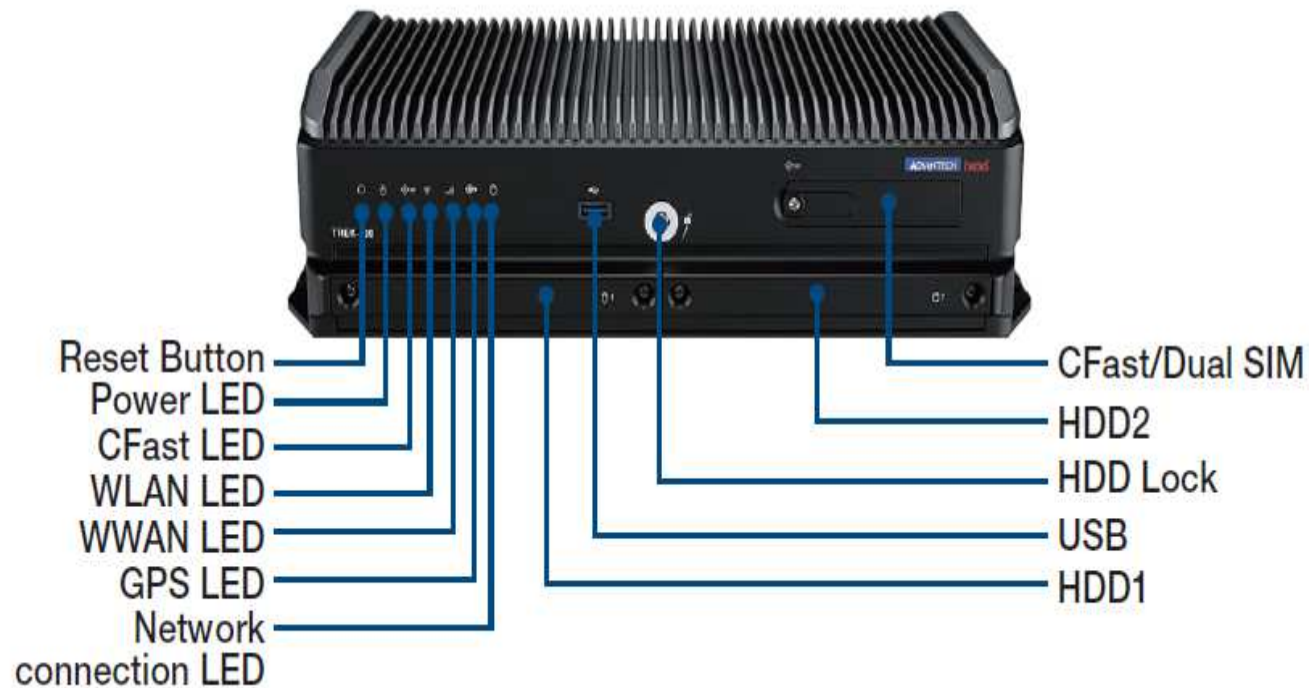
● Особенности продукта

- Intel **Haswell i7 Dual core** high performance processor for multitasking.
- Embedded video encoder supports up to **16 analog video inputs up to D1, 30fps** resolution (total 480fps) and 8 audio inputs
- **Dual external HDD/SSD tray** with key-lock protection.
- Easily paired with **TREK in-vehicle smart displays** via a single-cable connection.
- Intelligent vehicle power management system for ignition on/off/delay and power protection functions.
- Vehicle diagnostic interface with configurable dual CAN(J1939,OBD-II/ISO 15765) and J1708 protocols.
- Built-in LTE/GNSS/WLAN/BT (**with dual SIM cards**) modules.
- Advanced Shock & anti-vibration certified by MIL-STD-810G, EN60721-3(5M3)
- **Rich management & video SDK** , test utility for customer evaluation.

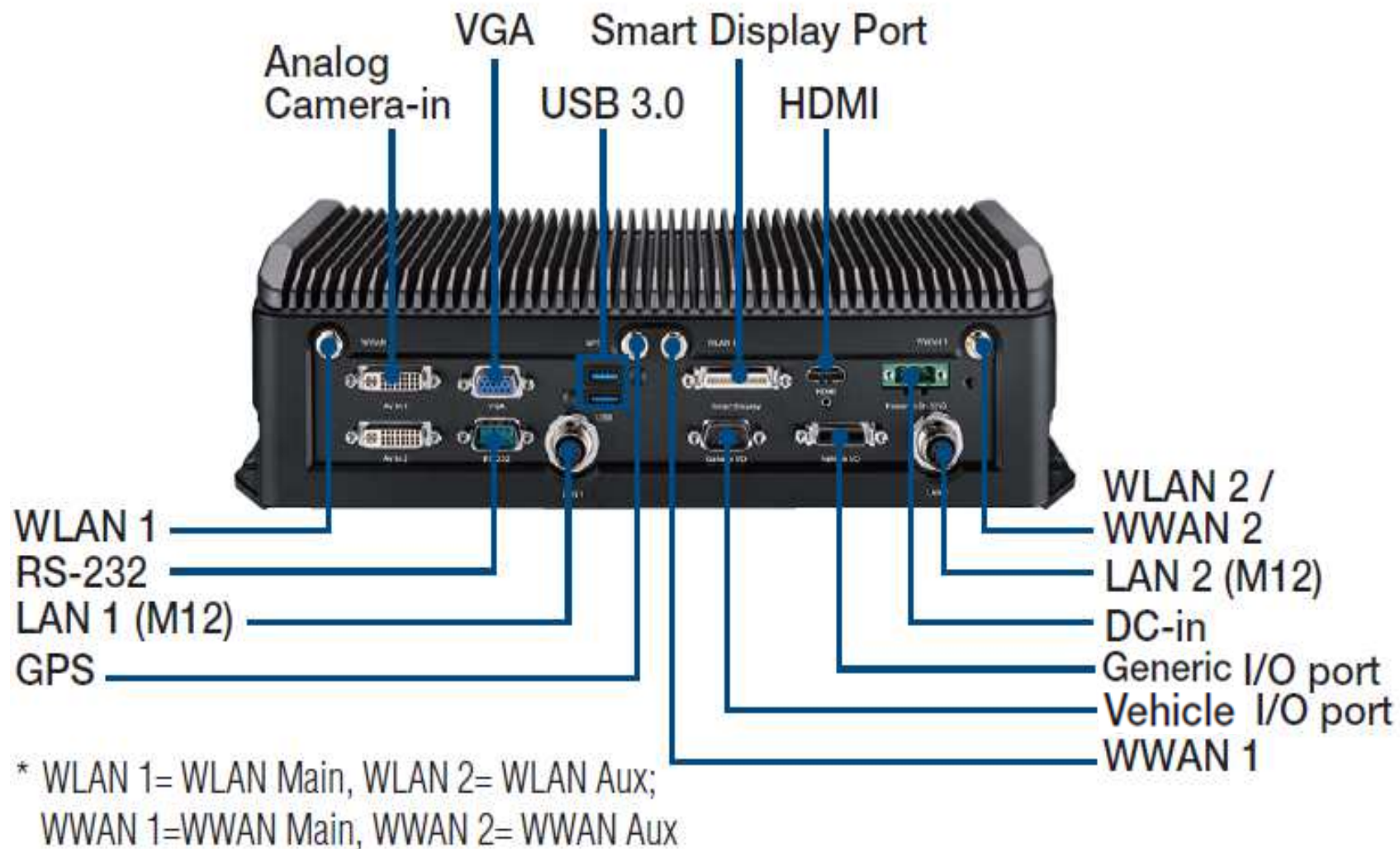
Передняя панель

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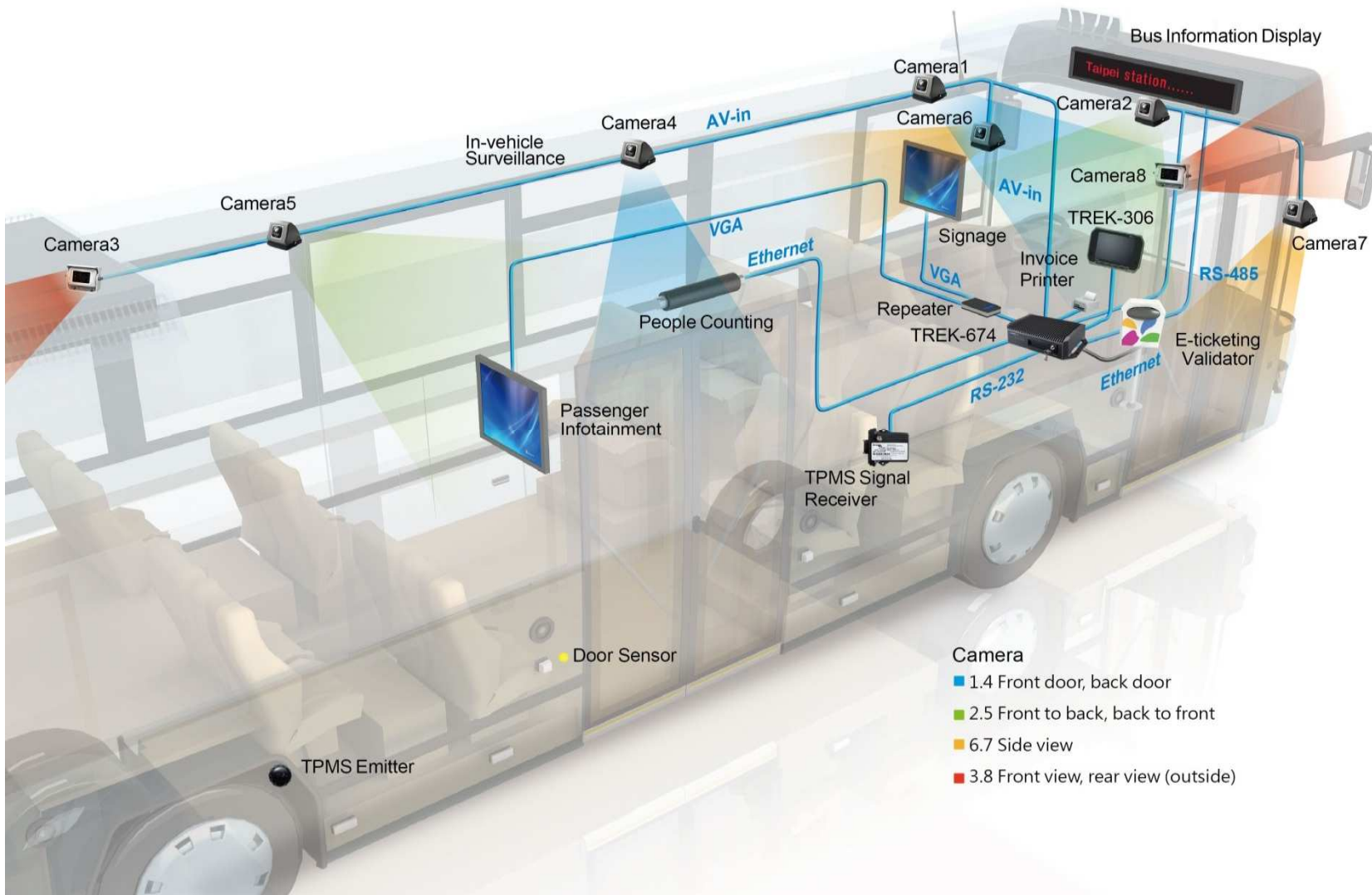
M Cable Waterproof 8P/RJ45-8P8C 5CM



Задняя панель



Пример применения для общественного транспорта



Fleet Management and In-vehicle Surveillance Computing Box

 Available
 Developing
 Planning

Fleet Management

TREK-570

- Intel Bay Trail-I E3826 Dual Core 1.46GHz
- WLAN, BT, WWAN (CDMA/HSPA+/LTE), 2 SIMs
- GNSS support GPS, Compass, GLONASS
- Dual CAN (J1939, J1708/J1587, ODB2/J15765)
- Real time Rear view monitoring
- Rich I/O interface
- Operating -30°C~70°C



TREK-572

- Intel Bay Trail-I E3815 Single Core 1.46GHz
- WLAN, BT, WWAN (LTE)
- GNSS support GPS with AGPS feature
- Dual CAN (J1939, J1708/J1587, ODB2/J15765)
- Compact Size Design (with limited I/O port)
- Support Smart Display output only
- Operating -30°C~70°C



TREK-530

- Qualcomm APQ809 Cortex-A7 4-Core 1.3GHz
- **Industrial Android 6.0**
- DDR3 2GB, eMMC 16GB
- BT / WLAN (802.11 a/b/g/n) / GNSS via **FAKRA**
- **Extension module** for WWAN LTE and Backup Battery
- ISO 7637-2 Car Power for 12/24V
- Operating Temp.: -20 °C ~65°C
- IP54 (I/O Cover) & MIL-STD-810G
- CE, FCC, CCC



TREK-470

- Compact light duty for main stream fleet management .
- CE, FCC, CCC



TREK-688

- Intel Haswell i3/i5/i7
- 12-Ch Video HW encode & 8-Ch Audio input
- 2x Giga LAN with M12 connector
- 2x Accessible 2.5" SSD tray
- WLAN, BT, GPS, LTE with 2 SIMs
- Dual CAN (J1939, J1708/J1587, ODBII/J15765)
- Operating -30 °C ~55°C



TREK-674

- Intel Bay Trail-I E3827 Dual Core 1.75GHz
- 4/8-Ch Video HW encode: H.264, D1/30fps/Ch.
- 2x Giga LAN with locking connector
- 1x Accessible 2.5" SSD tray
- WLAN, BT, WWAN (CDMA/HSPA+) w/ 2 SIMs
- GNSS support GPS, BDS, GLONASS
- Dual CAN (J1939, J1708/J1587, ODBII/J15765)
- Operating -30 °C ~70°C



TREK-676

- Com Express SOM CPU Board:
- ✓ Intel Apollo Lake -I (E39xx)
- ✓ Kaby Lake (7th Gen .Core i -U series)
- **Smart Display Port 2.0:** Thinner wire, up to 10-meter.
- **External RF Module:** (WWAN / WiFi / DSRC*)
- **Generic I/O 2.0: Automotive type connector - GT25-40p**
- ✓ Support both dry and wet contact input.
- ✓ More DI/O (6/4), RS232 /485(4//2)
- ✓ Support Dual Line Out / Mic In
- **Vehicle I/O 2.0: Automotive type connector -GT25-16p**
- ✓ Dual CAN bus and Single J1708
- **Support 8/16-ch 1080p AHD camera input 8-port 802.3af PSE. HDD**
- **Optional: 2x Giga LAN support passive PSE injector (up to 12W)**
- **Optional: 10W Audio Amplifier**
- **Optional : IP65 I/O Cover**
- Operating temperature: -30°C~70°C/ -20 °C ~ 50 °C



Jun'2019

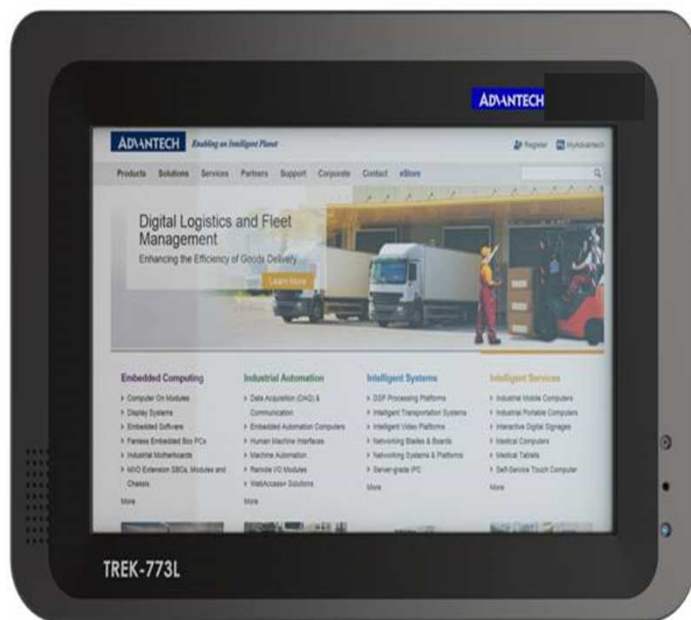
2018

2019

2020

Планшеты и панельные компьютеры для авто и ЖД транспорта

Мобильный терминал TREK-733L на базе процессора RISC



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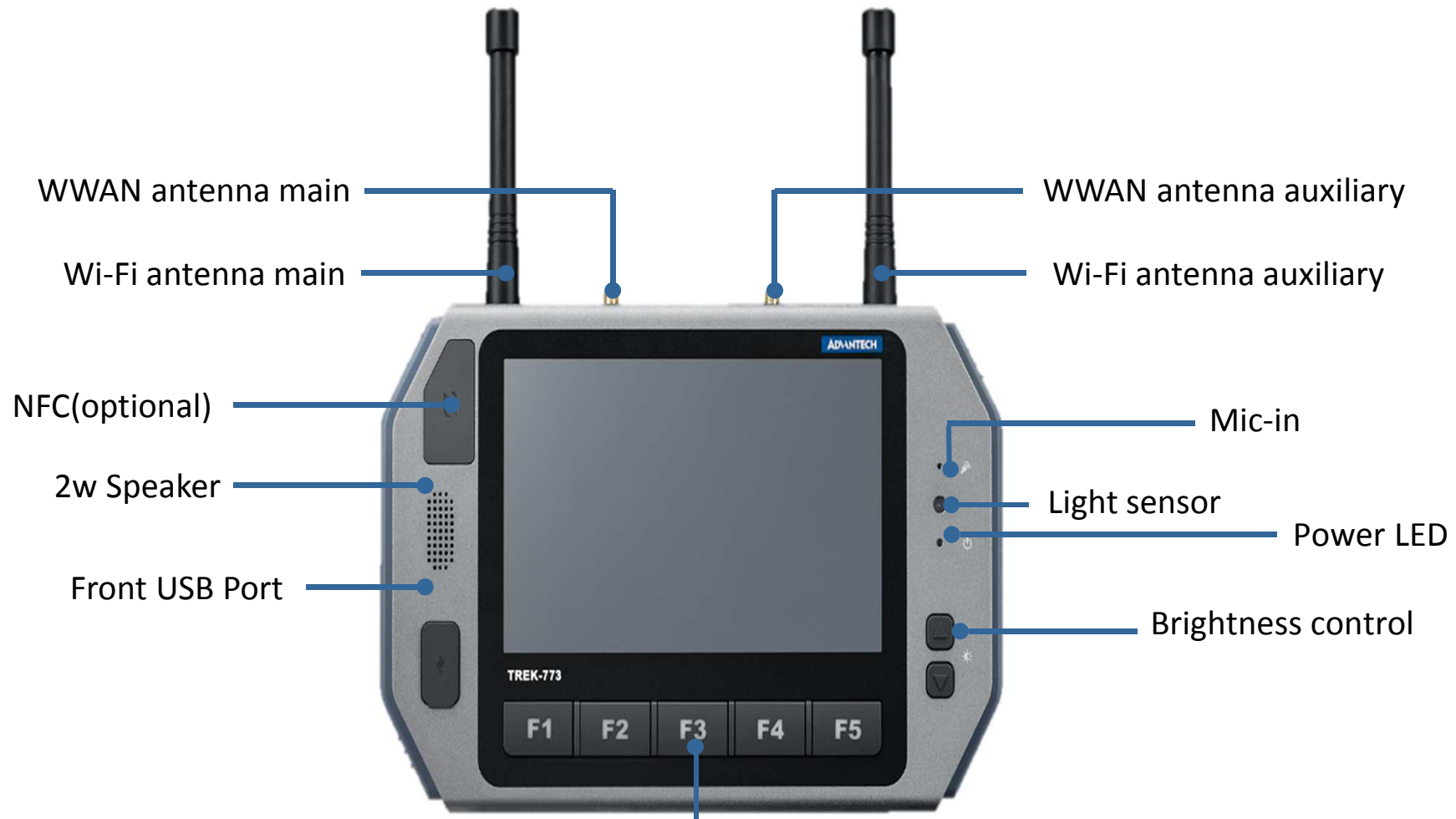
I/O коннекторы



Характеристики TREK-733L

	TREK-733L
Dimension	<ul style="list-style-type: none">• 200 x 140 x 33 (mm)
Processor	<ul style="list-style-type: none">• Freescale i.MX6D Dual Lite CPU 1.0 GHz / Quad
OS	<ul style="list-style-type: none">• Android 4.4
Storage & Memory	<ul style="list-style-type: none">• 1GB DDR3 SDRAM/ 2GB
	<ul style="list-style-type: none">• 4GB Emmc
Display	<ul style="list-style-type: none">• 7" , 1024 x 600, 400 nits TFT LCD panel
Touch	<ul style="list-style-type: none">• G/F/F,10 points capacitive multiple touch
Wireless *	<ul style="list-style-type: none">• HSPA+/LTE
	<ul style="list-style-type: none">• WiFi 802.11b/g/n & BT4.0 combo
	<ul style="list-style-type: none">• Integrated GPS
	<ul style="list-style-type: none">• Three External ANT reserved

Мобильный терминал TREK-773 на базе процессора INTEL

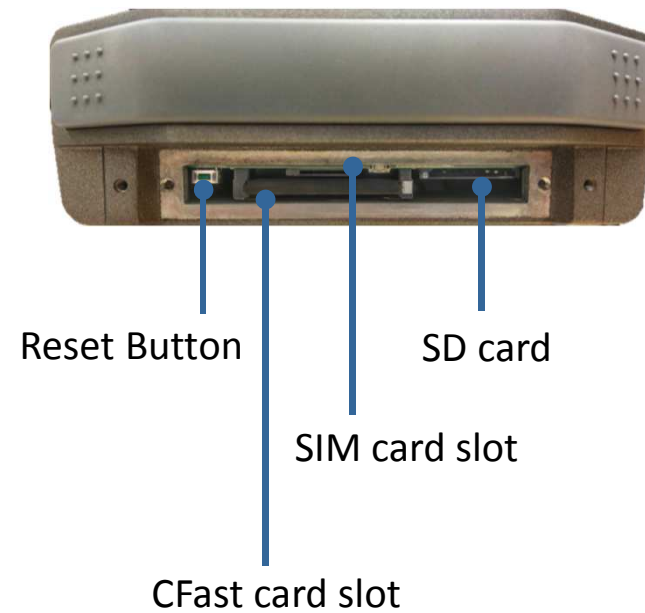


5 programmable **hot keys**

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Задняя панель



Обзор коннекторов



GPS



High-Density Connector

RS232



RJ45

USB 3.0

Power Input

Power button

High Density Cable



 <p>CAN bus & J1708</p>	 <p>Video in</p>	 <p>USB2.0</p>	
 <p>Power</p>	 <p>RS-485 4DI/4DO</p>	 <p>RS-232</p>	 <p>Line in Line out Mic in</p>

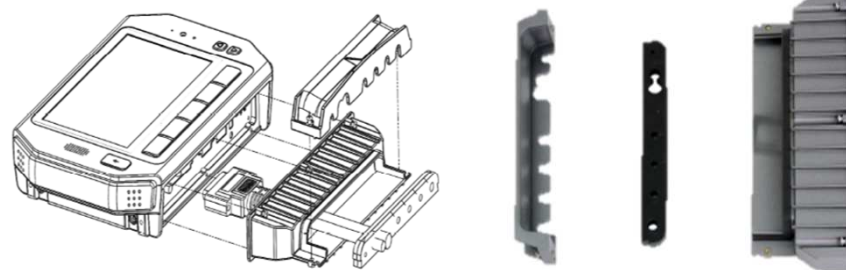
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Варианты крепления и защита IP54



Vehicle Mounting kit



IP54 IO Cover

Характеристики TREK-773

	TREK-773
CPU	Intel Atom E3827, Dual Core 1.75GHz
System Memory	DDR3L-1333 RAM up to 4GB
Storage	1 x external access CFast ; 1 x external access SD card
OS support	WES8/WIN10 (WES7/Linux Ubuntu by Project-based)
LCD	7" wide viewing angle screen 500nits TFT type
Touchscreen	Resistive type with IK06 protection (500g @ 200mm)
GPS	uBlox MAX-M8Q , support GPS/GLONASS/BeiDou
WWAN	LTE, backward compatible to GPRS, HSPA, CDMA
WLAN	802.11 a/b/g/n
Bluetooth	BT Class 2 (4.0LE, 3.0 HS, 2.1 EDR)
NFC	ISO/IEC 14443A, 14443B, 15693; MIFARE 1K/4K, Ultralight; NFC-IP2 protocol (optional in Win10 model)
Sensor	Light sensor, G-sensor
CAN BUS	1 x CAN: CAN 2.0B, J1939, OBDII (ISO 15765-4) 1 x J1708, J1587
Power Input	12V/24V car power system: 9~32V wide DC input, ISO 7637-2 & SAE J1113 compliant 48V car power system(optional): 18~58V wide DC input
I/O Port	1 x USB3.0 ; 2 x USB2.0; 1 x Giga LAN; 2 x RS-232; 1 x RS-485; 4 x DI; 4 x DO; 1 x MIC in; 1 x Stereo Line in; 1 Stereo Line out; 1 x CVBS input
Dimension	255.7 x 161 x 56 mm

All-in-One Mobile Data Terminal and Smart Display

 Available
 Developing
 Planning

Performance

TREK-773

- Intel Atom Bay Trail E3827 Dual-Core 1.75GHz
- 7" WVGA (800x480), Enhanced Res. T/S
- BT / WLAN / WWAN LTE / GNSS (AGPS) / NFC
- Vehicle Bus CAN 2.0B / J1939 / OBD II / J1708 / J1587
- ISO 7637-2 Car Power 12/24/48V
- IP54 (I/O Cover) / MIL-STD-810F & 5M3
- Operating Temp.: -30 °C ~70°C



Value

TREK-733L

- Freescale i.MX6 Cortex-A9 2-Core 1GHz
- Android 4.4
- 7" WSVGA (1024x600), PCap. T/S
- DDR3 1GB, eMMC 4GB
- BT / WLAN (802.11 b/g/n) / WWAN LTE / GNSS
- ISO 7637-2 Car Power for 12/24V
- AV-In for Rear View Monitor
- Operating Temp.: -20 °C ~70 °C
- MIL-STD-810G
- CE, FCC, CCC, BSMI



TREK-734

- Freescale i.MX6 Cortex-A9 2-Core 1GHz
- **Android 5.1**
- 8" WSVGA (1024x600), PCap. T/S
- DDR3 1GB, eMMC 4GB (**DDR3 2GB, eMMC 8GB**)
- BT / WLAN (802.11 b/g/n) / WWAN LTE / GNSS
- ISO 7637-2 Car Power for 12/24V
- AV-In for Rear View Monitor
- Operating Temp.: -20 °C ~70 °C
- IP54 (I/O Cover) & MIL-STD-810G
- CE, FCC, CCC



Smart Display

TREK-306DH

- Paired with TREK-5xx/6xx
- **10.4" XGA (1024x768), 400nits, LED B/L**
- 5-Wire Resistive T/S
- Speaker, Hotkeys, USB 2.0, Light sensor
- **IP55 with I/O Cover**
- Operating -30°C~70°C



TREK-306PH/D2

- TREK-306DH Revision.
 - keep most features the same as TREK-306DH.
- 10.4" XGA (1024x768), **500nits** LCD
- **TREK-306PH:**
 - **PCAP** (support multi-touch)
 - **Keep Smart Display 1.0**
- **TREK-306D2:**
 - **Smart Display 2.0 interface.**
 - ✓ **Thinner** connector and cable.
 - ✓ Support up to **10 meter** cable length.
 - ✓ To pair with TREK-676
- **IP55 with I/O Cover**
- Operating -30°C~70°C

Jun'2019

TREK-303R2

- TREK-303RH Revision.
 - keep most features the same as TREK-303RH
- **7" WVGA (800x480), 500nits, LED B/L LCD**
- Built-in Light sensor for auto-dimming.
- **Smart Display 2.0 interface**
 - **Thinner** connector and cable.
 - Support up to **10 meter** cable length.
 - pair with TREK-676
- Speaker, Hotkeys, USB 2.0, Light sensor
- **IP55 with I/O Cover**
- Operating -30°C~70°C

Aug'2019

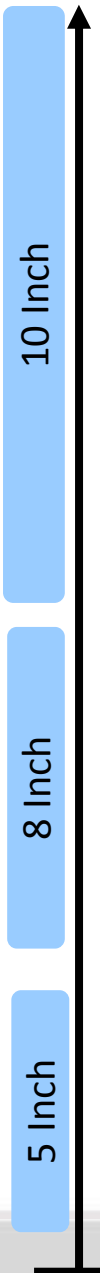
2018

2019

2020

Product Roadmap

■ Available
 ■ Developing
 ■ Planning



PWS-870

- Intel Core i3/i5/i7 4xxxU (Haswell) Dual-Core 1.7/1.9GHz
- 10.1" HD (1366x768), PCap. T/S
- DDR3L 8GB, mSATA SSD 32~256GB
- BT / WLAN / **WWAN LTE** / GNSS
- 1D/2D Barcode, 2M/5M Camera
- NFC, Fingerprint, Extension module
- Windows
- IP65 & 4 ft Drop, MIL-STD-810G
- Hot-Swap battery
- CE, FCC, CCC



PWS-872

All features follow PWS-870, except the following:

- Intel Celeron 3965U, Core i3/i5/i7 7xxxU (**Kaby Lake**) Dual-Core 2.2/2.8GHz
- 10.1" HD (1200x800) 300 nits
- 10.1" **WUXGA** (1920x1200) **1000 nits**
- DDR4 4~8GB
- **8M** Rear Camera
- **5 Hotkeys**
- Windows 10



DLT-M8110

- Intel Atom Bay Trail E3827 Dual-Core 1.75GHz
- 10.4" XGA (1024x768), **Res. & PCap. T/S**
- DDR3 4GB, mSATA SSD 32~128GB
- BT / WLAN
- 1D/2D Barcode, 5M Rear Camera, Hot-Swap battery
- WE7S, Win 7 Pro, WES8, Win 8.1 Industry
- IP65 & 4 ft Drop on Concrete, **MIL-STD-810F & 5M3**
- CE, FCC, CCC



AIM-68

- Intel Atom x7-Z8750 Quad-Core 1.6GHz
- 10.1" **WUXGA (1200x1920)**, PCap. T/S
- LPDDR3 4/8GB, eMMC 64/128GB
- BT / WLAN / WWAN LTE / GNSS
- NFC, 2M/5M Camera, **Extension Module, Vehicle Docking Station**
- **Windows 10 IoT Enterprise and AIM Android 6.0**
- IP65 & 4 ft Drop
- CE, FCC, CCC



AIM-65

- Intel Atom x5-Z8350 (**Cherry Trail T3**) Quad-Core 1.44GHz
- 8" **WUXGA (1200x1920)**, PCap. T/S
- LPDDR3 2/4GB, eMMC 32/64GB
- BT / WLAN / WWAN LTE / GNSS
- NFC, 2M/5M Camera, **Extension Module, Vehicle Docking Station**
- **Windows 10 IoT Enterprise and AIM Android 6.0**
- IP65 & 4 ft Drop
- CE, FCC, CCC



PWS-472

- **MTK MT6735** Cortex-A53 Quad-Core 1.3GHz
- 5" HD (1280x720), PCap. T/S
- LPDDR3 2GB, eMMC 16GB
- BT / WLAN (802.11 a/b/g/n) / WWAN LTE / GNSS
- 1D/2D Barcode, 13M Camera, NFC, **4 Hotkey**
- **Android 5.1**
- IP65 and 3 ft Drop
- FCC, CCC, BSMI



MP

2019



Cold Chain Solution.

Available
 Developing
 Planning

Advantech Cold Chain Solution Offering

Sensors



S/W Utility



Lora Gateway



Software Package



API/ SDK for data transfer to cloud server (windows & Android)

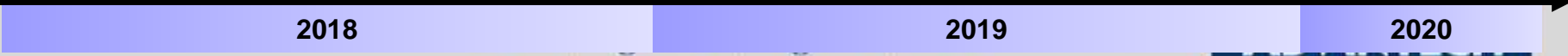


NFCread Utility/ app (Windows/Android)

Intelligent Sensors

TREK-120

- Wireless data transmissions via NFC and LoRa technology
- Integrated Temperature, Humidity, Free Fall detection sensor
- Integrated Battery for 2-years operation
- Rich accessories includes NFC Reader, LoRa Gateway,
- Software Package (API/SDK) and Utility for Windows & Android

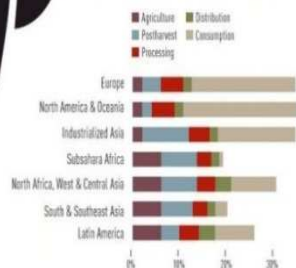




30% CEREALS FOOD LOSSES

In industrialized countries, consumers throw away 286 million tonnes of cereal products.

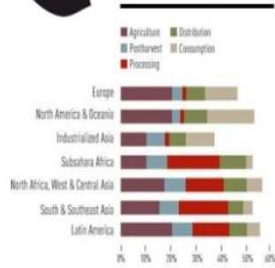
763 billion boxes of pasta



45% FRUIT & VEGETABLES FOOD LOSSES

Along with roots and tubers, fruit and vegetables have the highest wastage rates of any food products; almost half of all the fruit and vegetables produced are wasted.

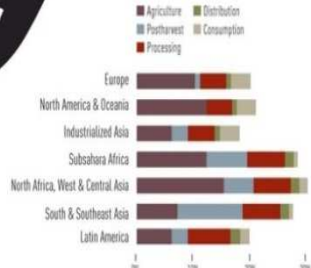
3.7 trillion apples.



20% OILSEEDS & PULSES FOOD LOSSES

Every year, 22% of the global production of oilseeds and pulses is lost or wasted.

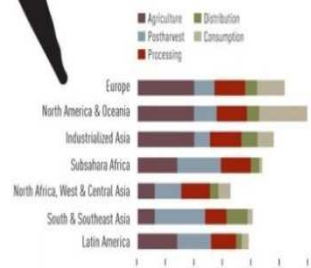
This is the same as the olives needed to produce enough olive oil to fill nearly 11,000 Olympic-sized swimming pools.



45% ROOTS & TUBERS FOOD LOSSES

In North America & Oceania alone, 5,814,000 tonnes of roots and tubers are wasted at the consumption stage alone.

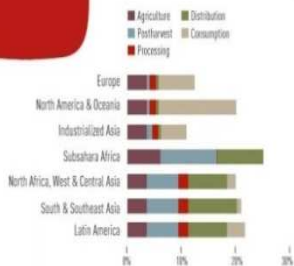
This equates to just over 1 billion bags of potatoes.



20% DAIRY FOOD LOSSES

In Europe alone, 29 million tonnes of dairy products are lost or wasted every year.

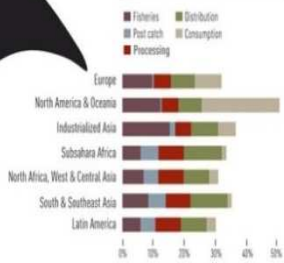
This is the same as 574 billion eggs.



30% FISH & SEAFOOD FOOD LOSSES

8% of fish caught globally is thrown back into the sea. In most cases they are dead, dying or badly damaged.

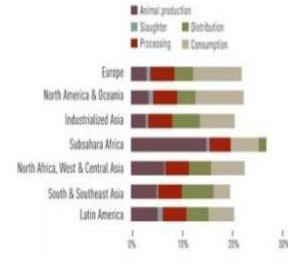
This is equal to almost 3 billion Atlantic salmon.



20% MEAT FOOD LOSSES

Of the 263 million tonnes of meat produced globally, over 20% is lost or wasted.

This is equivalent to 75 million cows.



GFLI Balance Sheet

ΠΟΤΕΡΙ

On-farm Post-harvest
Slaughter operations

Processing
Packaging

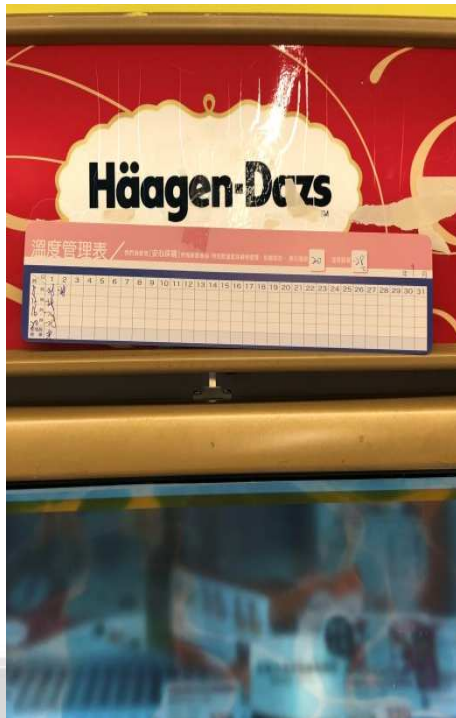
Transport
Storage
Distribution

30~40%

US \$1 Trillion



How Did Our Customer Do Before?



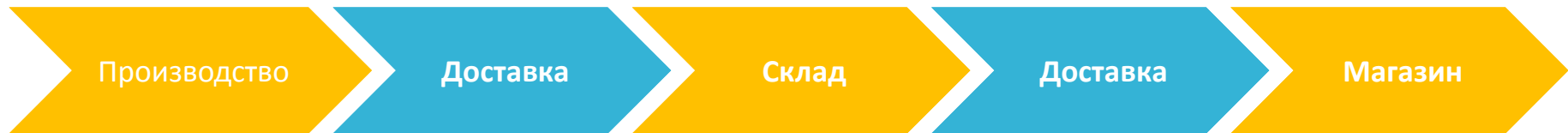
品質紀錄 冷藏/凍庫溫度&自主檢查紀錄表

年度 107 月份 2 編號

		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
溫度紀錄	溫度	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
	檢查人員	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文	周文
	備註																
	備註																
自主管理	品質管理	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	衛生管理	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	設備管理	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	物料管理	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	其他	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



Cold Chain Solution в реальном времени



- Food Dispensing
- Pharmaceutical Production

- Refrigerated Trucks
- Refrigerated Railway Wagons

- Cold Storage
- Warehouses

- Refrigerated Trucks
- Refrigerated Railway Wagons

- Hypermarket
- Supermarket
- End User

Application Ready Platform



NFC Reader



Lora Gateway dongle



LoRa Sensor

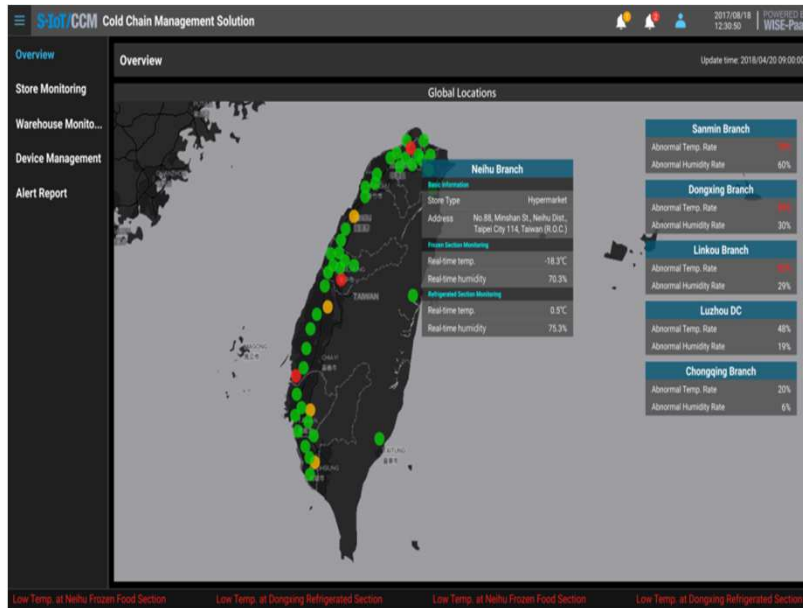


In-Vehicle Lora Gateway

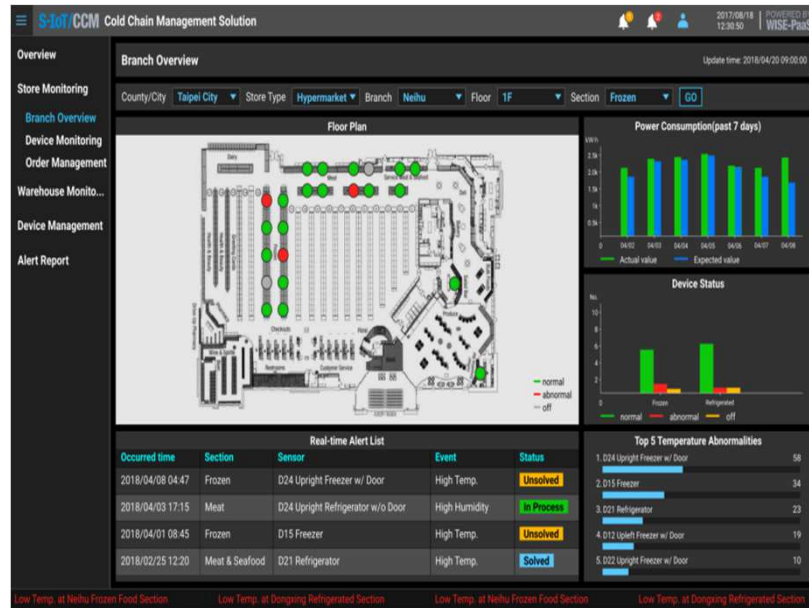


Handheld

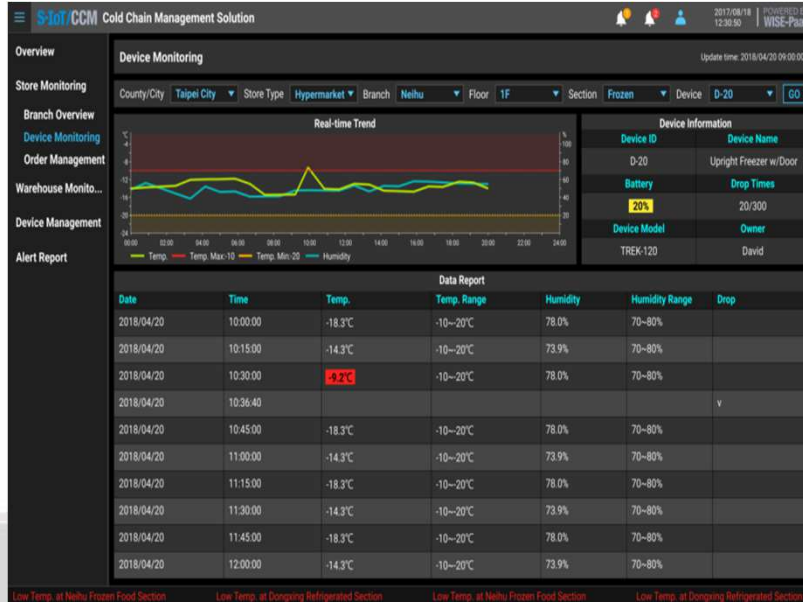
Cold Chain Solution – ситуационный центр



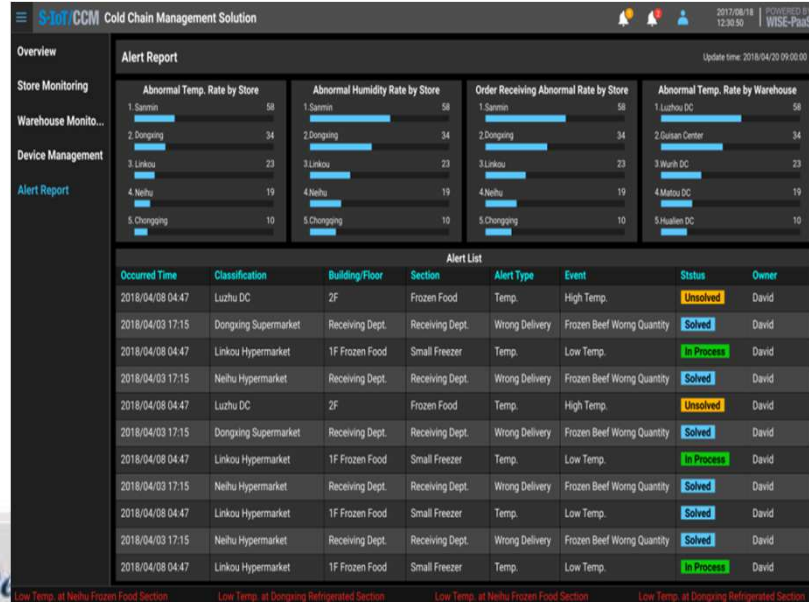
Low Temp. at Neihu Frozen Food Section Low Temp. at Dongxing Refrigerated Section Low Temp. at Neihu Frozen Food Section Low Temp. at Dongxing Refrigerated Section



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