



CarNeTek

Specialized in Car Multimedia and AI Applications

COMPANY PROFILE

www.carnetek.com.tw

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ABOUT COMPANY

A brief glance

- Established in August, 2016
- Amount of Capital:
NT\$27,500,000
US\$850,000
- Employees: 13
(R&D: 9 including system planning, PCB layout, HW/FW/SW, Android OS, iOS and mechanical)
- Factory: subcontracted under the quality standard of ISO-9001 (Tucheng Dist., New Taipei City)

CarNeTek has been specializing in designing, developing and manufacturing of **Android IoT multimedia player** as well as **GNSS tracking device** since its establishment, and aims to provide products with the most stable, the most advanced and the best price/performance ratios.

In recent years, AI has developed quite rapidly, and AI-based applications have also been successful in many industries; therefore, we are also actively engaged ourselves in product development for Android based Edge AI system.

Our employees have a strong history of pioneering new products and collaborating with customers to deliver cutting-edge technology, also together with our strategic partners, we are better positioned to meet our customers' needs today and into the future.

VISION

We aim to be a world leading Android based AI and IoT multimedia solution provider as well as GNSS tracking system integrator by leveraging the domain know-how we have in car electronics, communication, GNSS, Internet of Things and multimedia technologies

“Following the development trend of AI and IoT technologies is the key to our competitiveness”



MISSION

Delivering **QUALITY SERVICES AND PRODUCTS** to increasing more happy customers making them peace of mind through our hard work



MILESTONE



2019

CNT-AA100Q had acquired **GOOGLE GMS** (Google Mobile Service) certification and obtain a GMS license to pre-install Google-specific apps on their manufactured devices

2021

CNT-NV100 Android IoT box sales reached 30,000 units within 2 years

2022

CNT-OE100Q has been adopted by **Indian DHL** for Fleet Management application (team up with our solution partner for providing ADAS and DMS services)

OUR STRENGTHS

Our team is having...

- More than 20 years of experience designing car video interface/multimedia entertainment system
- Solid and proven business records selling product to worldwide market
- Design partners who are able to share, exchange market and technology information
- Solid experience testing and manufacturing car electronics products

Strong experience in car electronics/multimedia technologies



Proven track record working with GNSS tracking service providers



*Great engineering team
Superior technical support*



Strong knowledge and experience in product certifications



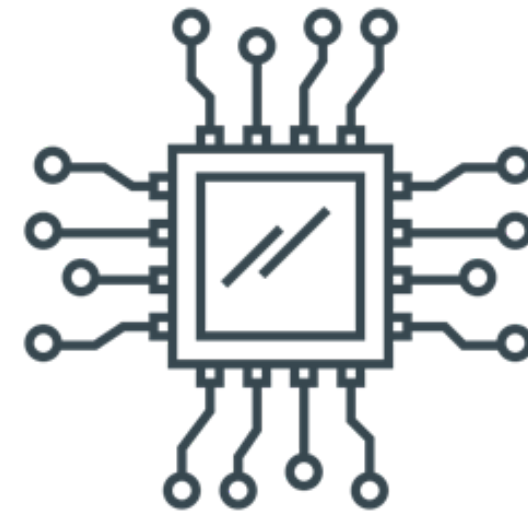
Solid design know-how in car electronics applications



*Rigid stock control
Fast delivery guaranteed*



CARNETEK ENGINEERING





CARNETEK

ADAS AND DMS FEATURES

COMPUTER VISION AI

ADAS

UNIFYING CONVENTIONAL **ADAS** FEATURES WITH REAL-TIME WARNINGS FOR CRITICAL EVENTS



Cutting-off Warning

An alert is provided to the driver when a front vehicle is cutting off the driver at a high speed and a potential collision is about to occur



Forward Collision Warning

An alert is provided to the driver when the distance between the driver and the front vehicle falls below a safe value



Warning of Red-light Running

An alert is provided to the driver if the driver does not slow down when approaching a red light



Warning of Pedestrians at Crosswalks

An alert is provided to the driver when the vehicle may hit a pedestrian at an intersection/crosswalk



Warning of Approaching Stop Signs

An alert is provided to the driver when the driver is about to pass an intersection with a stop sign or flashing red light and doesn't slow down to a full stop

DMS

IN-CABIN DRIVER BEHAVIORS DETECTION AND REAL-TIME WARNING



Distraction using Cellphone

Detect the distraction of a driver when talking over a cellphone or texting on a cellphone



Smoking

Detect in-cabin smoking based on work environment regulations, if applicable



Fatigue

Detect fatigue of a driver due to overtime driving or physical illness



No Seat Belt

Detect unfastened seat belts for drivers and passengers in the front seats



No Mask

Detect removal of mask for drivers and passengers in the front seats based on work environment regulations, if applicable



Unauthorized Passenger

Detect in-cabin unauthorized personnel

OUR SERVICE

With more than two decades experience in adopting **mobile platforms**, **MCUs**, **GNSS** and **wireless technologies** for developing diversified solutions for car electronics industry as well as having strong partnership with key components suppliers, SMT and certification labs, **CarNeTek is able to provide reliable, cost-effective OEM/ODM services which is capable of significantly reducing time-to-market without compromising product quality.**

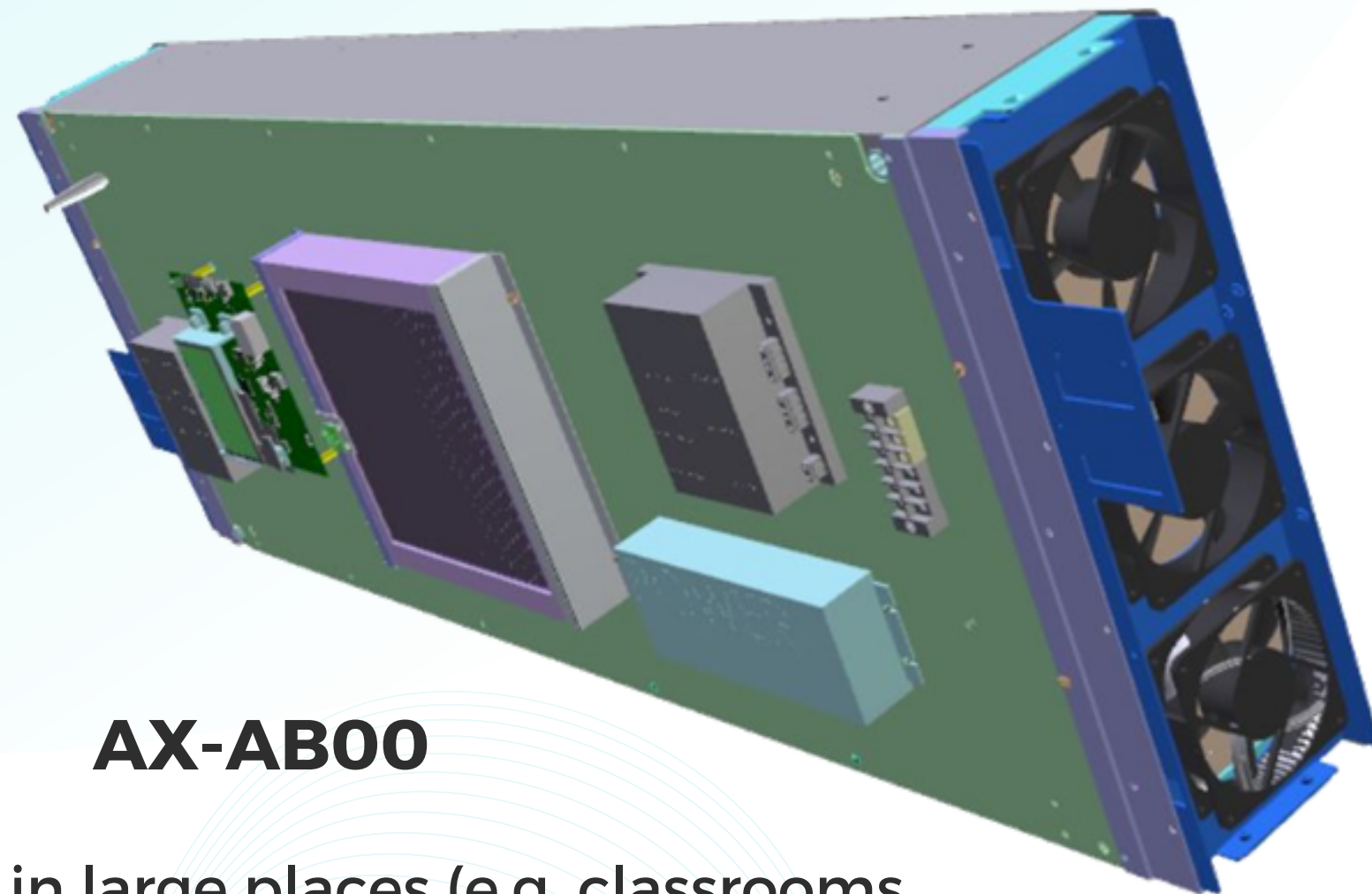
While having the concept information and detailed specifications from our customer, we will notify customer of the **total cost for design**, **prototyping**, and **estimated cost per unit** before the project begins. We will work closely with customer until they are satisfied and all original design requirements are met, and the product performs exactly to customers' expectations.

- **01** Identify Project Requirement and Feasibility Study
- **02** Project Development HW/SW/FW
- **03** Prototype Verification
- **04** Sourcing and Procurement
- **05** Testing Commissioning Certification
- **06** After Delivery Technical Support and Training

UVC DISINFECTION EQUIPMENT

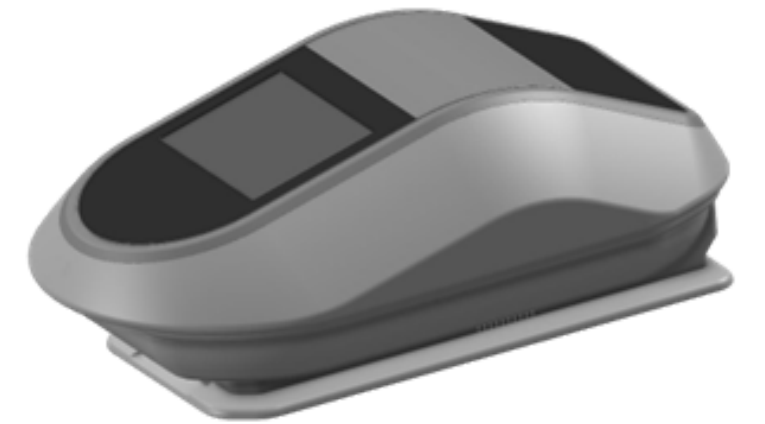
FOR GERMAN CLIENT

ODM CASE01



AX-AB00

Use in large places (e.g. classrooms, cinemas, conference rooms)- Air disinfection and sterilization



AX-AB10

Home use - The objects (glasses, mobile phone, watch, key etc.) to be disinfected will be placed in the chamber



AX-AB20

Vehicle or Home use - Air disinfection and sterilization

AAMP200 ANDROID BASED IOT MULTIMEDIA PLAYER WITH FM/AM FUNCTION

FOR U.S. CLIENT

ODM CASE02

- Display capable and controllable for any Android Auto capable device (IE, OEM or aftermarket screen or generic HDMI screen)
- Wide operating voltage range from 8 to 19V, very low standby current
- Bluetooth connections
- Built in microphone for voice commands and recording
- Supports multi-users WIFI 2.4/5.8GHz hot spot and LTE 4G access point
- 5 USB connection ports
- OS/FW OTA update via Firebase

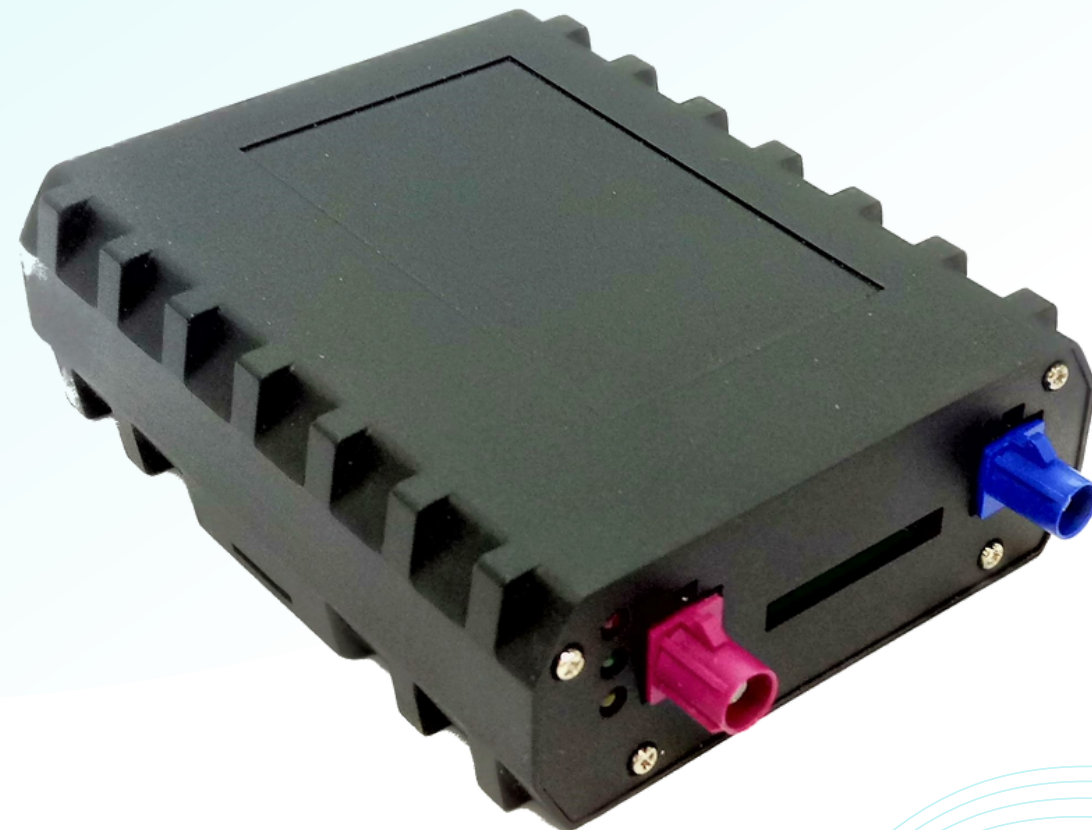


- FM/AM function
- Micro SD and Micro SIM supported
- Reverse camera in
- Speed in
- Parking wire
- Steering wheel (IR format input)
- UART port

GNSS VEHICLE TRACKING DEVICE

FOR U.S. CLIENT

ODM CASE03



PRODUCT FEATURES

- Equipped with 4G LTE Cat 1 cellular modem
- DC 8-35V wide operating range
- 1-wire interface
- Bluetooth Low Energy (BLE) for IoT applications
- RS232 serial port supported
- 4 Input/4 Output
- 3-axis accelerometer built-in
- Micro SIM and micro SD card supported
- e-SIM supported
- Multiprotocol OBDII to UART (**SAE J1939** supported)
- Firmware update over-the-air
- GPS update rate down to 1 second

ODM CASE04

SPECIFICATIONS UNDER DISCUSSION

12.3" COMMERCIAL VEHICLE DIGITAL SIDE MIRROR SYSTEM

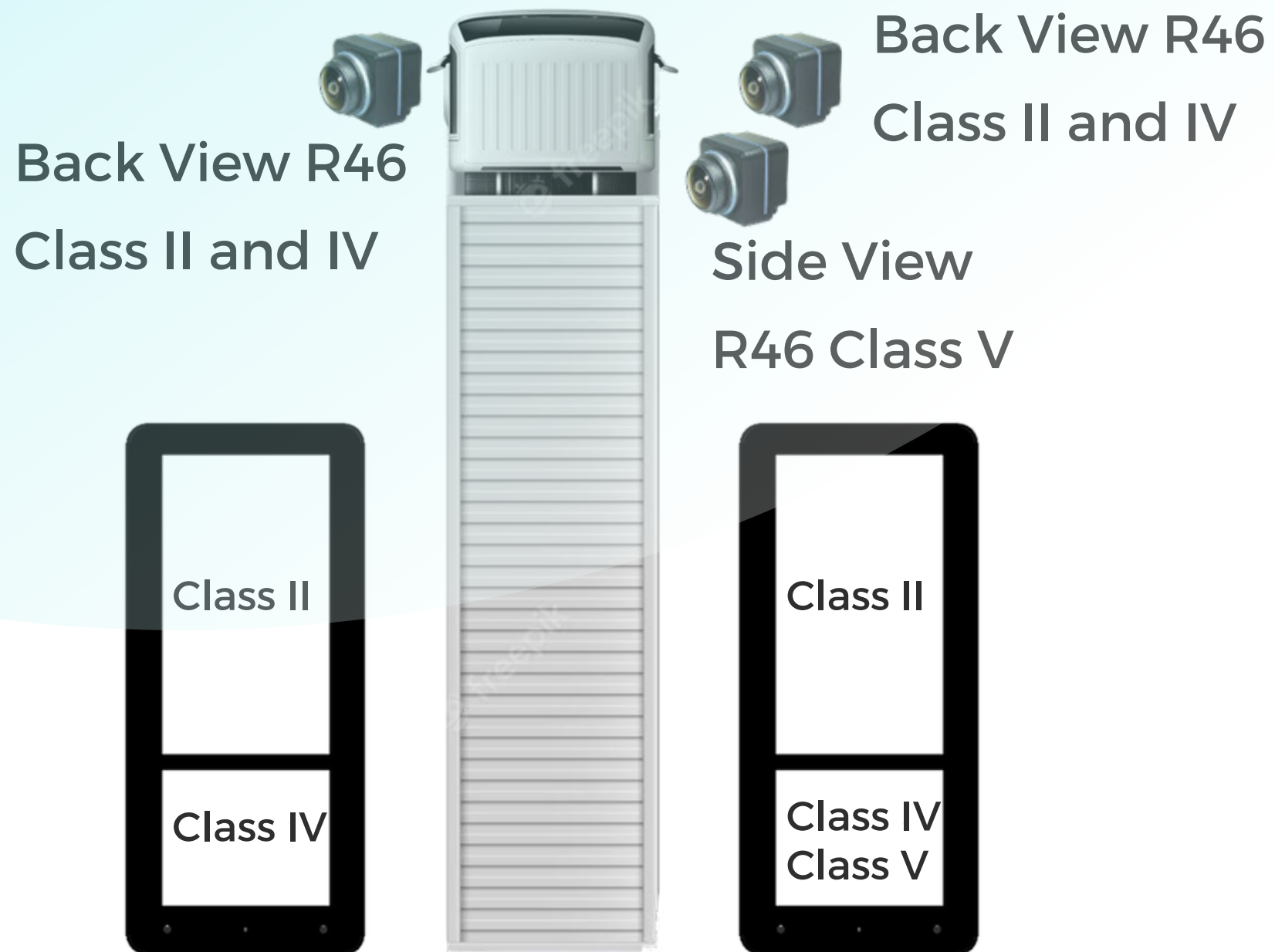
FOR U.S. CLIENT

The Camera Monitoring System is designed to completely replace conventional **class II**, **class IV** and **class V** rear-view mirrors on vehicles. The digital side mirror system designed by Carnetek is complies with the regulations as described in **R46**

- High resolution 12.3" driver and passenger display at 1920 x 720 pixels
- CAN interface (vehicle data interface) level capacity
- Operating temperature: -40 to 85 degrees Celsius
- Handles 12V and 24V OEM voltage levels and requirements
- Fully automotive-qualified parts: OEM-quality
- Distance markers for safer lane changes
- High-definition, real-time images



ODM CASE04



PRODUCT FEATURES

- Image Panning Adjustment
- Distance lines Setting
 - Auxiliary line of rear axle
 - Bumper extension line
 - 10M reference line at the rear of the car
 - 20M reference line at the rear of the car
 - Lane change auxiliary line
- Camera Resolution
 - LVDS: 1080p/720p
 - AHD: 1080p/720p
- Chroma Adjustment
 - Contrast/Brightness/Saturation/Exposure
- Video Recording
- ADAS Setting
 - BSD/FCW/PCW/LDW/RCW
- Manual Heat
- Version Information

OUR PRODUCT

Android IoT Multimedia Player/Android Edge AI System*

- AA100Q Android Based IoT Multimedia Player
- OE100Q High Performance Android Edge AI System

*Integrated driving violation detection, ADAS, and DMS can be done by seamlessly integrating a sophisticated 3rd party's image recognition software and external cameras in our OE100Q

GNSS Tracking Devices

- TK100S GNSS Portable Magnetic Asset/Covert Tracker
- TK200S GNSS Portable Magnetic Asset/Covert Tracker
- TK10 Series Cost Effective Entry Level GNSS Tracking Devices

Video Capture Adaptor

- UAM200 USB2.0 Type C Video Capture Adaptor

Wireless Temperature and Humidity Sensor

- AI01HT Wire Temperature and Humidity Sensor



HIGH PERFORMANCE ANDROID EDGE AI SYSTEM

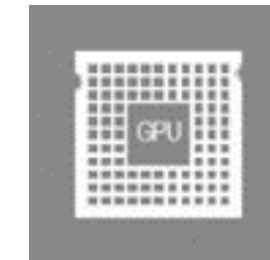
POWERED BY QUALCOMM SNAPDRAGON MOBILE PLATFORM



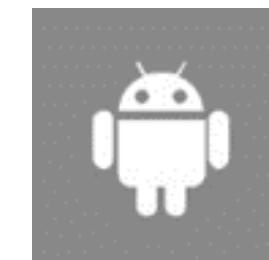
- Utilize existing OEM screen integration with Android Auto capable vehicles
- Install any apps legally from Google Play
- Allow third party applications
- Dedicated USB hub to support cameras



SDM66064-bit
Processor
(Octa-core)



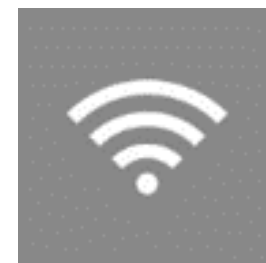
Qualcomm®
Adreno™ 512
GPU



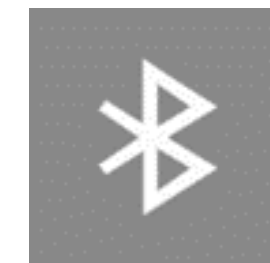
Android 9.0
with GMS



Cat 6
Max 300Mbps (DL)
Max 50Mbps (UL)



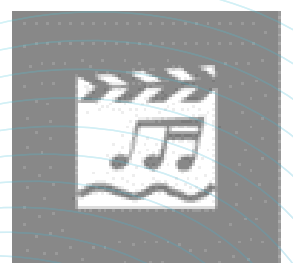
IEEE 802.11
a/b/g/n/ac



BT 5.0



GPS +
GLONASS +
BeiDou



Powerful
Multimedia
Function

GNSS MAGNETIC ASSET TRACKER



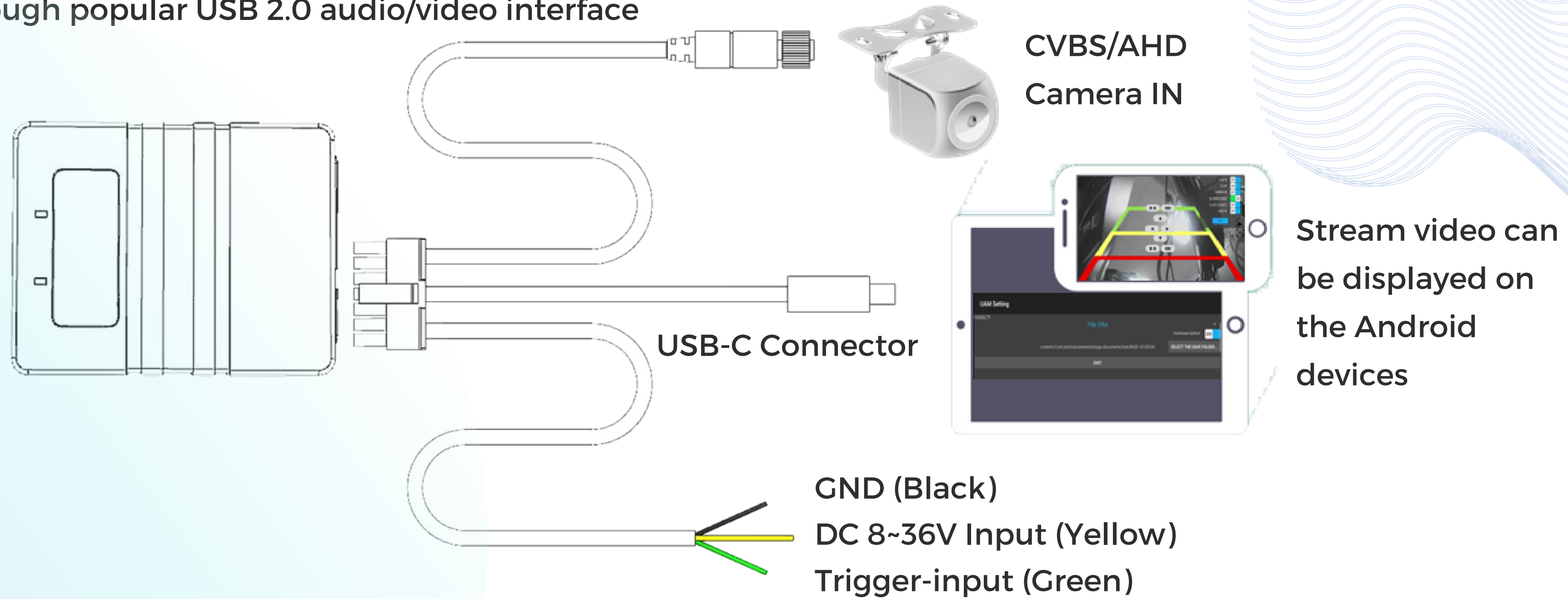
SUITABLE APPLICATIONS

- Container and Mobile Assets
- Trailer and Caravan
- Construction Equipment
- Plant Machinery
- Boat and Motorcycle



USB 2.0 TYPE C VIDEO CAPTURE ADAPTOR

The CNT-UAM200 is a small, compact, and easy to install USB 2.0 Type C Video Capture Adaptor which is providing a secure and reliable link between a CVBS (or AHD) rear view camera and an Android based devices and is capable of converting CVBS (or AHD) rear view camera signal to USB 2.0 Type C signal; with the signal conversion function of CNT-UAM200 and a handy APP, the high quality image of the rear camera can be captured and displayed on the Android smartphone or Tablet PC seamlessly through popular USB 2.0 audio/video interface



AI01HT WIRELESS TEMPERATURE AND HUMIDITY SENSOR

The AI01HT is BLE-enabled wireless temperature and humidity sensor offers an accurate, low-power, factory-calibrated digital solution ideal for measuring humidity, dew-point, and temperature, in applications ranging from cold chain and asset tracking to industrial and consumer platforms

COLD CHAIN APPLICATION



CONNECT WITH OUR TEAM FOR FURTHER ENGAGEMENT!

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From
Design
Through
Completion
To **Certification**
Service
Provider

ODM/OEM