

# INTELLIGENT TRANSPORTATION SOLUTION

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*Explore Transportation Solution for engaging with  
connected intelligent urban mobility that delivers  
safety, trust and security.*

# New Era of Transportation

Due to the booming urbanization and climate change of the world, the challenge for efficiency, sustainability, security, and innovative technology of cities have increased years by years. Digitalization of transportation helps reduce congestion and human error incidents that can lead to injury.

The good news is that innovations in Internet of Things (IoT), Artificial Intelligence (AI), 5G network connectivity, and edge to cloud computing are giving Avalue the ability to support the customer to improve transportation safety, efficiency, reliability, and profitability.



# Essential Professional Capabilities



Wide Range of Product Series Selection



Domain Know-How in Transportation Market



Solution-Build Thinking



Dedicated Teams to Support



Win/ Linux/ Android OS Support

# Transportation Product Highlights



# How Avalue will shape transportation in smart cities?



We support our customers with innovative solutions in fields of public transport, first response, logistic and related infrastructure in a smart city. We also help our customers to achieve faster time-to-market within our ideal solutions, how to make this world smarter, at the same time, with the best quality, performance and support.

“ Our intelligent transportation solution, is to find out the pain-point from customers and solve it in a suitable, professional and efficient way. And we hope one day in the future, you will realize our ITS solution is all around you in your daily life. „

- Jason Liu  
Director of Product Division



## Public Service

- 01 **Terminal display wall**  
• NUC-TGU  
• ACS10-TGU
- 02 **Fare collection system & entrance management**  
• EMS-EHL-10COM
- 03 **Roadside law enforcement**  
• EMS-TGL-PSE
- 04 **AI traffic flow detection and TOD adjustment**  
• AIB-IMX8M  
• EMS-TGL
- 05 **Smart waste management**  
• VMS-APL  
• ARC 10W00
- 06 **Communication system for emergency vehicles (V2X)**  
• RISC SBC
- 07 **Parking entrance management with ANPR**  
• EMS-TGL-PSE  
• ARC-1535/ARC-1538
- 08 **Enforcement with edge computing**  
• EMS-TGL-PSE  
• VMS-ADPS



## Raw Materials Management

- 09 **Fatigue system & fleet management**  
• VMS-CFS-SLIM  
• ARC-1200
- 10 **Precision agriculture**  
• VMS-APL  
• ARC 10W00

## Public Transport

- 11 **School bus positioning & children location confirming**  
• UWB Anchor  
• UWB Tag  
• VMS-APL
- 12 **Electrical autonomous bus**  
• VMS-CFS-PSE  
• OFM-15W00/21W00



## Public Service

- 13 **Outdoor drive thru ordering system**
  - OFP-15W33
  - OFP-21W33
- 14 **Emergency traffic light influence system (DSRC)**
  - ARC series monitor
  - VMS-APL



## Public Transport

- 15 **Smart public transit in bus**
  - VMS-APL + ARC 10W00
  - ARC-1238
  - OFT-07WR1
- 16 **Travel information display at stop**
  - EPD-42T
  - EPD-3133
- 17 **Wifi router & entertainment system**
  - VMS-ADPS
  - ARC series monitor
  - OFT-07WR1
- 18 **Smart public transit in rail**
  - VMS-EHLR
- 19 **Advertisement/ Travel information/ Bulletin**
  - EPD-42T
  - EPD-3133
- 20 **Bridge control system**
  - EMS-SKLU-Marine
  - EMS-TGL-Marine



## Logistic

- 21 **Collision-avoidance system w/autonomous mobile robot**
  - VMS-CFS-PSE
  - VMS-ADPS
  - AIB-NW01
- 22 **Forklift & pallet maneuver**
  - ARC-1033
  - CAXA0
- 23 **Smart port management**
  - EPS-ADS + ARC 1500
  - ARC-1238/ARC-1538
  - CAXA0





## Ensuring the safety and efficiency with autonomous garbage truck in the community

- OBC is equipped on a autonomous garbage truck to collect the on-board information, furthermore, to assist to complete the self-driving behavior in the community.



## Preventing the possible danger occurred during the school bus trip.

- By using this solution to make sure children are in the school bus after leaving home and later, get off the school bus while arriving in school. Furthermore, to confirm the school bus is well arrived and punctually at school parking area as well.



**ARTEMIS Solution**  
(Anchor+Tag/ Wristband) provides the real-time location information of children & school buses, while children get into bus and buses arrive in school parking lot.



### Product Highlights



**VMS-APL**  
Intel® Pentium®/ Celeron®/ Atom™ Processor Fanless Vehicle Telematics System



**ARC-10W00**  
10.1" WXGA Rugged PCAP Multi-Touch Monitor



**Vehicle Power Management**



**Ignition Control**

### Benefit & Advantage

- Driver can send the OBC's setting by themselves via vehicle power management AP in Win/ Android OS
- One cable solution for touch monitor through HDMI w/RS232 interface
- Easy installation with customized chassis attached on to vehicle.
- Communication with 4G/Wifi/GPS for fleet management.
- Multi-IO to connect with sensors for object/obstacle detection, RFID to container identification for billing.

### Product Highlights



**VMS-ADPS**  
12th/13th Intel® Core™ Processor i7/i5/i3 Rugged Fanless Vehicle Telematics System



**ARC Series**  
Fanless Rugged Touch Panel PC with IET Expansion



**RENITY ARTEMIS**



**Vehicle Power Management**



**Ignition Control**

### Benefit & Advantage

- Fatigue system to make sure the driver is not falling asleep while driving.
- To ensure the school is on track via GPS, furthermore to send the school bus location to parents during the while trip.
- Children can stay at home until the school bus is approaching by APP to decrease the danger while waiting outside for bus.
- By Radar/ Lidar/ Sensor to detect the obstacle on the street and prevent from car accident. (V2I/V2P/V2V)
- OBU connecting with cameras for video surveillance, PA system, stop sign, TPMS module...etc.



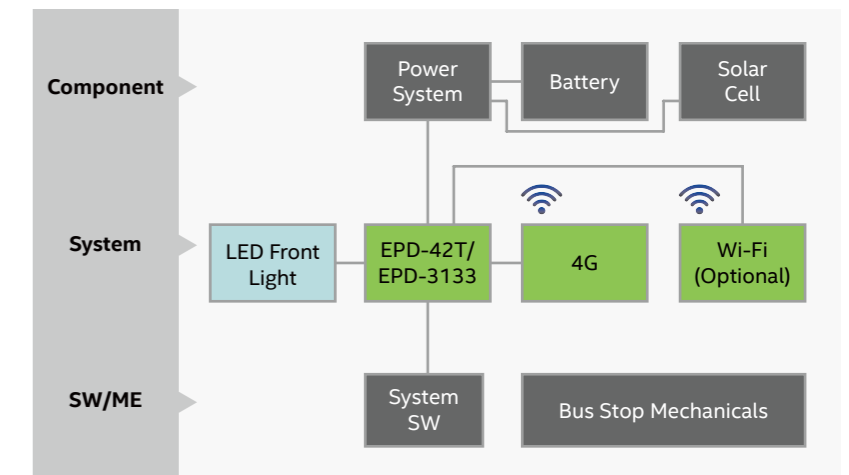
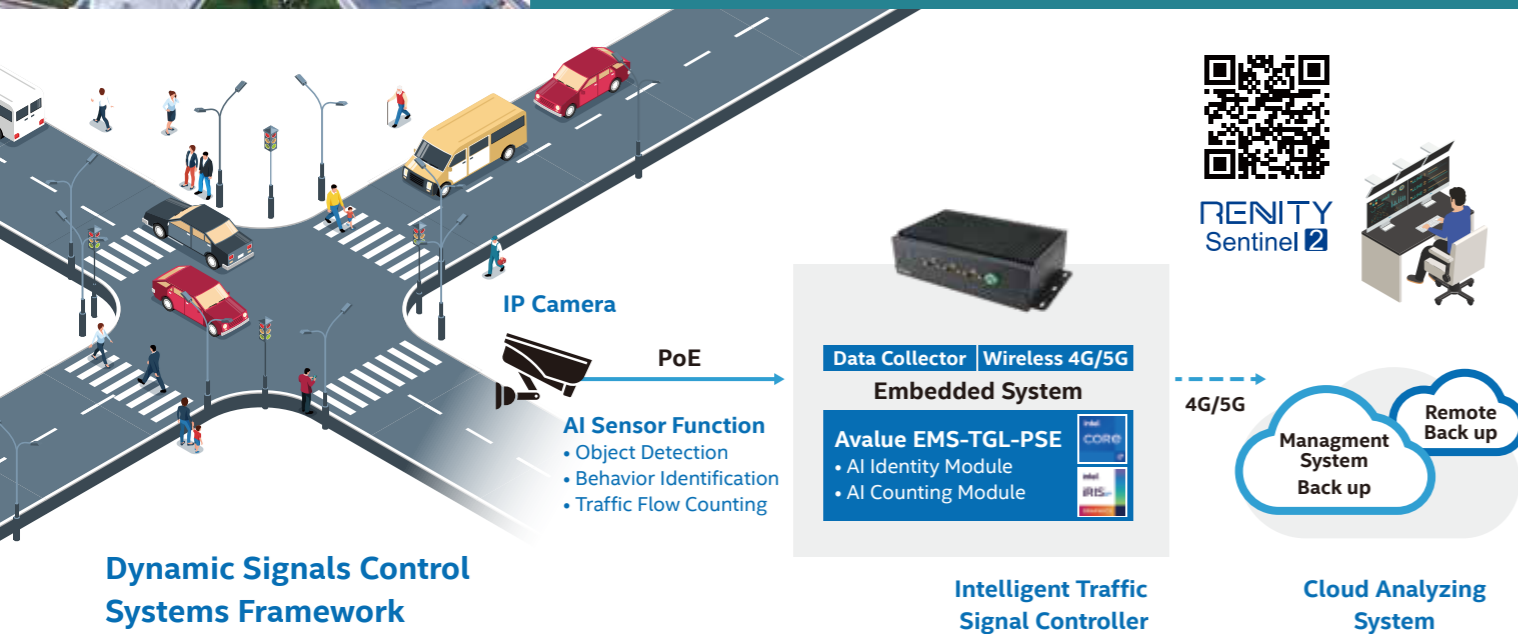
## Resolving the traffic jam during the peak hour in the smart city, and providing with OOB solution for system maintenance.

- Using AI recognition technology and Big Data Analysis to generate Time-of-Day (TOD) and provide this generated TOD to Traffic Controller (local) in the roadside that can control the traffic light to dissipate traffic congestion.



## Improving the user experience for passenger, easy maintenance for system integrator and Eco-friendly to the world.

- Vehicle communicate with RSU (EPD) via 4G/5G and update the in-time travel information on EPD series, at the same time to satisfy the user experience for passenger, easy maintenance demand for system integrator and Eco-friendly to the world



### Software Highlights



Remote Control



Real-time Monitoring



Prevent Traffic Violation



Make efficient Law Enforcement



Reduce Traffic Congestion

### Product Highlights



**EPD-42T**  
Public Information Display (Digital Signage)



**EPD-3133**  
Public Information Display (Digital Signage)



Sunlight Readable



Eco-friendly

### Benefit & Advantage

- Reducing traffic accidents and congestion, and improve road safety and compliance with traffic.
- Reminding drivers to reduce speed when approaching the junction, reducing chances of traffic accidents, and keeping the records (hard brake, ideal, etc.) helps to identify patterns of driving behavior.
- RS2 remote monitoring and management software to enhance the performance of the systems and to adjust control functions in real-time, improving traffic flow and increasing convenience and safety.

### Benefit & Advantage

- Sunlight readable, paper-like and eye-friendly digital signage solution
- E Ink bi-stable feature, no power needed to hold an image, which makes ultra low power consumption
- System is suitable to operate with solar cell and batteries, easy to complete infrastructure installation
- Green and eco-friendly solution with minimum total cost of ownership for outdoor signage display

## Transportation System



**VMS-APL**  
Intel® Pentium®/  
Celeron®/ Atom™  
Processor Fanless  
Vehicle Telematics  
System



**VMS-ADPS**  
12th/13th Intel® Core™  
Processor i7/i5/i3  
Rugged Fanless Vehicle  
Telematics System



**VMS-CFS**  
8th/9th Intel® Core™  
Processor i7/i5/i3  
Rugged Fanless Vehicle  
Telematics System



**VMS-CFS-PSE**  
8th/9th Intel® Core™  
Processor i7/i5/i3  
Rugged Fanless Vehicle  
Telematics  
System w/RJ45 PoE



**VMS-EHLR**  
Intel® Atom® x6425E  
Processor Rugged  
Fanless Railway System



**EMS-TGL-Marine**  
11th Intel® Core™  
Processor i7/i5/i3  
Rugged Fanless Rugged  
Marine System with 4  
COM Isolations

## AI System



**EGS-MX1**  
Embedded GPU System  
w/MXM Graphic Card



**AIB-NW01**  
AI BOX PC System w/  
NVIDIA Nano or NX  
Carrier Board



**AIB-IMX8M**  
NXP IMX8M Embedded  
Computer AI BOX PC

## Panel PC



**ARC-1033**  
10.4" Intel® Apollo Lake  
Fanless Rugged Touch  
Panel PC with IET  
Expansion



**ARC 1238/ 1538**  
12.1"/15" 11th Gen.  
Intel® Core™ Processor  
i7/i5/i3 Fanless Rugged  
Touch Panel PC with IET  
Expansion



**ARC-1235/ 1535**  
12.1"/15" Intel® Atom™ SoC  
Processor  
x6211E/x6413E/x6425E  
Fanless Rugged Touch Panel  
PC with IET Expansion



**ARC-10W33**  
10.1" WXGA LCD with  
P-cap Intel® Celeron®  
N3350 Rugged Touch  
Panel PC with IET  
Expansion



**OFP-15W33/ 21W33**  
15.6"/ 21.5" Full-HD  
PCAP Multi-Touch Fanless  
Open Frame Panel PC  
with Intel® Celeron®  
J3455 Processor



**OFP-15W38/ 21W38**  
15.6"/ 21.5" Full-HD  
15.6"/21.5" Full-HD PCAP  
Multi-Touch Fanless Open  
Frame Panel PC with Intel®  
Core™ SoC i7/i5/i3 &  
Celeron® BGA Processor

## Industrial-grade Monitor



**ARC-10W00/  
15W00/ 21W00**  
Rugged PCAP  
Multi-Touch Monitor



**ARC-1200/ 1500/  
1700**  
Rugged PCAP  
Multi-Touch Monitor



**OFP-15W00/ 21W00**  
15.6"/ 21.5" Full-HD  
PCAP Multi-Touch  
Fanless Open Frame  
Monitor

## E Ink



**EPD-42T**  
Communication  
Board



**EPD-3133**  
Public Information  
Display  
(Digital Signage)



**CAXA0**  
10.1" Semi-Rugged  
Tablet with Intel®  
Celeron® Processor  
N3350

## Ruggedized Tablet



### Avalue Technology

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