



# 亞旭智慧交通解決方案

## Askey Smart Transportation Solution

- 2021 Smart City



# 亞旭智慧交通解決方案

## Askey Smart Transportation Solution

- 亞旭智慧車隊管理解決方案  
Askey iDVR Fleet Management Solution
- 亞旭智慧車聯網解決方案  
Askey C-V2X Smart Transportation Solution

# Askey iDVR Solution Architecture & Portfolio

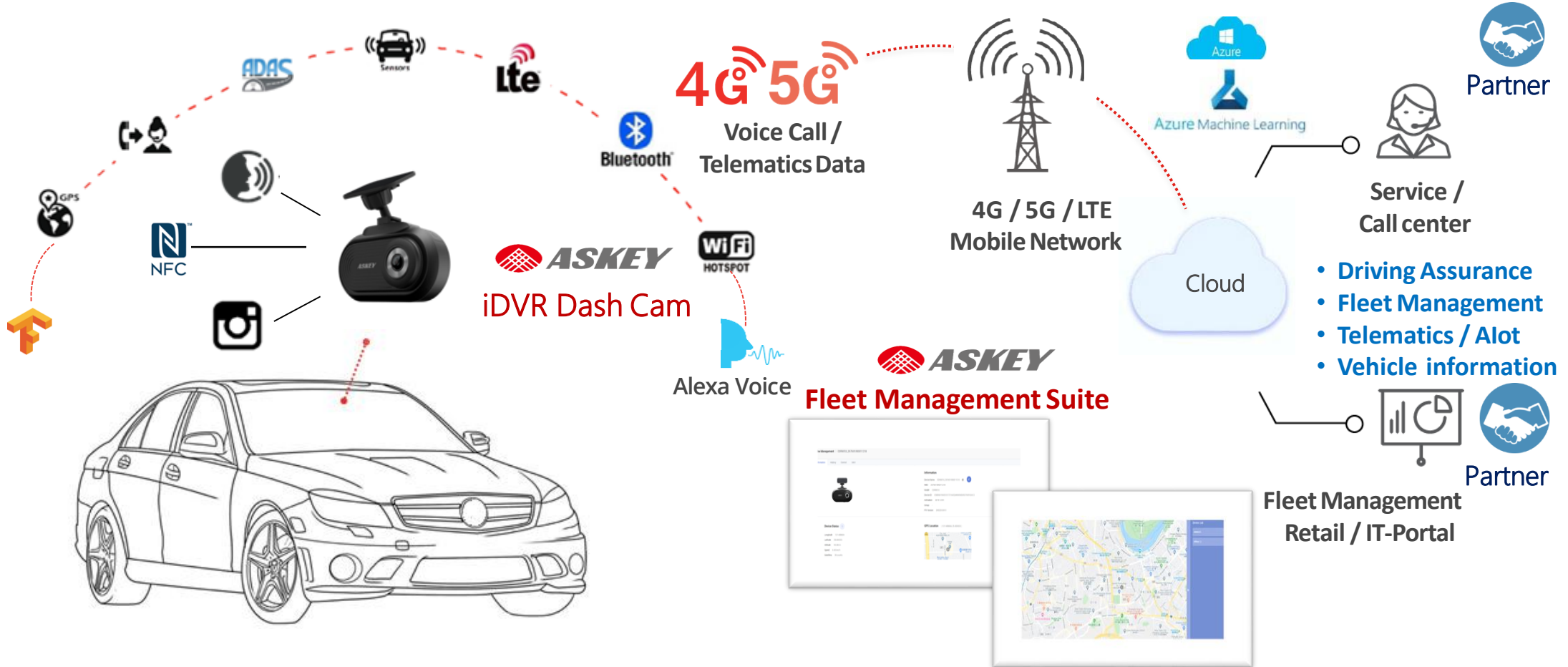
Connected Car Cam AI , IoT , Telemetry System

End user, Driving experience

Connecting and Recording

Cloud server

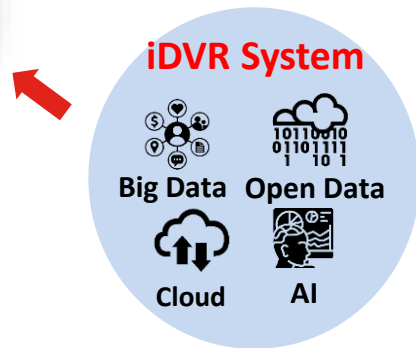
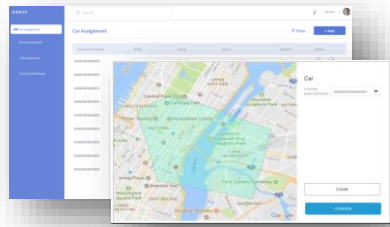
Center, Data collection



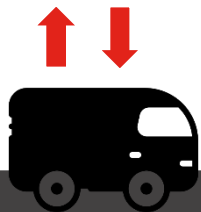
# iDVR user scenario

## Scenarios 1 : Manage the fleet efficiently

### Fleet management system



1. GPS Location tracking
2. Electronic Geo Fences
3. Task assign management
4. Alert to Event management



## Scenarios 2 : Provide UBI insurance data

### Driving behavior analysis



Driver score



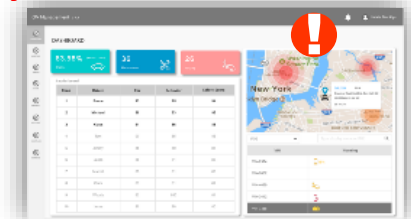
Insurance company

Safe Driver

Normal

Danger

### Event / Footage Repository



# Insurance application

- **Usage-Based Insurance**

- Collect driver behavior to count insurance fee.(ex: Hard acceleration, hard break, hard turn..etc.

- **Driver assurance service**

- Advanced Driver Assistant System

Ex: FCWS(Forward collision warning system) 、LDWS(Land departure warning system).

- Emergency event video upload real time.

- E-call service



**Forward collision warning system**



**Land departure warning system**

# Driver behavior analysis - 1

Askey

統計區間 2021-01-27~2021-02-17

0123456789 Askey office

英

Askey

89

平均駕駛分數

1

車隊車輛數

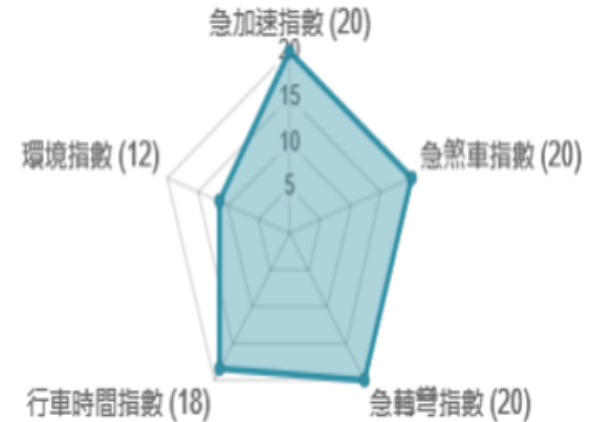
55

平均環境指數

Smooth

駕駛行為等級

總行駛里程	439.1 km
總行駛時間	30.3 h
平均行駛里程	8.0 km
平均行駛時間	0.6 h
平均行駛車速	33.6 km/h
最高車速	109 km/h
最長行駛里程	27.3 km



Lower score means dangerous

# Driver behavior analysis - 2

車隊旗下車輛分數

匯出至 Excel

每日出車記錄

2021-02-02

搜尋

匯出

車輛	駕駛分數	環境分數
XYZ-8888	89	55

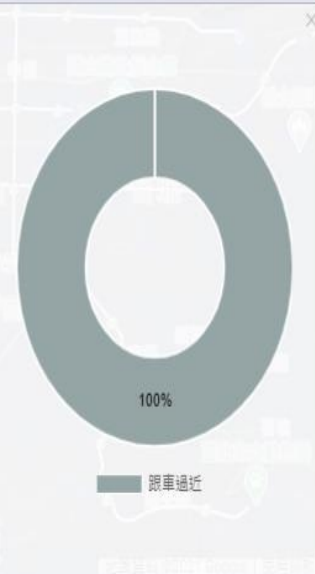
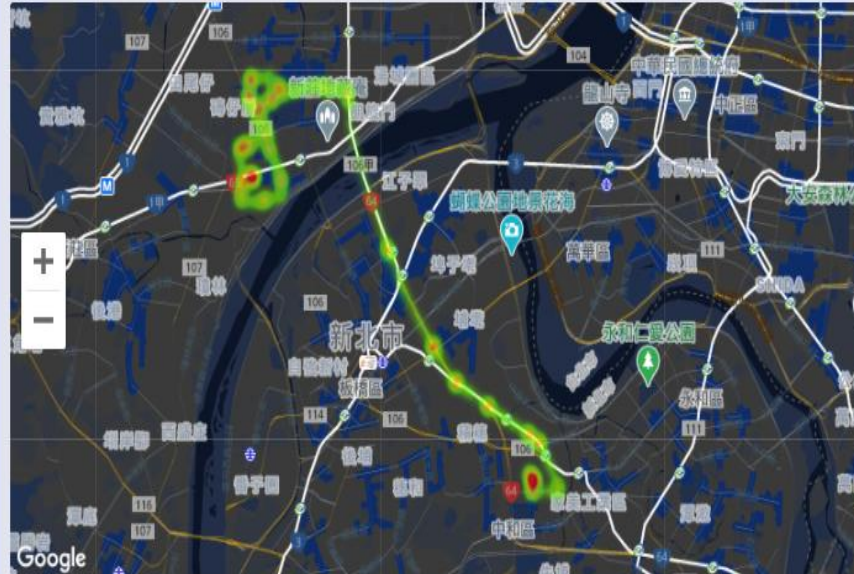
車牌	出勤總里程	出勤總時數	環境指數	駕駛分數	熱力圖
XYZ-8888	13.4 km	1.1 h	55	90	繪製

XYZ-8888 當週駕駛建議(2021/01/31 ~ 2021/02/06)

急加速風險 急煞車風險 急轉彎風險 行車時間風險 環境風險 超速風險 快速變換車道風險

環境風險駕駛建議

您本週經過風險路段27次，行經速度平均為25.77公里/小時，行車區域或行車時段存在高風險，請將行車速度保持於安全限速內，並注意周遭車輛與環境變化。



# Askey Smart Transportation Solution

**Make The Driving Safer,  
Smarter and Always Connected**

- Real-time Traveler Information
- Smart Traffic Light Solution
- Autonomous IV&V Solution



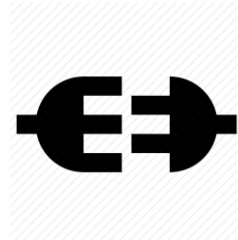


# V2X Use Cases – RWW, FCW & SVW

- Road Work Warming / Forward Collision Warning



- Signal Violation Warning



Public Transport Data eXchange, PTX

# V2I Use Cases – Traffic Light Status & GLOSA

## ● Traffic Light Status

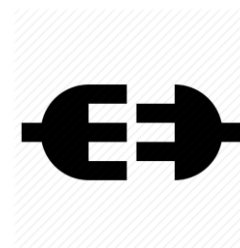
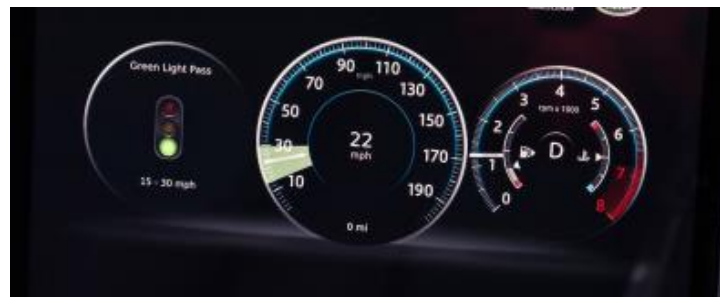


**NTCIP, UTMIC & TCROS**



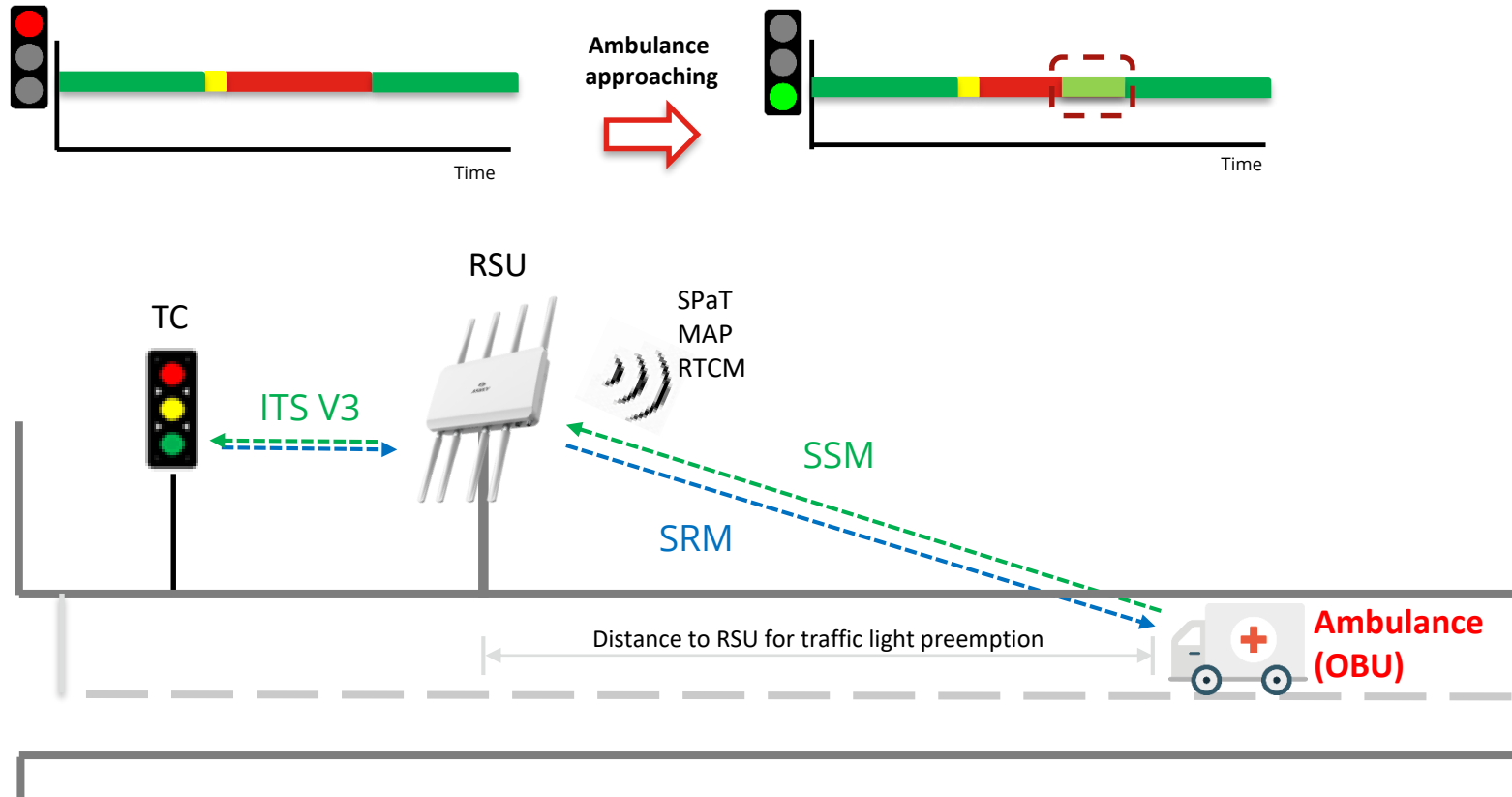
Traffic Signal Controller

## ● GLOSA (Green Light Optimal Speed Advisor)



# V2I Use Case– Traffic Light Priority

- Traffic Light Priority



# V2X Field Experiences in Taiwan

Overview of field trials in Taiwan: location and key feature



## Taipei City

AV field



Bridging Auto-bus and traffic light controller

Solved traffic light sync issues

## New Taipei City

Smart city



Most V2I Day1 use case

Integration in 5G smart pole

## Tainan City

Autonomous bus, and smart bus stop



Bi-way communication over 5.9GHz

Auto-bus operation monitoring

Integrated with ADAS system

## New Taipei City

ITS field



ITS protocol (NTCIP, UTMC, TCROS)

Day1 use cases

## Taoyuan City

AV field

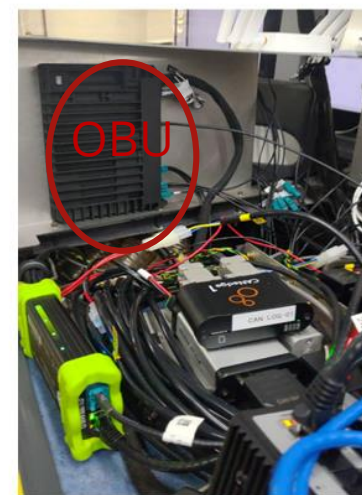
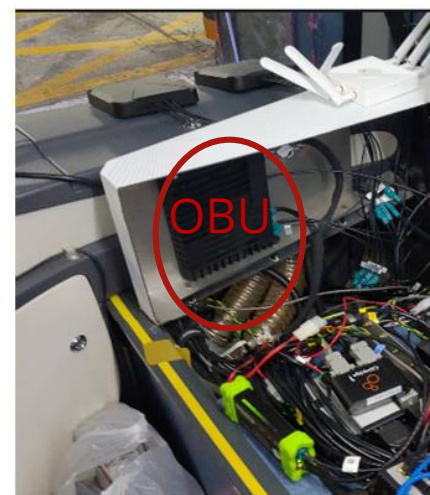
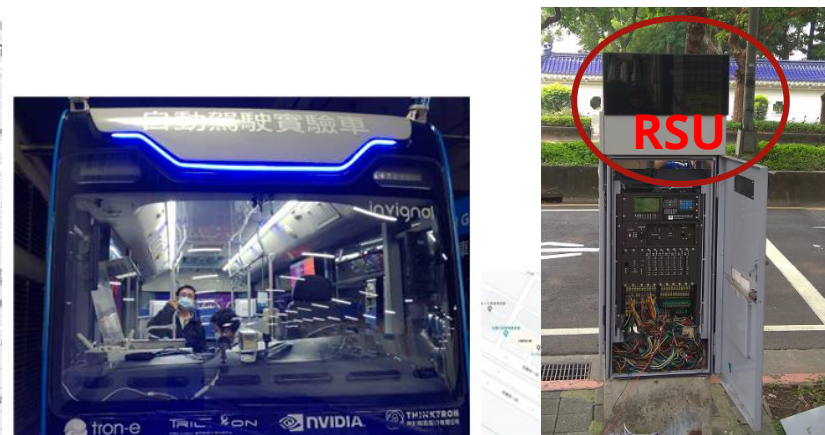
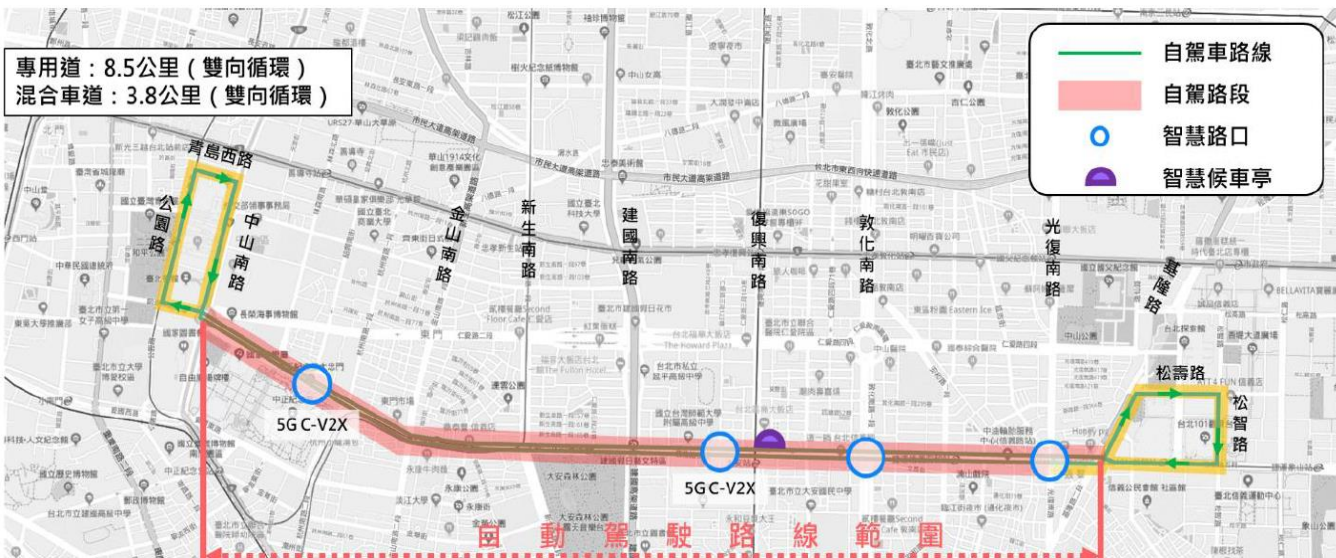


V2I and V2V use cases

Bridging Auto-bus, RSE and RSU

# Bridging Auto-bus and traffic light controller

Taipei city: 4 intersections



## V2I

- RSU provides real-time traffic light status to OBU via 5.9GHz · Vehicle PC will do sensor fusion with other sensors ◦

## 5G Router

- OBU provides 5G router and RTK features, to improve precise location and data upload to back end

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Day1 use cases

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V2I and V2V use cases

Bridging Auto-bus, RSE and RSU

# Askey Smart Transportation Solutions

## Solutions



V2V & V2I



Smart Pole/Street



Connected Vehicle

## Software Application & Infrastructure

**AMP Network Management System**

- Operation level
- Supports TR-069/369
- Able to Manage 10M Devices

**Cloud Integration Software**



- Fleet Management
- Cloud Interfacing
- PTX integration

**CMS**

- Content Magt.

**3<sup>rd</sup> party**

- Surveillance
- PTX

**Public Clouds:**  

**Private Clouds**

## Connecting Devices



5G / LTE CPE



5G / LTE Small Cell



11ax WiFi



iDVR



V2X OBU



V2X RSU



Camera



LED Signage

mmWave, Radar, Lidar...



Manufacturing Experiences.

Since 1989.