



UmeC

環隆科技股份有限公司

Universal Microelectronics Co., Ltd.

(股票代號：2413)

Investor Conference



2020年12月8日

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**Company Profile**

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## 1 Company Profile



- **INITIAL OPERATION :**
  - » January 1984
- **EMPLOYEES :**
  - » Taiwan — 750
  - » China — 2500
  - » Vietnam — 1000
- **CAPITAL :**
  - » US\$43,209,000
- **INITIAL PUBLIC OFFERINGS:**
  - » October 1998
- **ANNUAL SALES:**
  - » US\$125,401,626. (2019)
- **PLANT FLOOR AREA :**
  - » 32,100 m<sup>2</sup> ---- Taiwan HQ and Factory
  - » 72,200 m<sup>2</sup> ---- Shenzhen Factory
  - » 10,000 m<sup>2</sup> ---- Longyan Factory
  - » 7,200 m<sup>2</sup> ---- Meizhou Factory
  - » 18,000 m<sup>2</sup> ---- Hanoi Factory



Headquarter  
Taichung Taiwan



Taichung Factory



Shenzhen Factory



Meizhou Factory



Hanoi Factory



Longyan Factory

Your Solution Provider  
Your Partner  
**UMEC**



• CERTIFICATIONS:

- » Taiwan Factory
  - ISO 9001/ TL9000
  - ISO 14001
  - UL / TUV
  - OHSAS 18001
  - IATF\_16949
  - MFi Manufacturing
  
- » China Factory
  - ISO 9001
  - ISO 14001
  - UL / TUV
  - IATF\_16949
  - QC080000C
  - OHSAS 18001
  - MFi Manufacturing
  
- » Vietnam Factory
  - ISO 9001
  - UL / TUV
  - ISO 14001
  - OHSAS 18001
  - MFi Manufacturing



## 2 Product Development

A wide-angle photograph of a modern university campus. The scene features several large, multi-story buildings with a mix of brick and white facades. In the foreground, there is a paved road with white crosswalk markings and a yellow arrow pointing right. The area is landscaped with green trees and shrubs. The sky is bright blue with scattered white clouds.

Universal Microelectronics Co., Ltd



- \* RF transformer
- \* Telecommunications
- \* Power Transformer
- \* Inductor Products
- \* Custom Design
- Transformer/ Inductor



- \* DC/DC Converters
- \* AC Open Frame
- \* Power Adapter
- \* Hot-swappable
- Redundant Power



- DMS/ EMS
- \* Marine & GPS Product
- \* Automotive Radar
- \* Wearable Device
- \* BLE related Consumer



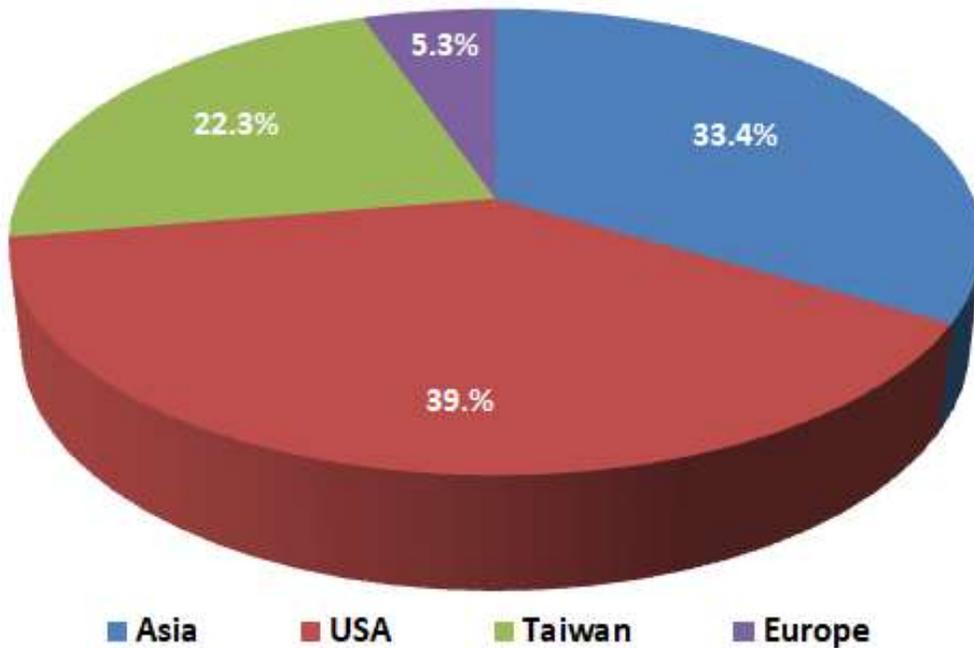
- \* 3.5inch ~ 19inch
- \* COG, FOG, POG
- \* Lamination, OCR
- \* Film on Sensor Glass
- \* LCM assembly



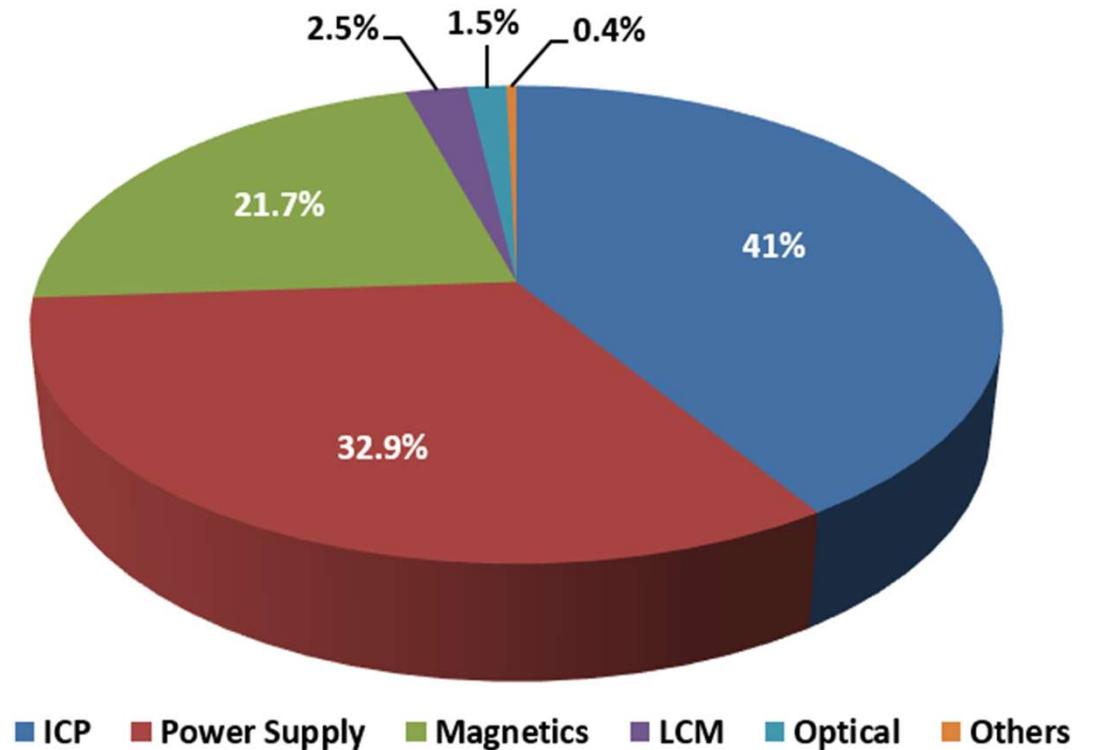
- \* Ultra High Speed AOC :
- USB3.1 type C, SFP
- HDMI 2.0 TRX
- \* Passive Components:
- CWDM/ DWDM
- Fused Biconical Taper

**2019 ANNUAL SALES: US\$125,401,626.**

**● By Territory**



**● By Product Line**



**RF Baluns/Transformers**



**SMD Transformer**



**Common Mode Choke**



**SMD Inductor**



**Planar Transformers for High Current Application**



**PLC Data Coupling Transformers**



**Common Mode Chock for ADSL/VDSL**



**Transformer for Power Applications**



**XDSL Transformers/POTS Inductors**



**Transformer & Inductor by Ringing Core Design**



**Flat Wire Common Mode Choke**



**Transformer for Automotive Application**



## DC/DC Product Line



**From 50W to 420W.**

**For Telecom/ Datacom/ Industrial Control System**



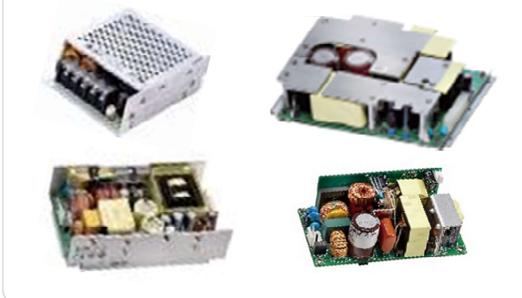
## AC/DC Wall-mount



## AC/DC DeskTop



## Open Frame



## Redundant(CRPS)



**From 6W to 2000W**

**For Networking System, AP Router, Color Laser Printer**



## DMS/ EMS

### ● Marine Products

- Radar
- Fish Finder, Transducer
- Marine Chart Plotter
- Trolling Motor Control System
- Solid State Marine Radar

### ● Telephone Line Test Devices

### ● Automotive Products

- Automotive FMCW Radar
- Car Multimedia System

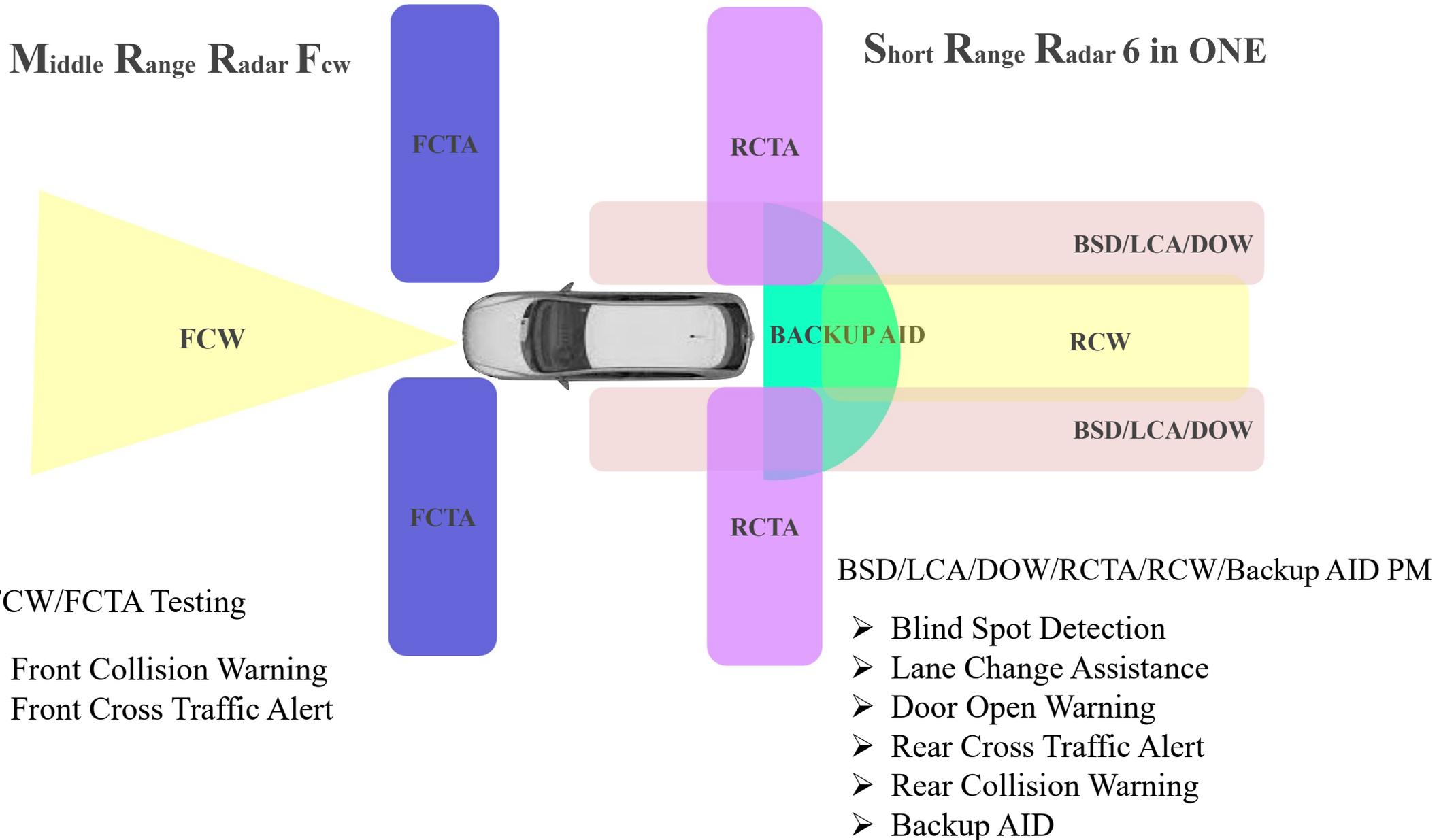
### ● Industrial Android Rugged Tablet Solution

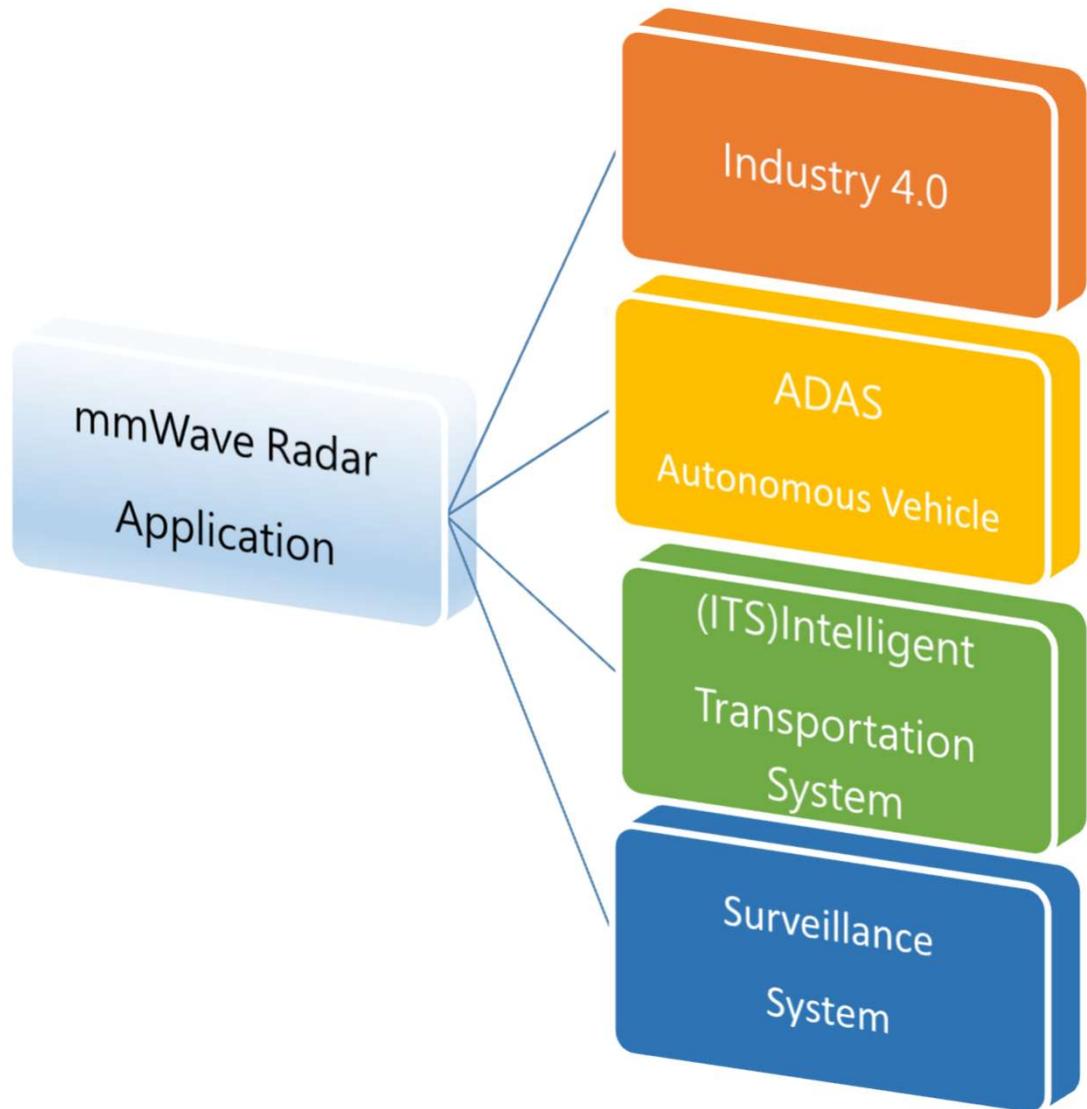
### ● Radar Sensor Module( IoT )

### ● IoT Products

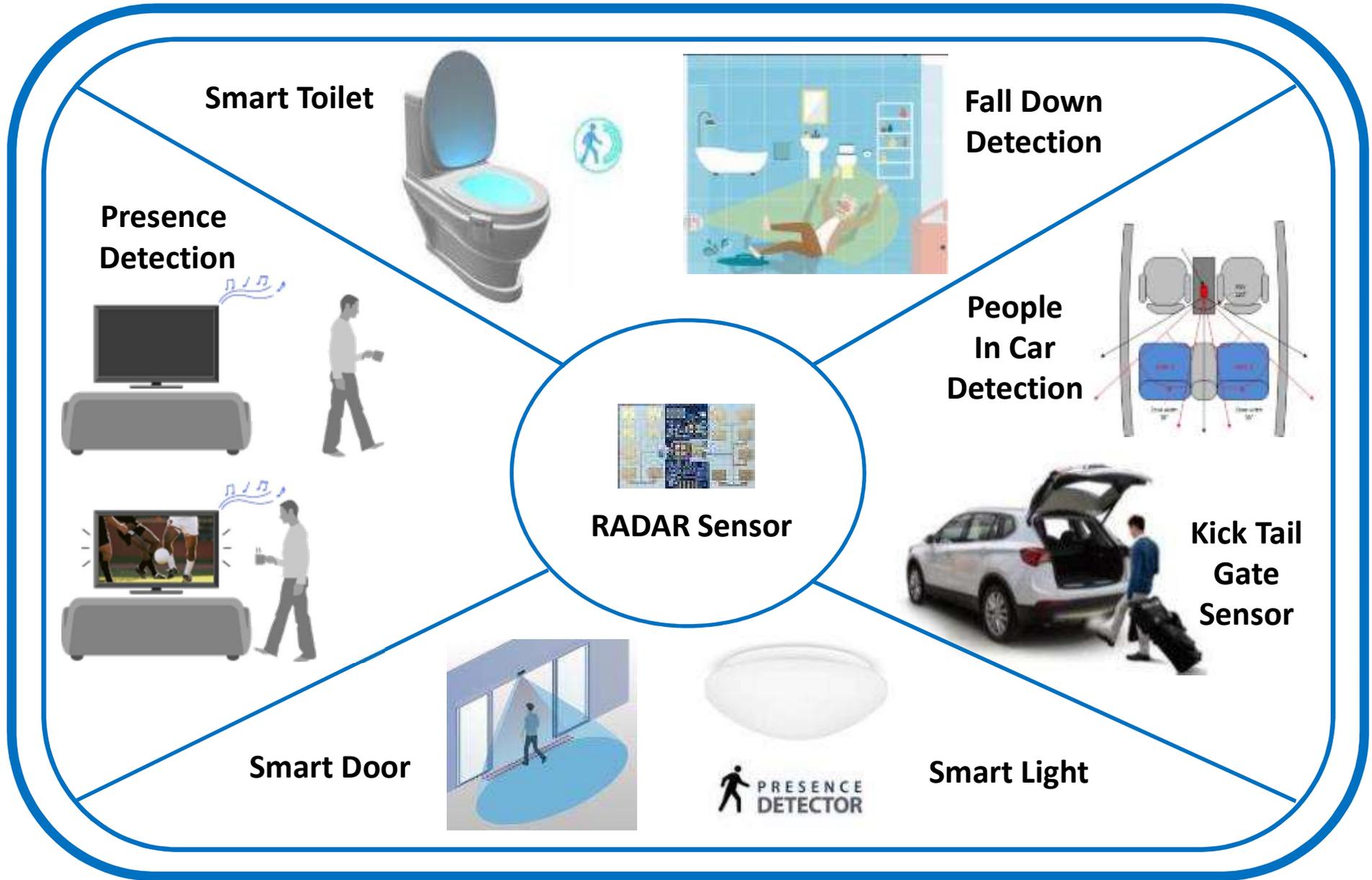
- Wearable & IoT Devices
- Controlling Center Platform & System in ZigBee/ Wi-Fi/ BT







- Used in different vehicles to achieve detection and warning sensors in all directions
- Combine various monitoring systems and provide long-distance detection and early warning
- Make good use of the characteristics of radar and complement the weaknesses of other sensors
- Other applications:
  - Smart transportation,
  - smart toilet,
  - personnel detection,
  - home care,
  - smart weighbridge station... etc.



**Polarize on Glass**



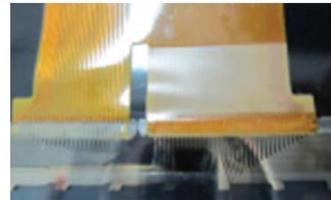
**Film On Board**



**Chip On Glass**



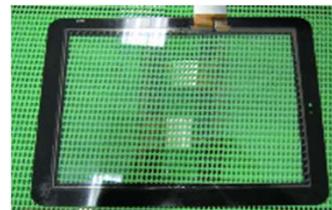
**Film On Sensor Glass**



**FPC On Glass**



**Lamination(OCR)**



## Ultra High Speed AOC :

## HDMI 2.0, USB3.1 Type C, SFP+, QSFP+

### Target Application:

- Medical Imaging Equipment
- Airplane On-board Video System
- TV Broadcast Station
- Conference Room Video System
- Traffic control
- Factory Automation Systems
- Digital Home Theatre
- LED signboards and panel information displays for Airports, Stadiums and Outdoor Advertising, Auditorium, and Kiosk.

USB 3.0 AOC



USB 3.1 Type C



SFP & QSFP



HDMI 2.0 TRX.



## COMPONENTS

### ● Fused Biconical Taper(FBT)

- 1x2 Single Mode Fiber Couplers
- 1x2 Multimode Fiber Couplers
- 1x3/1x4 Single Fused Coupler
- 1310/1550, 980/1550,1480/1550 WDMs
- Compact Size Products

### ● CWDM/DWDM

- 4 -10 Channels CWDM
- 100/200 GHz DWDM
- 980/1310/1480/1550 WDM
- 1310/1490/1550nm Filter WDM
- Hi isolation FWDM
- Compact-size CWDM (6.8mm)

10Ch LGX type



4RU Chassis for LGX type



Coupler/ WDM



Filter WDM



8CH Compact CWDM  
55 × 30 × 6.5mm



Optical Passive Device-  
Modules



## 3 Marketing

A wide-angle photograph of a modern university campus. The scene features several large, multi-story buildings with a mix of white and brown facades and large glass windows. The buildings are surrounded by lush green trees and manicured lawns. In the foreground, a paved road with white crosswalk markings and a yellow directional arrow is visible. The sky is bright blue with scattered white clouds.



**MAGNETIC**



**POWER**



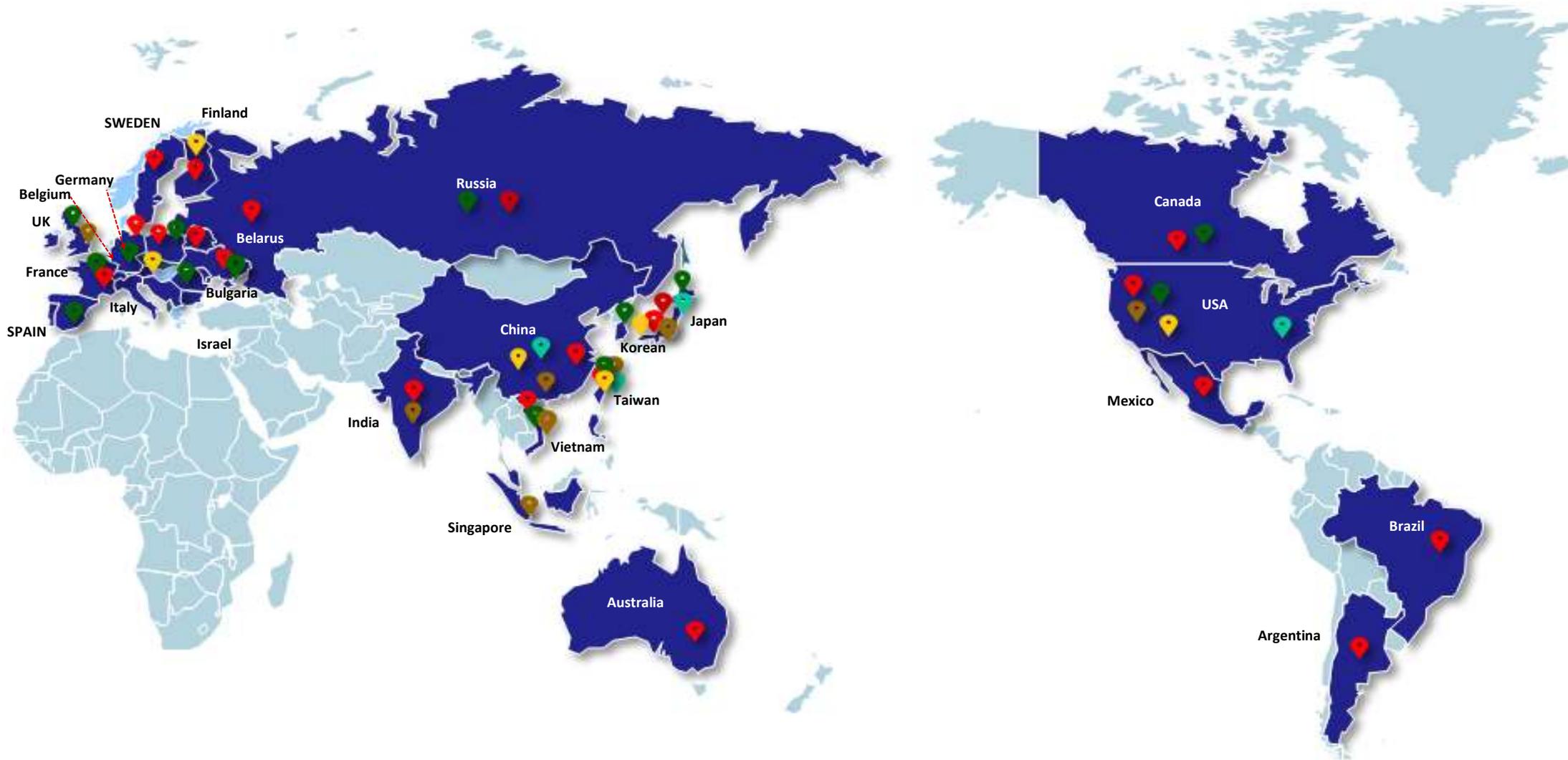
**ICP(EMS/ODM)**



**OPTICAL**



**LCM**



## 4 Operational Prospect





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# Operation Outlook –Magnetic Component

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## **TELECOMMUNICATION:**

- Sales on second generation copper broadband G.fast application had grew 36.6% from 2018 to 2019. Updating equipment actions from telecom operators had made the Jan to Sep 2020 sales on related products increased 33.6% compared with pervious year
- Continuous working with telecom IC manufacturers in developing magnetic for third generation G.mgfast application to maintain UMEC leading product technology position
- Develop high power planar transformer for the increasing demand on 5G small cell

## **Home Appliance:**

- UMEC standard flat wire transformer series has won design approval in renown Japan home appliance company and also has sales contribution since Q3 2019

## **Automotive:**

- Controller area network (CAN)) in car
- Ultrasonic-parking-sensor
- Power Management
- Auto lighting and battery charging on electric car
- Electric car electronic passive component AEC-Q200 verification ability and IATF16949 system certification



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## **Operational Prospect – Power Supply**

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- **Industrial , Commercial, Medical System :**
  - Build up product lines of Transportation, military application.
  - Provide from 250W power supply for entry level server up to thousands watts distributed power for large multi processors systems.
  - Provides high quality supplies for various healthcare and medical applications.
  - Customize battery chargers for lithium-ion and lead acid batteries.
- **Railway, Power Plant system :**
  - UMEC's DC-DC converters are designed to provide isolated DC power in the transportation industry for such electronics as LED displays, audio amplifiers, lighting, safety, monitors and communications systems under the European Standard EN 50155.
  - Customize power supply for power substation automation.



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## **Operational Prospect – Power Supply**

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- **Mobile Communication Sites System :**
  - The demand on power supply for data centers and cloud infrastructure are growing rapidly due to 5G application. A partner with design expertise can help you beat out the competition when it comes to power availability, density, efficiency, cost and performance.
  - UMEC has been assisting many networking companies to achieve their objectives by providing the core competency of power supply design and manufacturing.
- **Direct Account for Branding Companies :**
  - Become Branding Companies' assigned parts without go through their OEM partner.
  - Increase our product usability and avoid middle man cost.
  - First hand information from Direct Account customer's requirement.



- **Marine Product Line :**
  - US COVID-19 spread rapidly, cause major customers in Q2 stop operation for 3 weeks and affect our Q2 shipment.
  - Starting from Q3, due to pandemic reason that make outdoor activity increase and cause strong demand for the marine product.
  - 2021 Customer demand remain positive.
  - Long term business partnership that build strong trust relationship to co-development the new product for customers.
- **Medical Aide Product Line:**
  - Penetrated into EU and US semi-Medical related product field.
  - Strict Product requirements to increase gross margin.



- **Communication Module Product Line:**
  - Worldwide pandemic cause strong communication equipment demands, so that the communication module production also get increased.
  - Self support auto testing equipment to resolve the module testing bottleneck and increasing our competing edge.
- **Electronic Testing Device Product Line:**
  - Testing devices customer's business affect by home office (no access to Lab), cause demanding drop in 2020.
  - Estimate business will bounce back in 2021 after virus get controlled.



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# Operational Prospect– Radar Product

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- **Automotive Radar:**

- 77/79GHz automobile rear side radar already mass production and continue expand new car factory customer
- Cooperate with automotive lens manufacturers to develop safety protection systems for excavators, bulldozers and other engineering vehicles that integrate images and radar
- Develop low-power and shrink-fit 77/79 GHz radar, and promote it to the motorcycle and bicycle market

- **Non-Automotive Radar:**

- Developed 60GHz radar for people counting, vital signs detection and sensing, which can be used to maintain social distance or home care for the elderly
- 24GHz smart toilet, smart doorbell and smart lighting applications have begun mass production in 2020, and continue to be promoted to other applications such as car DVR, tail door switch sensing and other applications

## 5 Advanced Field





# New Venture – Green Energy



**自願性產品驗證證書**  
Certificate of the Voluntary Product Certification



證書號碼： V539050040023號00  
Certificate No.

茲據 環隆科技股份有限公司 申請自願性產品驗證，  
經審查結果符合規定，准予並使用產品驗證標誌及識別號碼；  
其登載事項如下：

The application made by UNIVERSAL MICROELECTRONICS for Voluntary Product Certification has been reviewed and found to be in compliance with related regulations. Therefore, registration is granted with the Certification Mark and the Identification No. V53004. Details of the registration are as follows:

申請人： 環隆科技股份有限公司  
Applicant

地址： 臺中市南屯區工業區二十七路3號1-3樓  
Address

生產廠場： 盈正豫順電子股份有限公司屏東二廠  
Factory

廠址： 屏東縣屏東市橋南里工業路1-1號  
Factory address

產品種類名稱： 變流器  
Type/name of product

中文名稱： 太陽能變流器  
Chinese name

英文名稱：  
English name

型 式： UPV3075TTLS  
Type

系列產品： UPV3060TTLN, UPV3060TTLS, UPV3063TTLN, UPV3063TTLS, UPV3066TTLN, UPV3066TTLS, UPV3075TTLN  
Series of type

驗證標準： CNS14674-2 (95年版)、CNS14674-4 (105年版)、CNS15382 (107年版)、CNS15426-1 100年版、CNS15426-2 102年版  
Standards

**取得VPC認證**



**標準檢驗局發證**  
This certificate shall be issued by the BSMI

本證書所載內容若有不符之處，以標準檢驗局系統登錄資料為主，查詢證書資料網址：  
<https://civil.bsmi.gov.tw>

核可日期：中華民國	109	年	07	月	29	日
Registration date	2020	(year)	07	(month)	29	(day)
本證書有效期限至	112	年	07	月	28	日
Expiration Date	2023	(year)	07	(month)	28	(day)
發證日期：中華民國	109	年	07	月	29	日
Date of issue	2020	(year)	07	(month)	29	(day)



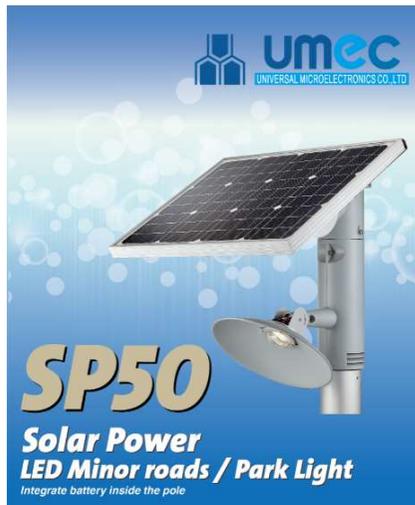
註：次年度自願性產品驗證年費繳納期限為當年11月30日，逾期未繳納者，經限期繳納屆期未繳納，即依自願性產品驗證實施辦法第21條第8款規定廢止產品驗證，並自次年度1月1日起生效。

# umec New Venture—Smart City Light System and Glass Lens

## Smart City Lighting System

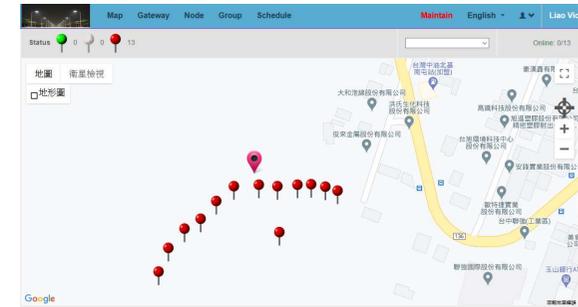


## Green/Solar LED Light



Smart LED Lighting

Smart Node:4G/5G/NB-IOT/M1/Bluetooth



Gless Lens



**Thanks for Your Attention!**