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**Universal Microelectronics Co., Ltd.**

(股票代號：2413)

## Investor Conference



2019年12月04日

- |   |                      |
|---|----------------------|
| 1 | Company Profile      |
| 2 | Product Development  |
| 3 | Marketing            |
| 4 | Operational Prospect |

## 1 Company Profile



- **INITIAL OPERATION :**

- » January 1984

- **EMPLOYEES :**

- » Taiwan — 700
  - » China — 4000
  - » Vietnam — 1000

- **CAPITAL :**

- » US\$43,209,000

- **INITIAL PUBLIC OFFERINGS:**

- » October 1998

- **ANNUAL SALES:**

- » US\$127,745,746. (2018)

- **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
  - » 13,000 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**



## 2 Product Development





Universal Microelectronics Co., Ltd

**UMEC**



**MAGNETIC**



**POWER**



**ICP**



**LCM**



**OPTICAL**



- \* 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 :
- HDMI, DVI, USB3.0,
- SFP+, QSFP+
- \* Passive Components:
- CWDM/ DWDM
- Fused Biconical Taper

## • CERTIFICATIONS:

- » Taiwan Factory
- ISO 9001
  - ISO 14001
  - ISO/TS 16949
  - ISO 13485
  - TL 9000
  - UL / TUV
  - SONY GP
  - MFi Manufacturing

- » China Factory
- ISO 9001
  - ISO 14001
  - ISO/TS 16949
  - UL / TUV
  - QC 080000
  - SONY SPP
  - OHSAS 18001
  - MFi Manufacturing

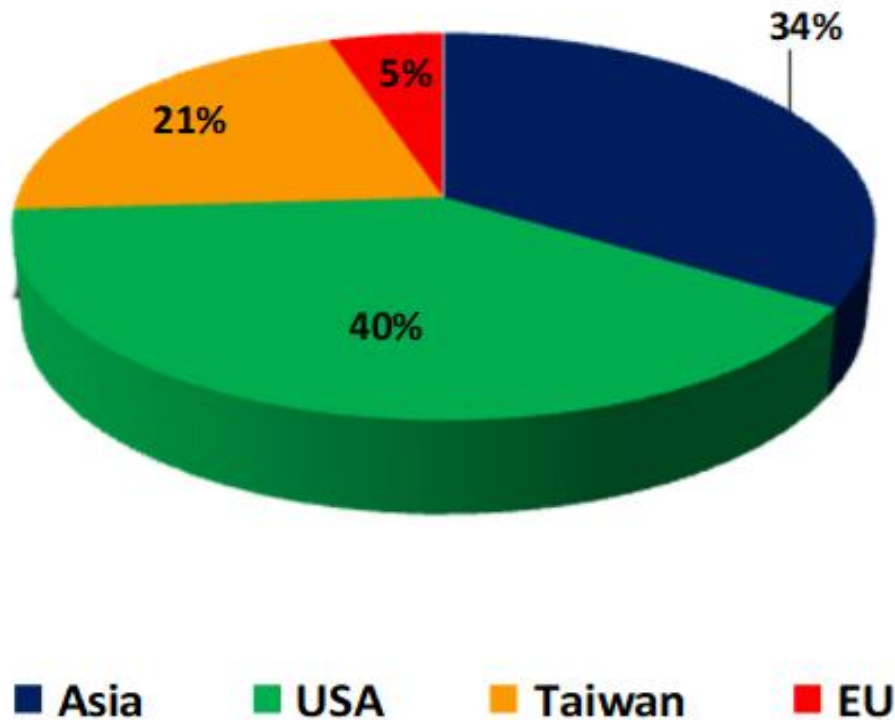
- » Vietnam Factory
- ISO 9001
  - UL / TUV
  - ISO 14001
  - MFi Manufacturing



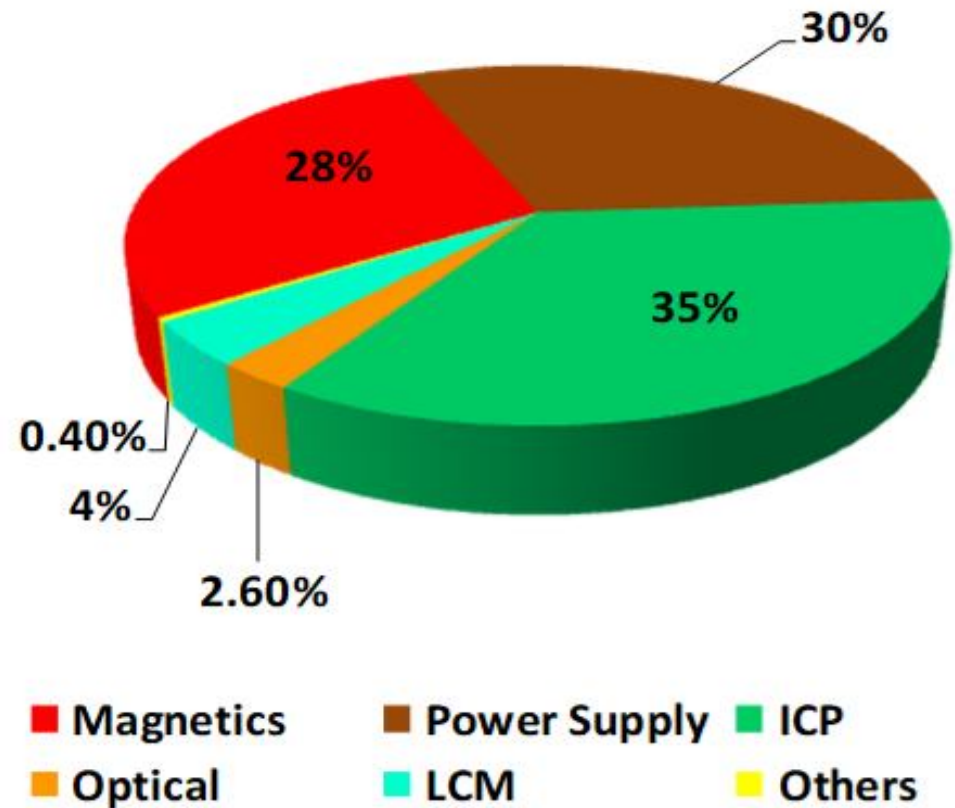


2018 ANNUAL SALES: US\$127,745,746.

● By Territory



● By Product Line



- Total Capacity: 20KKpcs/ month

RF Baluns/Transformers



SMD Transformer



Common Mode Choke



SMD Inductor



ISDN S/U-interface Transformers



Data Coupling Transformers



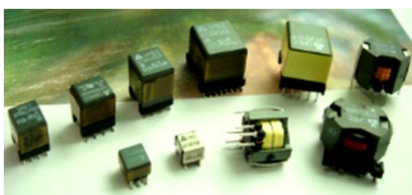
Common Mode Choke for ADSL/VDSL



Transformer for Power Applications



XDSL Transformers/POTS Inductors



Transformer & Inductor by Ring Core Design



Flat Wire Common Mode Choke



Transformer for Automotive Application





# Magnetic Component Product

IC Manufacturer	Technical
<b>ADI</b>	HomePlug/VDSL2
<b>Broadcom</b>	ADSL/ADSL2+/VDSL2/ADSL2+/VDSL3/G.FAST/ <b>G.mgfast</b> HomePlug/VDSL/VDSL2
<b>Broadcom(Gigle)</b>	HomePlug
<b>Ikanos(Globespan)</b>	ADSL/ADSL2+/G.SHDSL/VDSL
<b>Ikanos(Globespan,Conexant)</b>	ADSL2+/G.SHDSL/VDSL/VDSL2
<b>Lantiq</b>	Power
<b>Intel ( Lantiq, Infineon)</b>	ADSL/ADSL2+/MDSL/SDSL /VDSL/VDSL2/G.FAST/ <b>G.mgfast</b>
<b>Level One</b>	DDS
<b>Marvell (DS2)</b>	G.hn/HomePlug
<b>MicroSemi (Zarlink, Legerity)</b>	ADSL/ADSL2+/POTS
<b>Mstar, Qualcomm(Atheros,Intellon), Silicon Labs</b>	HomePlug
<b>Realtek, Metanoia, Sckipio</b>	G.FAST/VDSL2
<b>Sigma Designs (CopperGate)</b>	G.hn/HomePlug/HPNA3
<b>Silicon Labs</b>	VoIP (Power)
<b>Texas Instruments, STM</b>	Power
<b>Teridian</b>	Analog
<b>Triductor, INTEL(Lantiq), Metanoia</b>	VDSL2

- Total Capacity : 20kkpcs per month.
- Telecom Transformers/Inductors : 9kkpcs per month  
(Ferrite EE5, EP7, EP10, EPX10, EP13, EPC13, RM4, RM5, RM6, TKH7---)
- LAN, ISDN, T1/E1, T3/E3 Transformers/Inductors : 3kkpcs/ per month  
(Ferrite Ring core T2.5~T10 ----)
- Power Transformers/Inductors : 8kkpcs per month  
(Ferrite EF16~EF32/11, EE40,-----)





## DC/DC Brick

Encapsulated 1/2, 1/4, 1/8 and 1/16 Brick series are available from 50W to 350W.



*For Telecom / Datacom & Industrial Control System*



## AC / DC Adapter

Adapters are available with power range from 3W to 160W.



*For Datacom System*



## DC/DC Cu Case

Industrial DC/DC Module series are available from 6W to 60W.



*For Telecom / Datacom & Industrial Control System*



## AC / DC Open Frame

I.T.E Power Supply are available with power range from 5W to 880W.



*For Color Laser Printer, Multifunction Printer*



## DC/DC Multilayer Converter

Hi Density DC/DC Board Mount Modules are available from 50W to 420W.



*For Telecom / Datacom and Industrial Control System*



## Redundant(CRPS)

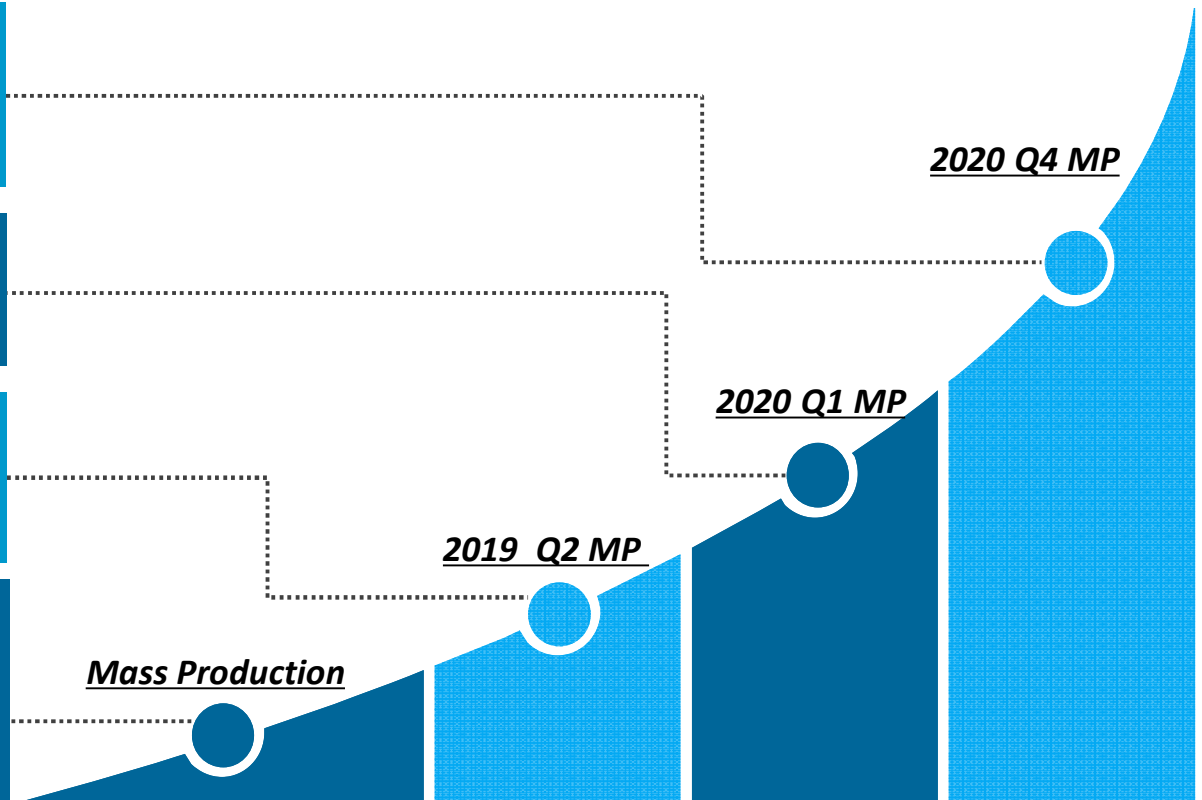
Redundant PoE Switch Application with range: from 250W to 2000W.



*For Networking System*



- AC(HVDC))-DC (CRPS) : 12V-2000W
- DC(LVDC)-DC (CRPS) : 12V-550W/880W/1200W
- AC(HVDC)-DC (SSI) : 12V -400W
- AC(HVDC)-DC(CRPS) PoE : (54V)-300W/2000W
- AC(HVDC)-DC(CRPS ) : (12V)-550W/880W/1200W
- AC-DC(CRPS): 250W
- AC(HVDC)-DC (CRPS) POE: 54V-600W/ 1200W
- AC(HVDC)-DC (CRPS) PoE : (54V)-920W





## DMS/ EMS

### ● Marine Products

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

### ● Automotive Products

- Automotive FMCW Radar
- Car Multimedia System
- Power Lift Gate module

### ● Consumer Products

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

### ● Industrial Android Rugged Tablet Solution





## 24GHz Radar

- Rear Cross Traffic Alert (RCTA)
- Lane Change Assistance (LCA)
- Blind Spot Detection (BSD)
- Door Open Warning (DOW)



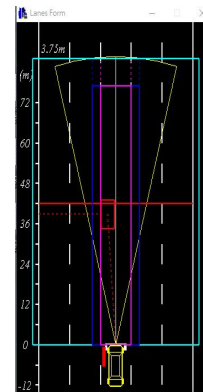
< Installation >



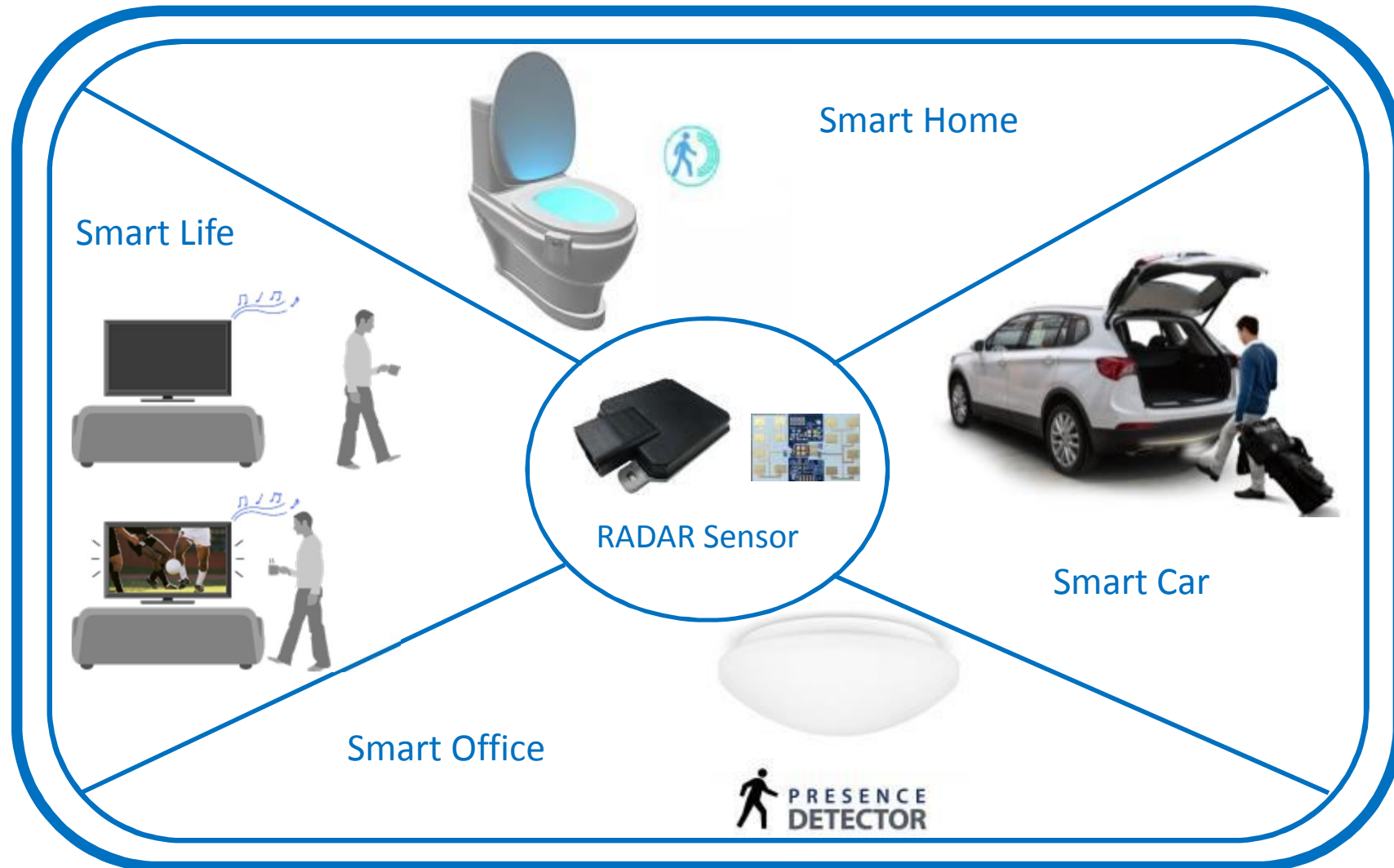
Waveform	Interleaved FMCW/CW
Horizontal Coverage	100°
Range Resolution	0.8m
Detection Distance	75m
Working Temperature	-40° to +85°C
Waterproof	IP67
Dimension (mm)	113.3 x 83.9 x 23.8
Certificate & Regulation	ISO 17387-2008, LCDAS, ISO-16750, FCC part 15.249, ISO -10605, NCC LP0002

## 77GHz Radar

- Front Cross Traffic Alert
- Forward Collision Warning
- Rear Collision Warning

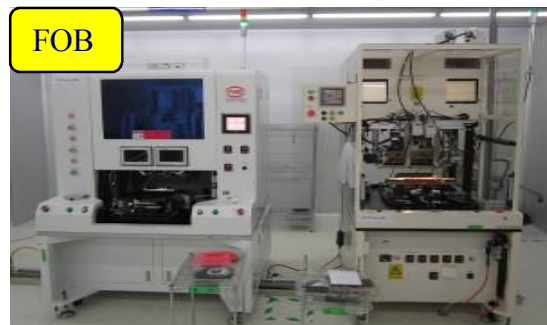


Waveform	FMCW/ Sawtooth
Horizontal Coverage	160°
Range Resolution	1.58m
Detection Distance	180m
Working Temperature	-40° to +85°C
Waterproof	IP67
Dimension (mm)	87*67 *14



# LCM Process & Products

**Bonding Process (2.8"-15.6")**  
Capacity : 250 (K/M)



**CTP Process (3"-12")**  
Capacity : 150 (K/M)



**Main Products (4.3"-10.1")**  
Capacity : 50 (K/M)

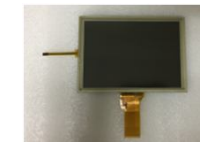
4.3" / 5.6" / 8" Module + RTP → Application



AC control



OS printer

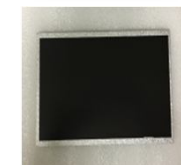


POS machine

7" / 9.7" / 10.1" Module + CTP → Application



Mechanical



Tablet



Financial



## ■ Ultra High Speed AOC :

- HDMI, DVI, USB3.0, SFP+, QSFP+

## ■ Component:

- CWDM/DWDM
- Fused Biconical Taper ( FBT)

## Target Application:

- Medical Imaging Equipment
- Cloud Computing
- Telecommunications
- Conference Room Video System
- Factory Automation Systems
- LED signboards and Kiosk.



USB3.0 AOC  
(5Gbps)



8CH Compact  
CWDM



SFP+ Transceiver  
(10Gbps)



QSFP+ Transceiver  
(40Gbps)



## 3 Marketing





**MAGNETIC**



**POWER**



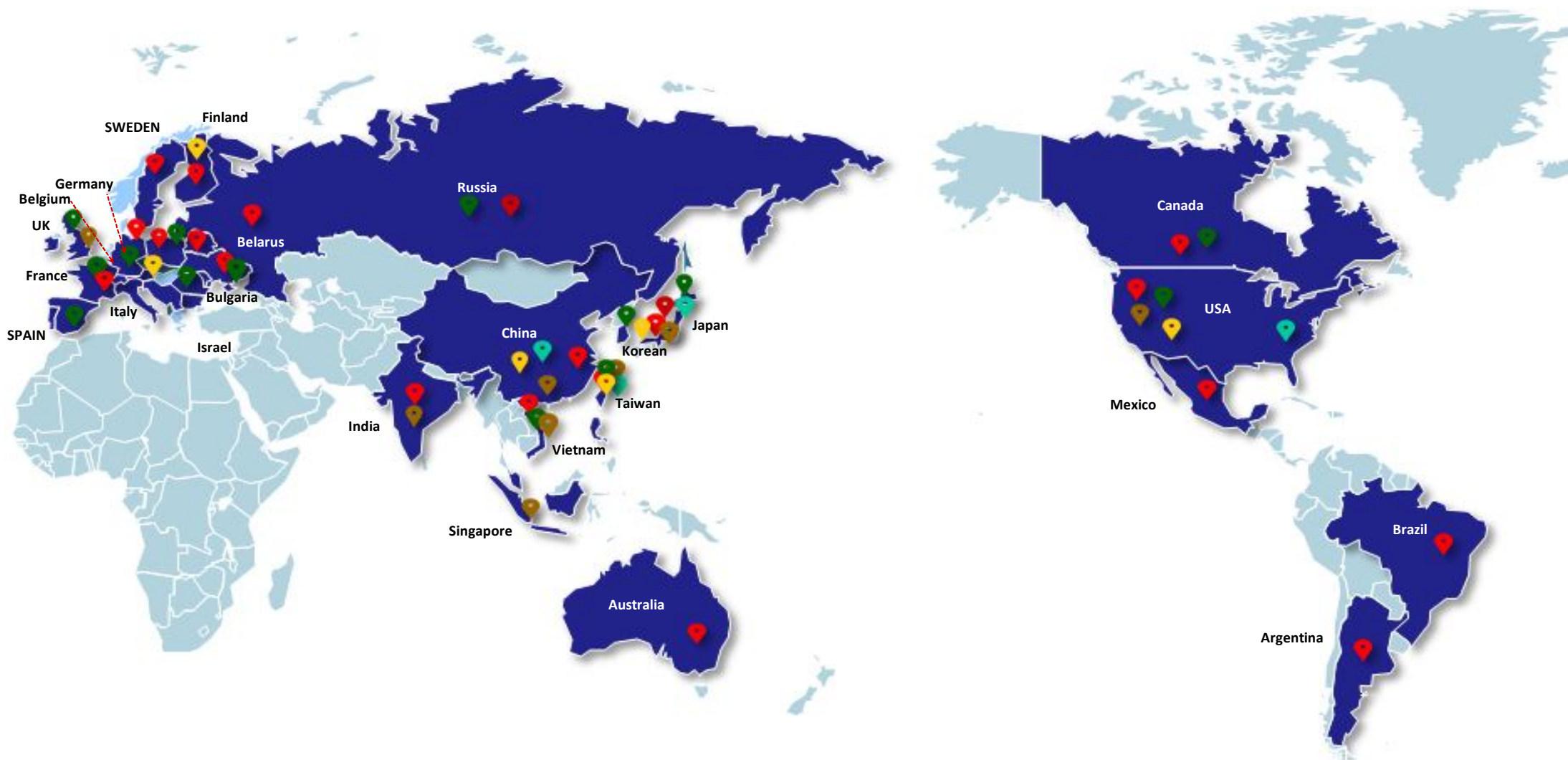
**ICP(EMS/ODM)**



**OPTICAL**



**LCM**



## 4 Operational Prospect





umec

## Operational Prospect

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- ADSL market has been moving to VDSL.
- For G.fast, UMEC already complete 3<sup>rd</sup> generation G.mgfast product develop, future is bright.
- Continue develop 4C related auto industry magnetic components, especially in automobile communication, lighting and power categories.
- Complete and Received AEC-Q200, IATF16949 certification.



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## Operational Prospect

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- UMEC continue to focus on D/D Converter for Military grade and railway market. Also develop for Network, medical equipment and cloud computing and data center power supply needs,
- Due to heavy data trafficking demand of 5G Telcom, IOT, Big data, and Cloud computing. The needs for the tolerance of high frequency and high temperature power supply is in great demand.
- Green/Reusable energy demand for energy saving power supply, create big market needs for us.





## umec Operational Prospect

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- 77GHz short distance radar and 79G wideband radar are all in master production. 77GHz mid-long range radar is in customer sample stage, including Japanese tier one customer.
- Non car use 24GHz short range radar has successfully penetrate into different market place and are currently in customer sample stage. Usage like smart parking, toilet door bell, drainage alarm system, etc. estimate MP in end of 2019.
- China will enforce AEB regulation JT&T 1242 for commercial vehicles. Currently are working with China car maker to replace current used US radar system to reduce the cost.

**Thanks for Your Attention!**