



Umec

Universal Microelectronics Co., Ltd.

(Stock Number : 2413)

Investor Conference



2021/12/07

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Operational Prospect

1 Company Profile



- **INITIAL OPERATION :**
 - » January 1984
- **EMPLOYEES :**
 - » Taiwan — 750
 - » China — 2000
 - » Vietnam — 1000
- **CAPITAL :**
 - » US\$43,209,000
- **INITIAL PUBLIC OFFERINGS:**
 - » October 1998
- **ANNUAL SALES:**
 - » US\$135,784,256. (2020)
- **PLANT FLOOR AREA :**
 - » 32,100 m² ---- Taiwan HQ and Factory
 - » 72,200 m² ---- Shenzhen Factory
 - » 10,000 m² ---- Longyan Factory
 - » 7,200 m² ---- Meizhou Factory
 - » 18,000 m² ---- 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/ CCC/ CQC
 — ISO 45001
 — IATF_16949
 — MFi Manufacturing

- » China Factory — ISO 9001
 — ISO 14001
 — UL/ TUV/ CCC/ CQC
 — IATF_16949
 — QC080000C
 — ISO 45001
 — MFi Manufacturing

- » Vietnam Factory — ISO 9001
 — UL/ TUV/ CCC/ CQC
 — ISO 14001
 — ISO 45001
 — MFi Manufacturing

ZERTIFIKAT ♦ CERTIFICATE ♦ 證書證書 ♦ СЕРТИФИКАТ ♦ CERTIFICADO ♦ CERTIFICATE

CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group
certifies that

UMEC Shenzhen Company Limited
No.16 Hao Ye Rd., Tong Fu Yu Industrial Park, Fu Hai Sub-district,
Baoan District, Shenzhen City, Guangdong Province, P. R. China
Post Code: 518103

has established and applies
an Environmental Management System for

Design, Manufacture and Sales of Magnetic Components, Power
Supplies, Liquid Crystal Module; Manufacture and Sales of Optical
Fiber Components, Printed Circuit Board Assemblies

An audit was performed. Report No. 20040404.
Proof has been furnished that the requirements according to

ISO 14001:2015

are fulfilled. The certificate is valid from 2017-12-05 until 2020-12-04.
Date of Initial Certification: 2008-02-24
Certificate Registration No.: TÜV104 02 0438
2017-11-30

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group

TUV

TÜV NORD

CERTIFICATE

Management system as per
ISO 45001 : 2018

In accordance with TÜV NORD CERT procedures, it is hereby certified that:

UMEC VIETNAM Co., Ltd
Lot B(B1), Quang Chau industrial park,
Bac Giang province,
Vietnam

applies a management system in line with the above standard for the following activity

Manufacturing and sales of magnetic components, power supplies

Certificate Registration No. 44 136 25 94 0005
Valid from 2020-02-28
Audit Report No. SCAT11940201-0202
Valid until 2025-02-28
Initial Certification: 2020

Certification Body
at TÜV NORD CERT GmbH

TÜV NORD (Thailand) Ltd
1016/75-75 10th Floor, Innotech Tower,
Debsiraya Road, Bangna Te,
Bangnae, Bangkok 10260, Thailand
202007020

This certification was conducted in accordance with the TÜV NORD CERT auditing and certification procedures and is subject to regular surveillance audits.

TUV NORD CERT GmbH Langensieboldstr. 20 45141 Essen www.tuv.nord-cert.com

国际电工委员会质量评定体系 (IECQ)
 涵盖电子元器件、组软件、相关材料的过程
 IECQ 官方网站及详细 请访问 www.iecq.org

IECQ 符合性证书

有害物质过程管理

IECQ 证书号码:	IECQ-H TÜVSKR 11.0010	发出序号:	7	状态:	Current
取代	IECQ-H TÜVSKR 11.0010 Issue 8	发行日期:	2019/08/21	原发出日期:	2011/09/23
认证机构文件号码:	PRC-HSPM-1911	失效日期:	2020/09/22		

适用于:

- European Directive 2011/65/EU ("RoHS – Restriction of the use Of certain Hazardous Substances") electrical and electronic equipment. Including all published amendments
- Customer specified requirements

嘉隆科技(深圳)有限公司
中国广东省深圳市宝安区西乡街道西乡社区铁岗路18号

该组织已制定和实施有害物质过程管理程序和相关过程，经审查，发现过程符合及过程符合适用的IECQ HSPM80附加要求，即IECQ电子元器件质量评定体系 (IECQ) 的基本规则IECQ Q1和程序规则IECQ 03-5 "IECQ 有害物质过程管理" 以及IECQ规范。

- IECQ QC080000:2017 – 有害物质过程管理体系要求

此证书适用于以下活动范围内的所有电子元器件、组软件、相关材料的过程：
 电路板、电源、液晶模块的设计、制造和维修，光纤组件、PCBA、智能模块（包含手机）的设计和维修

发的认证机构: TÜV Asia Pacific Ltd., TÜV SÜD Group
 20F, Two IFC, 10 Guljeungmyung-ro,
 Yeongdeungpo-gu,
 Seoul, 07526
 Korea (Republic Of)

授权人:
MOCK Wolfgang

此证书的有效性依赖于组织符合 IECQ 认证机构的所有要求。如有任何变更，请及时通知认证机构。
 组织应定期接受认证机构的审核。如有任何变更，请及时通知认证机构。
 此证书的有效性依赖于组织符合 IECQ 认证机构的所有要求。
 组织应定期接受认证机构的审核。如有任何变更，请及时通知认证机构。

Certificate TV1701033

The management system of

Universal Microelectronics Co., Ltd.

No. 3, 27th Rd., Taichung Industrial Park Taichung City

Has been assessed and certified to comply the requirements of

ISO 45001:2018

For the following activities

The scope of this certification appears on page two of this certificate.

This certificate is valid from 09 August 2018 until 09 August 2022 and remains valid subject to satisfactory surveillance audits. Recertification audit due before 31 July 2022 issue 2. Certified since 09 August 2019

This organization was previously certified to OHSAS 18001 since 02 October 2017

This is a multi-site certification. Additional site details are listed on subsequent pages.

Authorized by

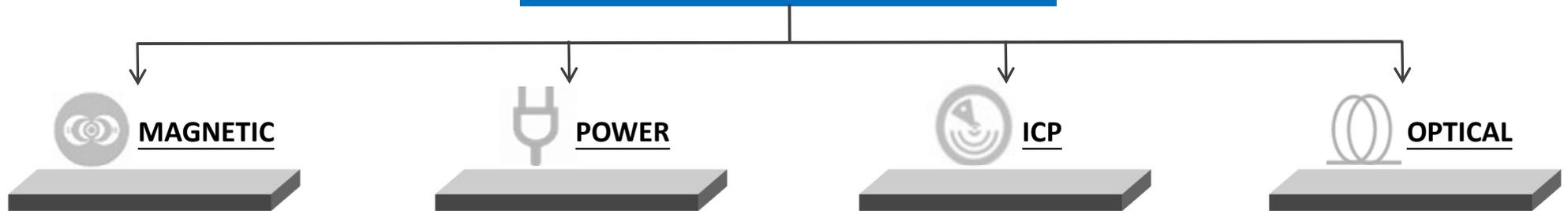
SGS Taiwan Ltd, Certification Business Department
No. 106-1, Gao-Lung Road, Hsin-Tsuei Industrial Park, No. 6, Zhong-Hua Road, Taichung City 40615
Taiwan/Phone: +886 (0)2399-3271 Fax: +886 (0)2399-3853 www.sgscert.com

SGS-04564612
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2 Product Development



Universal Microelectronics Co., Ltd



- * RF transformers
 - * Power Transformers
 - * Inductor Products
 - * Planar Transformers
 - * Custom Design
- Transformer/ Inductor



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



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



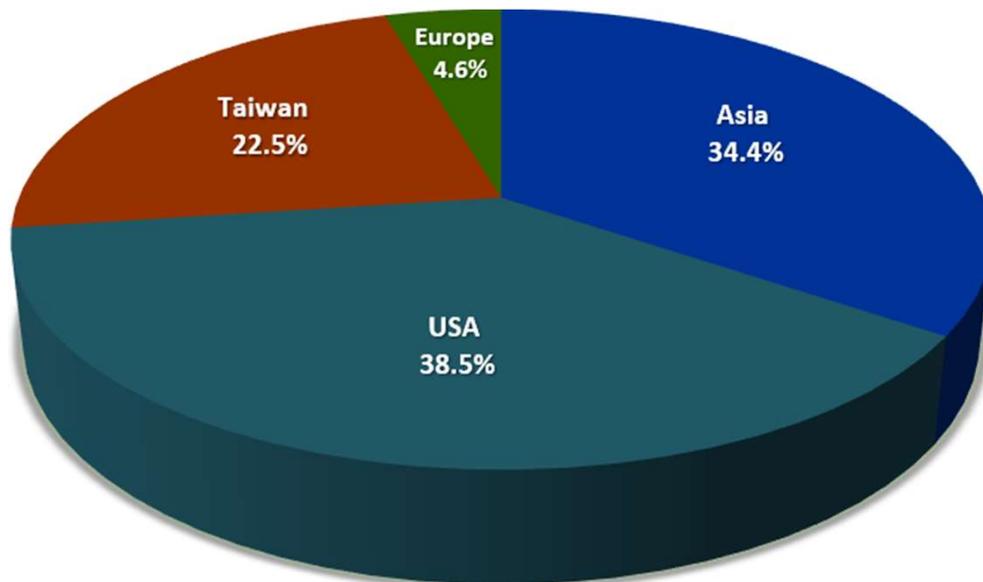
- * Ultra High Speed AOC :
USB 3.1 Type C & 3.0 AOC;
HDMI 2.1 & 2.0 AOC/TRX; S
FP & QSFP
- * Passive Components:
CWDM/ DWDM
Fused Biconical Taper



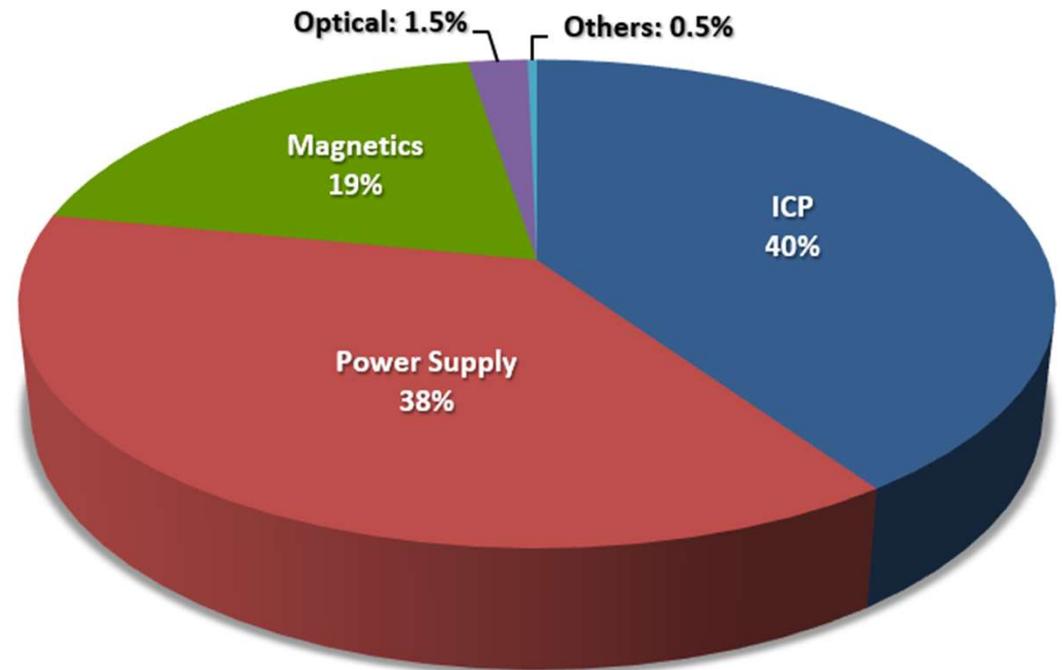
2020 Sales Revenue Update

2020 ANNUAL SALES: US\$135,784,256.

● By Territory

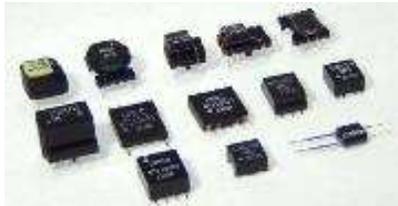


● By Product Line



Magnetic Component Product

PLC coupling Transformer



RF Baluns / Transformer



Planar Transformers(PCB)



Automotive Application



Power Transformer for PoE & HomePlug



Common Mode Chokes / Data Line Filters



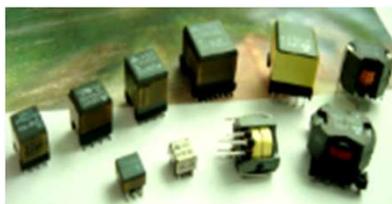
Power Inductors /Common Mode Chokes



SMD Inductor



XDSL Transformers/POTS Inductors



ADSL / VDSL/ G.fast Transformers



Current Sense Inductors/Transformers



Transformer for Power Applications



DC/DC Product Line

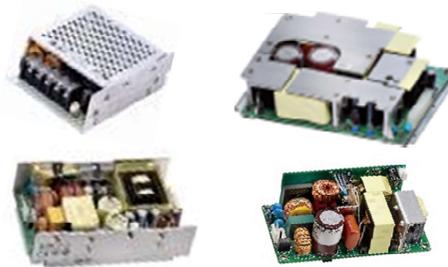


From 15W to 700W

For Telecom/ Datacom/ Industrial Control System



Open Frame



AC/DC Adapter



From 6W to 2000W

For Networking System, AP Router, Color Laser Printer



Redundant(CRPS)



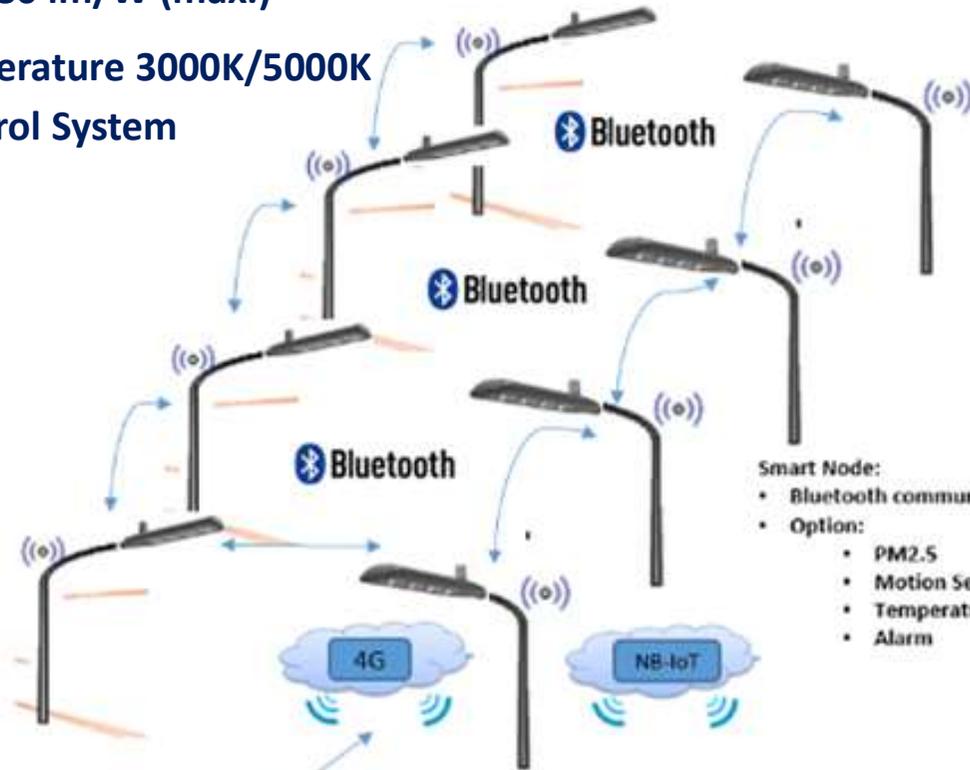
DC/AC Inverter



□ Smart LED Street Lamp

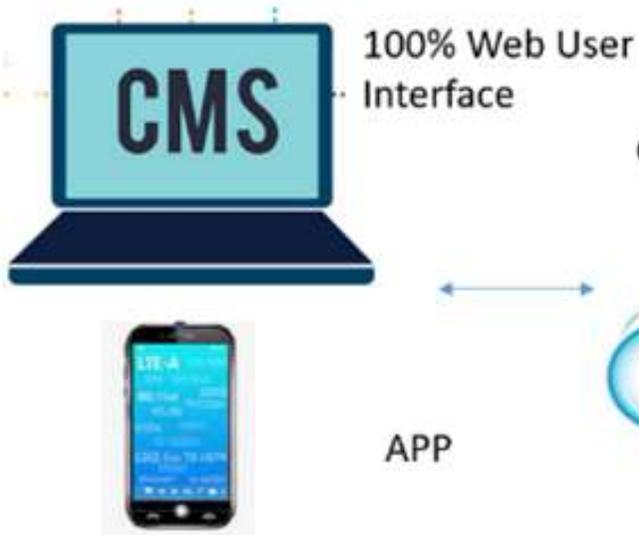
- 30W/60W/90W/120W/150W Series Type
- Efficiency 180 lm/W (max.)
- Color Temperature 3000K/5000K
- Smart Control System

Smart City Lighting System



- Smart Node:
- Bluetooth communication technology
 - Option:
 - PM2.5
 - Motion Sensor
 - Temperature Sensor
 - Alarm

- Smart Gateway:
- 4G,NB-IOT and Bluetooth communication technology
 - Option:
 - Surveillance system
 - Digital Signage
 - PM2.5
 - Motion Sensor
 - Temperature Sensor
 - Alarm



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 mmWave Radar
- ADAS Solutions

● Industrial Android Rugged Tablet Solution

● mmWave Radar Solutions and Modules

● IoT Products

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





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mmWave Radar Modules Application

Automotive Protection Radar

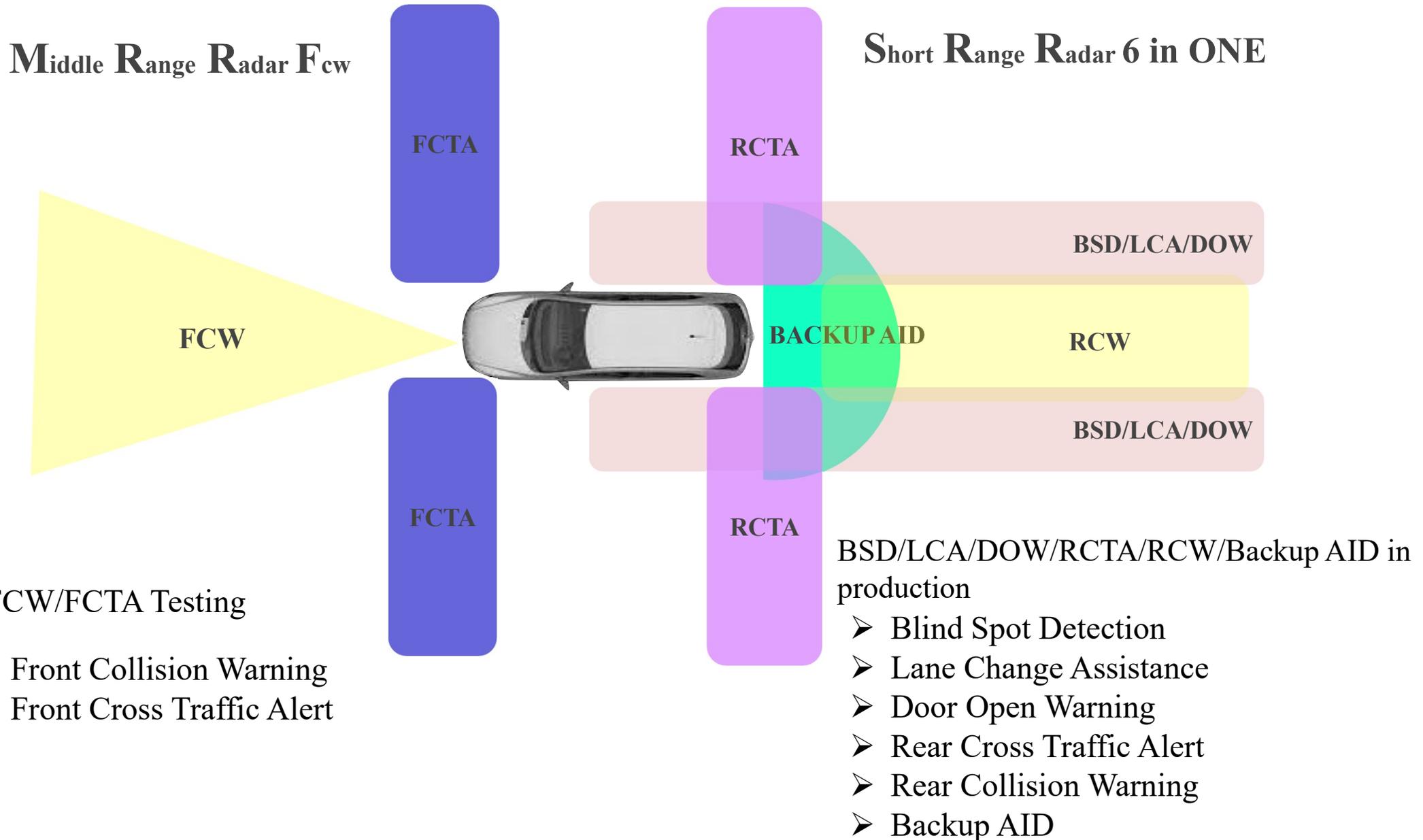
Large Vehicles
Front, Rear, Side
Radar

Two wheelers
Vehicle

Industrial
Robot
Sensor

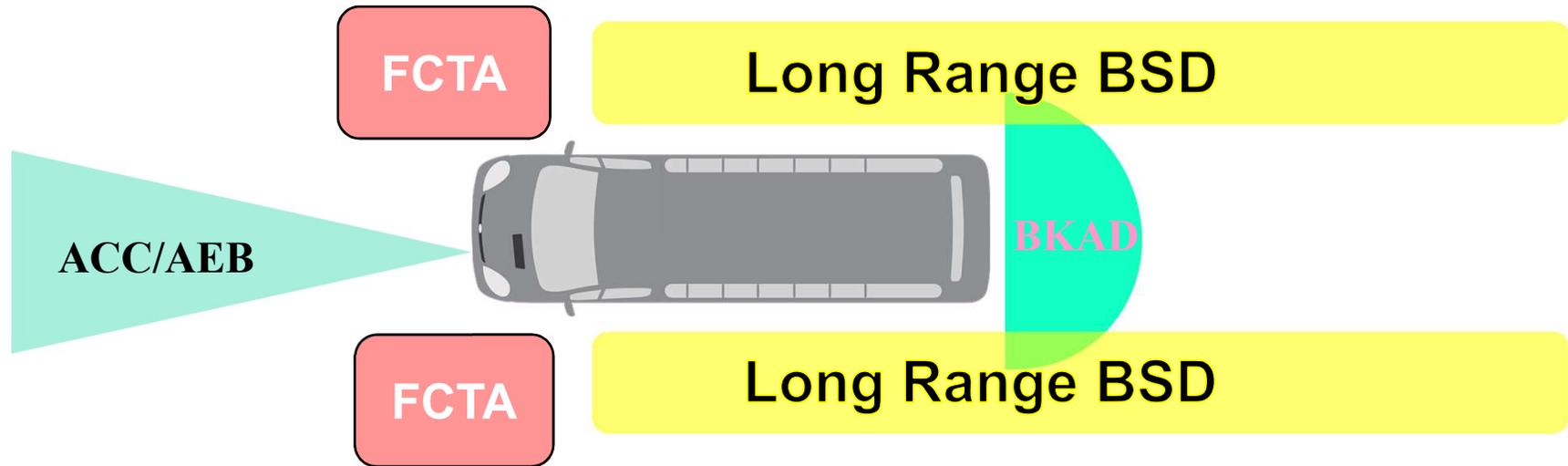
Vital-Signs
Detection

Surveillance
System
Value-Added

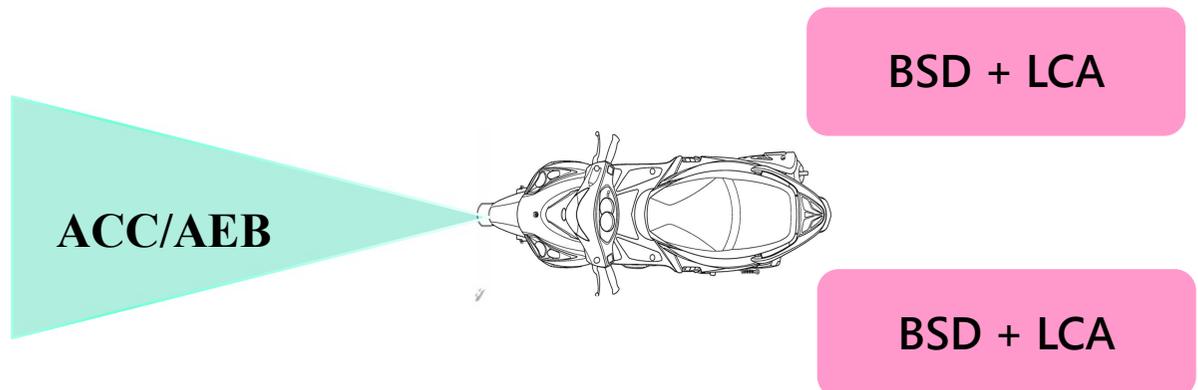


umec Heavy Duty Vehicles and Moto Radar

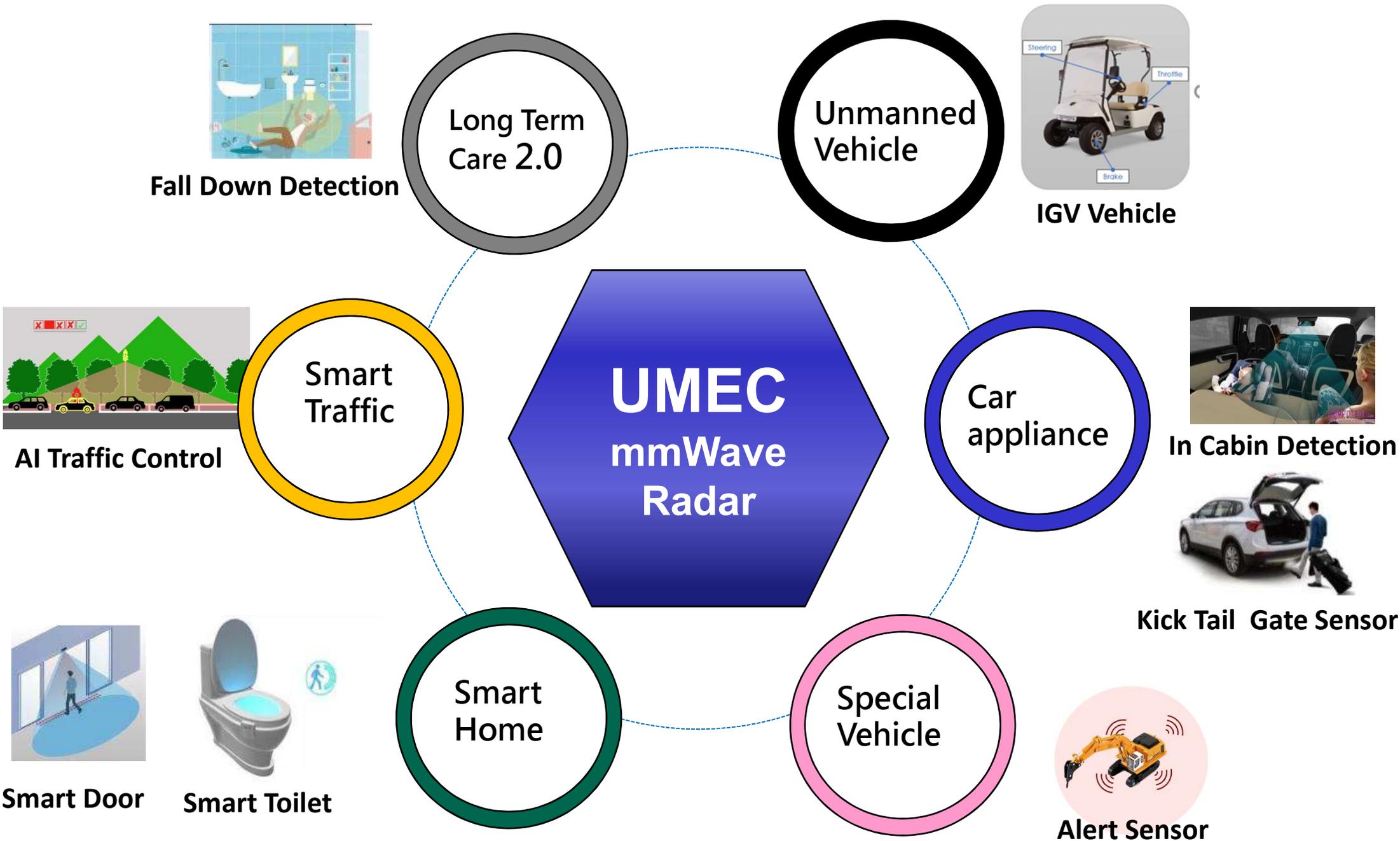
Heavy Duty Vehicles Radar



MOTO Cover Radar



umec Special Industry Applications



3 Major Customers





Magnetic



Power Supply



ICP



Optical



4 Operational Prospect





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Operational Prospect – Magnetic Component

- **Telecommunication :**

- Major IC design house Alfa-side, to develop Broadband Tele-Com used G.mgfast transformer to maintain UMEC leading technology edge.
- Develop high power planar transformer for the increasing demand on 5G small cell

- **Power Management :**

- Develop 3rd generation Semiconductor SiC IC transformer product line and apply to Data Center, Electricity Car and charge station, Solar Power and Wind Mill Green Energy Power station related equipment usage..
- Telecommunication Power supply used transformer sales compare to 2020 increased up to 20%.

- **Home Appliance :**

- UMEC standard flat wire transformer product can apply to large home appliance, targeting Japan customers.

- **Automotive:**

- Controller area network (CAN)) in car
- Auto Lighting and battery charging on electric car and Power management
- Electric car electronic passive component AEC-Q200 verification ability and IATF16949 system certification
- Electric car electronic passive component sales compare with 2020 increase 45%



- **Tele-Com and Marine Field:**

- Multi-channel switch machine redundant power system sales compare with 2020 increase 6%.
- Marine use multi-port Lithium Battery charger.

- **Railway, Power Plan, Smart Home Appliance:**

- Develop and certify Railway Wide-range DC Power module, Customer already got local government related certification.
- Provide Power Plan with customized Power module to used at Power switch machine to sustain high voltage and high temperature.
- Green Home Appliance Constant current power supply and Panel control, Motor starter Power.
- Sales compare with 2020 increase 8%.

- **5G Cell Base Station System:**

- Supply 5G operator customized Power system to sustain high efficiency, high density and high temperature.
- Base on customer's system requirement to develop digitized communication power system.
- Sales compare with 2020 increase up to 49%.

- **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:**

- Strong market demand, customer request to increase production volume. Currently due to material shortage (especially on ICs), half of the POs can't be fulfilled. Sales compare with 2020 increase 14%.
- Asked customer to prolong PO preparation time to reduce the impact of the IC shortage..
- Co-develop the new product with customer to form long term business partnership, also speed up the product launch schedule to create win-win situation for both parties.

- **Communication Module Product Line:**

- Global Pandemic concerns, communication module demand increase dramatically. Blue-Tooth module sales compare with 2020 increase up to 3 times.
- Build up full auto-testing manufacture process to increase module's productivity to fulfill customer's strong demand.

- **Electronic Testing equipment Product Line:**

- Now, due to increasing back to office demand, office testing equipment demand are also back to normal, compare with 2020 sales increase up to 35%.
- Forecast for 2022 second half, if semiconductor supply comes back to normal, should have more increasing demand.



umec Operational Prospect– Radar Product (I)

- **Automotive Radar:**

- UMEC's LRR has passed ARTC certification, detecting range up to 230 Meters, accuracy also meet ISO15623 standard regulation.
- Passenger vehicles SRR Radar continue supply to Taiwan-made Japanese car brand and has started Japan-in-land car maker common accessory certification process. Target for 2022 Q1 to complete. Package shipment volume estimate to increase in Q3 2022.
- Micronize-module and low power 77/60/79GHz mmWave Radar:
 - Moto cycle Market Segment: Passed MIT name brand test, and will become option items start from 2022 Q1.
 - Bike Market Segment: Co-develop with America name brand company for BSD related product. Estimate production time around 2022 Q3.
- Develop meet EU standard UNR151 heavy duty vehicle side protection radar, provide industry smallest size module to meet vehicles size limitation regulation. Will start shipping around 2022 Q2.



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Operational Prospect– Radar Product (II)

- **Non-vehicle usage Radar:**

- Micronized 60GHz Radar module has be apply to Vital-signs and Surveillance system, Estimate production on 2022 Q4.
 - Long Term Care Market: Co-work with customer to integrate 60G Radar module into camera system and apply to long term care facilities.
 - Driver Vital-signs Detection system: Co-work with Japan Research Organization for the advanced product evaluation.
- Low Power/Cost 24GHz module are in production, apply to smart toilet system, smart door bell and smart Lighting system.

Thanks for Your Attention!