



Umec

Universal Microelectronics Co., Ltd.

(Stock Number : 2413)

Investor Conference



2022/12/14

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Company Profile

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Major Customers

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Operational Prospect

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Q & A

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

- **INITIAL OPERATION :**
 - » January 1984
- **EMPLOYEES :**
 - » Taiwan — 750
 - » China — 2000
 - » Vietnam — 1000
- **CAPITAL :**
 - » US\$43,209,000
- **INITIAL PUBLIC OFFERINGS:**
 - » October 1998
- **ANNUAL SALES:**
 - » US\$141,766,792 (2021年)
- **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



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About UMEC – New Facility TW 6F

Before



After





6F Factory Layout



台中市 | 2022.11.05 10:42

About UMEC– New Facility Hanoi

Before



After





About UMEC – Certification

• 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, Futai 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.: TUV104 02 0438
2017-11-30

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, Bao Giang province, Vietnam

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

Manufacturing and sales of magnetic components, power supplies

Certificate Registration No. 44 136 25 94 0005
Valid from 2020-02-28
Avail. Report No. SCAT11040201-0202
Valid until 2025-02-28
Initial Certification: 2020

Sawadee
Certification Body at TÜV NORD CERT GmbH

TÜV NORD (Thailand) Ltd
1016/75-75 10th Floor, Imperial Tower, Debsiriroj Road, Bangna, Bangkok 10700, Thailand 10700700

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

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

IEC IECQ

国际电工委员会质量评定体系 (IECQ)
涵盖电子元器件、组软件、相关材料和管理
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:	2019/09/21	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 HSPM1911附加要求，即IECQ有害物质过程管理程序（IECQ）的基本规则IECQ 01和程序规则IECQ 03-5 “IECQ 有害物质过程管理”以及IECQ附加要求

- 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、相关物料和过程：
电路板、电源、液晶模块的设计、制造和销售，光纤组件、PCBA、智能终端（包含手机）的设计和制造

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

授权人: *h. Holz*
MOCK Wolfgang

Certificate TW1701033

The management system of

Universal Microelectronics Co., Ltd.
No. 3, 27th Rd., Taichung Industrial Park Taichung City

has been assessed and certified to meet 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.

Authorised by: *[Signature]*

SGS Taiwan Ltd, Certification Business Department
No. 106-1, Gao-Lung Road, New Taipei City, No. 10, Zhongxing Road, Taipei 10615, Taiwan
Phone: +886 (2) 2939-3271 Fax: +886 (2) 2939-3263 www.sgscert.com

Management System Certification M8001

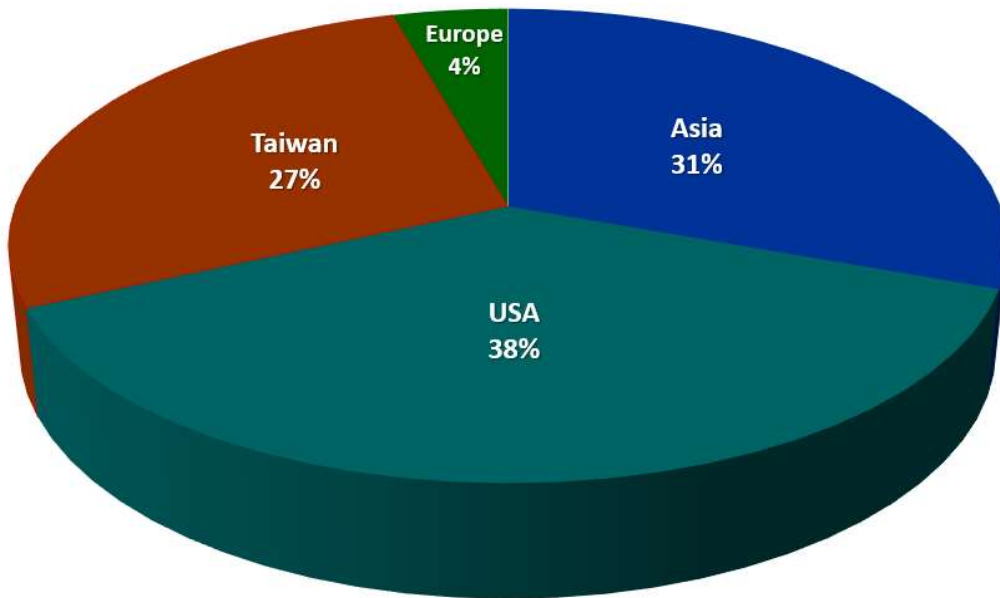
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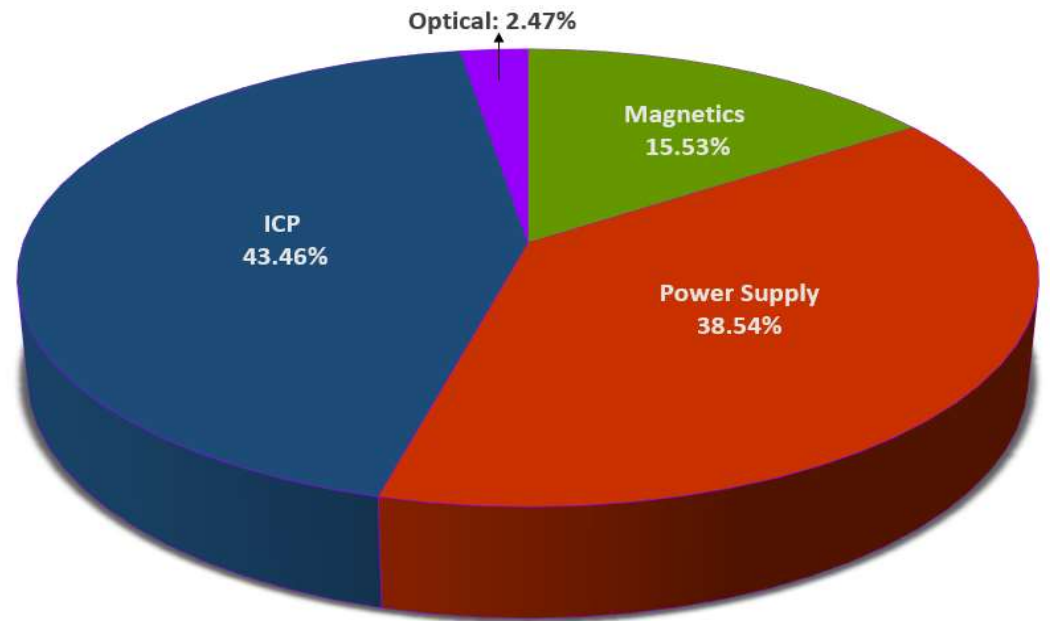
About UMEC – Sales Revenue By Territory and Product Line

2021 Revenue: USD \$141,766,792

● By Territory



● By Product Line






Magnetic



Power Supply



ICP



Optical



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



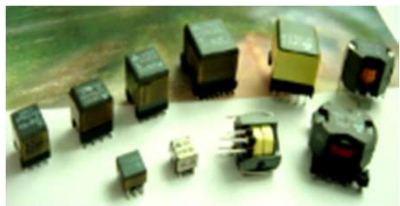
Power Inductors /Common Mode Chokes



SMD Inductor



XDSL Transformers/POTS Inductors



ADSL / VDSL/ G.fast Transformers



Current Sense Inductors/Transformers



Transformer for Power Applications





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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 2021 increased up to 10%.

- **Home Appliance :**

- Silicon Steel transformer product for air condition use, target to test run in 2023.

- **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
- 2022 Electric car electronic passive component sales compare with 2021 increase 15%

DC/DC Brick & Open Frame



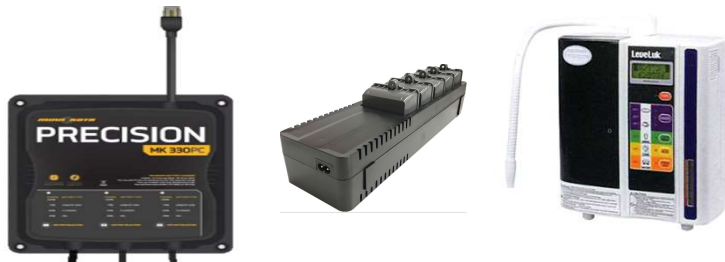
AC/DC Wall-mount



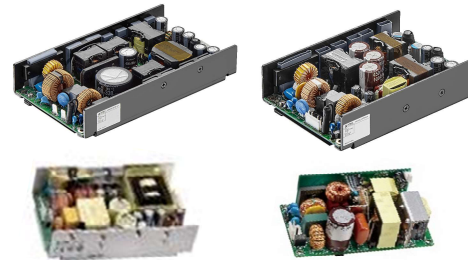
AC/DC DeskTop



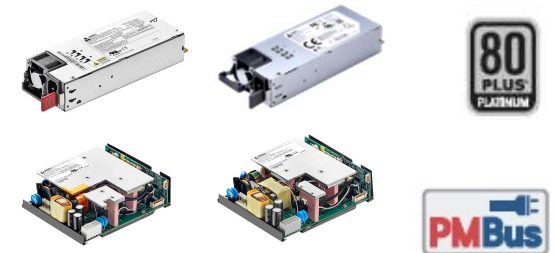
Subsystems JDM



Open & U Frame



Redundant(CRPS, SSI)



DC/DC from 50W to 700W

For Telecom / Datacom / Industrial Control System

AC/DC from 6W to 2000W

For Networking System / AP Router / Color Laser Printer





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

- Multi-channel switch machine redundant power system
- Marine use multi-port Lithium Battery charger.

- **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.
- .

- **High Frequency and Density Power System:**
 - Co-work with 3G Semi-com partners to develop High Frequency & Density Power system.
 - GaN MOSFET compare with traditional Si MOSFET, can tolerate more high frequency that can smaller the size of the system and bring up the system frequency density and weight.
 - Can apply to quick-charge system, White home appliances and low track satellite receiving power system.
- **Provide sub-system integration service to customers:**
 - Beyond the Power Supply.
 - Provide control and power system firmware, hardware design integration services.
 - Shorten customer product time-to-market and bring out UMEC's Power Supply add-on value to benefit both parties.

DMS/ EMS

- Marine Products
 - 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 dehumidification system controller
- Industrial Android Rugged Tablet Solution
- mmWave Radar Solutions and Modules
- IoT Products
 - Wearable & IoT Devices
 - Controlling Center Platform & System in ZigBee/ Wi-Fi/ BT





- **Marine Product Line:**

- 2022 market is recovering due to COVID slowing down. Customer request is strong but because of material shortage (especially on ICs), cause only slightly revenue increase.
- Look into 2023, material shortage should be resolved and with newly developed product get into production, expect to see healthy revenue growth.

- **Communication Module Product Line:**

- Global Pandemic slowing down, communication BT module demand in 2021 are back to normal.
- IOT related application module, due to back-to-office developers increase that cause demand increase, compare with 2021, shipment volume increase by almost 250%, and expect 2023 to continue the growth.

- **Electronic Testing equipment Product Line:**

- Office related testing equipment demand are also back to normal, compare with 2021, sales increase up to 30%.



ADAS (Advanced Driver Assistance Systems)

- Blind Spot Detection
- Rear Cross Traffic Alert
- Exit Assistance Function
- Lane Change Assistance
- Forward Collision Warning
- Parking Assist Sensor



Commercial Vehicle System

- BSIS UN R151 Blind-spot information systems
- MOIS UN R159 Moving Off Information System

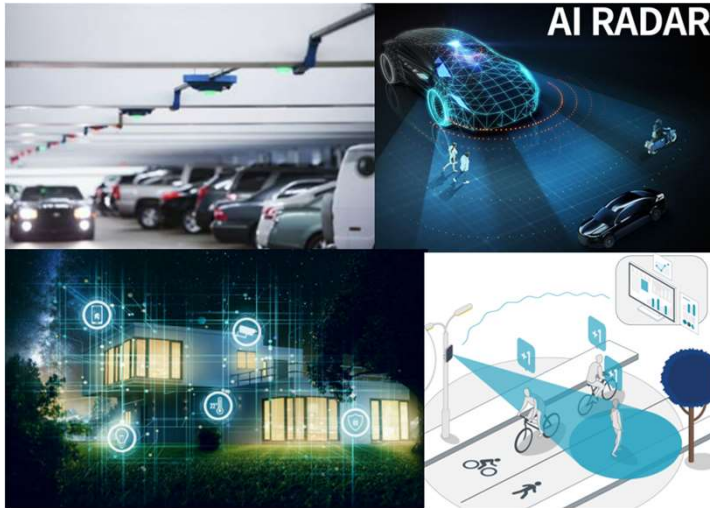


Bike Rear Warning System

- Motorcycle BSD
- Ultra Low Power Bike Radar

- **Automotive Radar:**
 - Passenger car radar (SRR) continues to be supplied to different Japanese automakers and new models in Taiwan
 - In Europe, all new models of large-scale commercial vehicles and trucks will be forced to import the BSIS UN R151 inner wheel differential blind spot warning system in 2022. UMEC has developed the industry's smallest size 77/79 GHz radar that complies with UN R151 regulations and will begin small-scale production at the end of 2022. The goods will be delivered to European car factories for trial assembly, and mass shipments are expected to begin in 2023
 - In Europe, all new large commercial vehicles and trucks will be forced to import the MOIS UM R159 pedestrian and bicycle movement monitoring system in 2024. The company has developed samples and is currently providing customer testing. It is expected to be introduced into mass production in 2023
 - The 77GHz bicycle radar with the lowest power number has been developed, which can run on batteries for more than 8 hours. At present, it has obtained ODM from a well-known American bicycle factory, and it will start selling in 2023 Q3. At the same time, it also cooperates with major bicycle brands, e-bike and motorcycles in Taiwan Manufacturer contact and sample delivery

umec Home and Commercial Usage Radar



Security

- Pedestrian Detection
- Automotive Security
- Home Security
- Parking Lot Sense

In Cabin Safety

- Passenger Seat Belt Warning
- Child Presence Detection (CPD)
- Driver Health Monitor



Industrial

- Drone Collision Warning
- Unmanned van Collision Warning

Healthcare

- Vital Sign Measurement
- Elder/Baby Home Care



- **Home and Commercial Usage Radar:**
 - Low power/cost 24GHz modules are not only used in smart toilets, doorbells and lamps, but will also be used in Korean car DVR anti-theft detection systems in 2022
 - Miniaturized 60GHz radar modules continue to be developed for applications in different fields. The application market for household and commercial radars will be more diversified and will there are more product business opportunities, especially the application of non-contact and non-visual biometric detection, as well as the application of home and industrial control and security monitoring

Questions?

Thanks for Your Attention!