The European Institute for the PCB Community

EIPC SPEeDNEWS

The Weekly On-Line Newsletter
Issue 24 – September 2022

NEWS FROM ASIA

PCB maker Eiso steps into production of own-brand e-bikes

Eiso chairman Chien Jung-kun with company-produced e-bikes. Credit: DIGITIMES

Niche-market PCB maker Eiso Enterprise is tapping overseas markets mainly in Europe for its own-brand Dosun electric bicycles (e-bikes), which it started developing and producing in 2019, according to company chairman Chien Jung-kun.

Before stepping into e-bikes, Eison had extended production from PCBs to LED bicycle lights for ODM/OEM shipments and sale under Dosun, Chien said.

Own-brand E-bikes are for sale only in the Taiwan market currently, and Eiso aims to sell 2,000 e-bikes in 2022 and 4,000 in 2023.

There is large potential demand for e-bikes, especially in Europe, Chien said. According to UBS Evidence Lab, demand for e-bikes in Europe will increase at a CAGR of 20-30% over the next three years, Chien said, adding therefore, Eiso targets Europe as the major overseas market for the time being.

Viewing that Taiwan exported 980,000 e-bikes worth NT$40 billion (US$1.36 billion) in 2021, Eison is optimistic about overseas e-bike markets, Chien said.

Eiso has obtained PCB orders with shipments scheduled for until the end of 2022, but some of the shipments may be deferred due to inventory adjustments at clients, Chien said, adding revenues from PCB will not decrease, but their proportion will gradually slip.

While demand for PCBs used in consumer electronics has weakened along with decreased sales of consumer electronics, Eiso has been slightly impacted because a large portion of its PCBs are used in industrial control, industrial PCs, car-use electronic devices, 5G-use high-frequency devices, networking/communication devices and medical devices.

Eiso posted consolidated revenues of NT$815.7 million, gross margin of 24.91%, and net profit of NT$103.8 million for first-half 2022. PCBs accounted for 66% of the revenues, and LED bicycle lights and e-bikes together for 32%.

Janet Kang, Taipei; Adam Hwang, DIGITIMES AsiaFriday 16 September 20220

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NEWS FROM THE UK

3RD INTERNATIONAL CONFERENCE ON PHOTONICS AND OPTO PACKAGING (POP3) - 17-18 OCTOBER 2022 AT SOUTH DEVON COLLEGE, PAIGNTON

LINKING OPTOELECTRONICS DESIGNERS AND MANUFACTURERS

Martin Vallo, Technology & Market Analyst at Yole Intelligence, part of Yole Group reported in EETIMES – "The value of optics and ASIC co-packaging for data centers could reach US$2B in 2032 if the technical challenges are solved."
This IMAPS-UK event will be a chance to learn about these technical challenges and what is being done to solve them.

The event is sponsored by Lumentum and Palomar Technologies and is supported by THTC, SDC, the EPIC centre and the EPIC organisation.
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NEWS FROM THE USA

Google and the US government partner to make open source chips

Google's money will be used to fund industry innovation

Google and the US government want to speed up design and manufacturing of new semiconductor devices, adopting the open source model to let universities and start-ups run wild with innovative ideas. The cooperative research and development agreement will allow the National Institute of Standards and Technology (NIST) to design, develop and produce open source chips that researchers and companies will be free to use and adapt in their applications.

A new agreement between the US Department of Commerce and Google could spark a surge of new chip designs and innovations. According to the DoC, the Google-NIST partnership answers one of the most pressing issues in the semiconductor industry: big corporations have ready access to new chips and designs, while universities, researchers and small businesses face a major hurdle as they try to create something new. An open source chip design, which can be used without restrictions or licensing fees, should accelerate innovation and bring costs down dramatically.

The agreement states that NIST, together with its many research partners (University of Michigan, University of Maryland, George Washington University, Brown University, Carnegie Mellon, and others), will provide new chip designs to be manufactured by Skywater Technology in Minnesota. Google will fund the initial manufacturing cost, subsidizing the first production run as well.

The US government aim is to create a new and affordable domestic supply of chips for research and development, a way to "unleash the innovative potential" of researchers and start-ups.
According to NIST director Laurie E. Locascio, the collaboration was planned before the introduction of the new CHIPS Act legislation, and it's an example of how government, industry, and academic can work together for the common goal of preserving the US leadership in the technology industry.

In NIST plans, almost 40 unique chip designs will be funded in partnership with Google to power different applications like new memory devices, nanosensors, bioelectronics, and chips for artificial intelligence and quantum computing. The open source designs will let researchers run wild with new ideas and share data without restrictions.

In presenting the new initiative, Google Public Sector CEO Will Grannis highlights the "long history of leadership in open source" of the Mountain View company. Public and private institutions will be able to iterate on each other's work, thus democratizing innovation in nanotechnology and semiconductor research. Chips will be produced in the Skywater foundry using industry-standard 200nm wafer discs, which universities and other partners will then dice into thousands of individual chips at their own processing facilities.

By Alfonso Maruccia *September 15, 2022*

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SEMICONDUCTOR NEWS

AMD, Nvidia, Intel: Things Aren't Looking Good for Semiconductors

The golden age of chip production appears to be fading, at least for now. The justcompleted second-quarter-earnings season confirms that the semiconductor makers are in for a tough time. AMD, Nvidia , and Intel , three of the biggest players in the sector, reported completely different performances.

But even when the results were encouraging, as in the case of Advanced Micro Devices, they results came up far short of allaying investors' concerns. Advanced Micro Devices delivered 70% year-over-year revenue growth, to $6.6 billion, even as sales of personal computers slowed sharply. The company has benefited from strong demand from data centers.

But Micron (MU) and Qualcomm (QCOM) also failed to send the message that the economic slowdown -- and possibly a looming recession -- will not significantly cut the sector's momentum. The chipmakers were supposed to see at least a decade of strong sales. That outlook has changed considerably.

Global semiconductor revenue is now projected to grow 7.4% in 2022 to $639 billion. Year over year that percentage estimate is down from actual 2021 growth of 26.3%. And it's down from the forecast in the second quarter that for all of 2022, chip revenue would grow 13.6%.

Future Horizons

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ELECTRONICA 2022

POLYRACK TECH-GROUP in Hall B3.141

Cross-technology partner for individual case and systems solutions

The POLYRACK TECH-GROUP presents itself as a cross-technology partner for individual case and systems solutions for a wide range of quantities.

Representative product development with various approaches and materials demonstrate the comprehensive competence of the POLYRACK TECH-GROUP in mechanics, plastics technology, surface treatment, electronics, mounting and assembly. The solutions range from small to large components for a variety of industries, such as mechanical and plant engineering, energy technology, medical technology, measurement and control technology, safety technology, transportation and telecommunications.

Highlights from the range of products and services include Panel PC solutions and Compact PCI systems in ready-to-use system solutions. In the field of electromechanics / system peripherals, these are 19-inch racks and housings as well as 19-inch subracks and accessories.

Other focus products are modular and customizable cases of the EmbedTEC series, which are also available in SDD and eNUC variants, as well as the new FrameTEC case series, which will be presented to the public for the first time.

All POLYRACK solutions are characterized by the matching combination of mechanics, plastics, electronics and surface finishing – tailored to the respective target market.

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News from
WECC members

WECC
World Electronic Circuits Council

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NEWS FROM THE IPC

PCB Designers to Vie for Design Champion Title at IPC APEX EXPO 2023

Virtual preliminary heats to start this October

BANNOCKBURN, Ill., USA, September 12, 2022 — For the second consecutive year, IPC is hosting an IPC Design Competition, inviting printed circuit board designers to compete to become the IPC Design Champion of 2023. The IPC Design Competition is composed of two heats – a virtual preliminary heat and an in-person layout final for the three top competitors on January 24, 2023 at IPC APEX EXPO in San Diego, Calif.

"This year, we're kicking things up a notch with more advanced designs, travel stipends for finalists, and cash prizes," said Patrick Crawford, manager, design standards and related industry programs. "Anyone with an interest in board design can register, but we're recommending the hobbyists and professionals alike have several years of experience designing boards and a familiarity with and ability to implement IPC standards requirements. Access to an ECAD tool is a must for the first heat," added Crawford.

The preliminary heat will be held October 17 to November 18, 2022, allowing designers to use their preferred tools to complete a full board buildup within 25 days. Provided with only a schematic, a BOM (bill of materials) and a scope of work document, competitors will be responsible for returning a Gerber file package of a completed design and judged against their

interpretation and implementation of design per IPC standards and general DFX (design for excellence) principles. Three finalists will be invited to participate in the four-hour layout final at IPC APEX EXPO 2023. In the final round, competitors will be given a partially complete Altium Design project file and will have four hours to complete a layout including design rule specification, routing, and component placement.

Registration for the IPC Design Competition is free and closes October 13, 2022. For more information, including eligibility requirements, information on preliminary and final heats and registration form, visit www.ipc.org/standards-ipc-design/ipc-design-competition-2023.

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International Diary

2022

KPCA Korea
21-23 September
Korea

EIPC @ FED Conference
29-30 September
Bamberg, Germany

HDP Fall Member Meeting
12 & 13 October
Rock Hill, South Carolina USA

EIPC Technical Snapshot Webinar
Registrations via www.eipc.org
19 October

TPCA Taiwan
26-28 October
Taiwan

EIPC @ Electronica
15-18 November
Munich, Germany

EIPC Technical Snapshot Webinar
Registrations via www.eipc.org
30 November

2023

EIPC Winter Conference
9 & 10 February