# BUILD

#### ANY SIZE. ANY COMPLEXITY. ANY PRODUCT.



### Highlights & Significant Wins

#### APAS:

#### Abrel, Ireland—NEW APAS Customer

Abrel Products was founded in 1994, and is head-quartered in Limerick, Ireland. The company manufactures Burn-in Boards for reliability testing of Semiconductors, Endzone Burn-in Systems, Bibtest55XL board testers and Socket test probes.

They purchased a Fuzion1-11 as part of a total line solution being supplied by our partner in Ireland ( IPP, Jack Daley ) to replace old Quad placement machines. Abrel are currently in the process of expanding their manufacturing facility for this new line.

They chose Universal as they felt the Fuzion offered needed flexibility, as well as increased throughput. A big factor in the decision was the engineers at Abrel have worked with Stephen Murtagh for many years and have a great trust and relationship with him. This helped to provide the added confidence to select Universal. Stephen will spend time prior to installation to work with the Abrel software team to convert the Gerber files via our DPO software.

#### White Goods:

Closed on a VCD 88HT unit for **NEW customer Mabe** located in Queretaro Mexico. Mabe is a Mexican-based global company which designs, produces, and distributes appliances, such as refrigerators and stoves, to more than 70 countries around the world.

They selected the VCD 88HT Sequencer because it offers fast, reliable sequencing and insertion of axial components and jumper-wires- all in one process. This flexibility is perfect to handle the through-hole component placement requirements for boards going into the white goods they are building.

Received a **repeat** Fuzion SMT line order from **Mack Technologies**, **Mexico.** We continue to leverage our

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very strong relationship at this account, and they are very happy with our equipment and support. Anyone need an EMS reference account?

### Booked our 1st Uflex in Canada at SMT Hautes, Quebec.

They added a Uflex platform to their already impressive (mostly Universal) manufacturing lines. The Uflex will be integrated with their recently purchased FuzionOF platform to inspect wet epoxy (required for protection in the blasting process) for presence before picking and placing two AA Industrial bulk batteries into the substrate. The Fuzion OF will be used to place antennas, tabs & connectors. The end application is a wireless explosive device for their customer Orica. Orica is the world's largest provider of commercial explosives and innovative blasting systems to the mining, quarrying, oil and gas and construction markets.

Do you have NEWS to share? Please e-mail me at schillof@uic.com, and I'm happy to include in future editions of U News!

#### Enjoy, Kristi-

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#### **New Team Members**

Frank Silva, Regional Mgr.—West



Frank has joined Universal as RSM for the Western United States covering Arizona, California, Nevada, and New Mexico.

Frank holds a B.S. Degree in Engineering from the University of California, San Diego. His career has spanned three decades and has included progressing engineering roles, product management, customer service and technical sales including sales of X-ray inspection and SMT rework stations at IRT, Nicolet Imaging Systems, GenRad and Teradyne.

In addition, Frank co-founded Focalspot in 2003, and led their Sales, Marketing and Product Development initiatives. In 2013, Focalspot was sold to Matrix Technologies, and for two (2) years Frank ran the US Operations. Frank has also worked as the Western Regional Sales Manager for Nordson; and most recently with Parmi.

You can reach Frank at:

- E-mail: Frank.Silva@uic.com
- Mobile: +1 760.672.2010

#### Robert Mahoney – CFO



Bob joined Universal as our Chief Financial Officer in July 2019. He comes to us with extensive experience in technology as well as public and private company governance.

Bob's career started in semiconductor at Texas Instruments and National Semiconductor, where he reached the position of Corporate Controller. Following this, he was CFO at Molex a passive component manufacturer. The last ten years have been private equity positions.

Bob brings a wealth of knowledge in technology, global operations, M&A and governance.

You can reach Bob at:

- E-mail: Bob.Mahoney@uic.com
- Office: +1 607.779.7305

We welcome both Frank & Bob to our team, and we look forward to their immediate contributions!

# July 2019

Recently our Southeast Asia team welcomed our SEA Channel Partners to our Penang, Malaysia office for a week of training and updates on our Advanced Packaging technology. The training culminated with a sales team dinner (pictures below). We were thrilled and happy to have the whole SEA team together! <u>#uicteamSEA</u>







#### System-in-Package (SiP) Solutions

Semiconductor companies are continually faced with complex integration challenges as consumers want their electronics to be **smaller, faster and higher performance** with more and **more functionality** packed into a **single device**. Semiconductor packaging has a significant impact on addressing these challenges. Current and future demands for greater system performance, increased functionality, reduced power consumption and reduced form factor require an advanced packaging approach known as system integration.

System integration is **combining multiple integrated circuits (ICs) and components into a single system** or modularized subsystem in order to achieve higher performance, functionality and processing speeds with a significant reduction in space requirements inside the electronics device.

#### What is System-in-Package?

System-in-Package (SiP) is a functional electronic system or sub-system that includes two or more heterogeneous semiconductor die (often from different technology nodes optimized for their individual functionalities), usually with passive components. The physical form of SiP is a module, and depending on the end application, the module could include a logic chip, memory, integrated passive devices (IPD), RF filters, sensors, heat sinks, antennas, connectors and/or power chip in packaged or bare die form.

#### Advantages of Advanced SiP

To meet the need for increased integration, improved electrical performance, reduced power consumption, faster speed and smaller device sizes, several advantages are driving the industry towards advanced SiP solutions including:

- Thinner / smaller form factor than individually packaged components
- Increased performance and functional integration
- Design flexibilities
- Better electromagnetic interference (EMI) isolation
- Reduced system board space and complexity
- Improved power management and more room for battery
- Simplified SMT assembly process

#### **Applications**

Today, advanced SiP and miniaturized modules are being utilized in a number of markets such as mobile devices, Internet of Things (IoT), wearables, healthcare, industrial, automotive, computing and communication networks. Each advanced SiP solution varies in complexity based on the number and functionality of the components required by each application.

Following are examples of advanced SiP applications:

- RF power amplifier (PA) Modules
- Front-end modules (FEM)
- Power management integrated circuit (PMIC)
- Baseband / application processor (APU)
- High-end application processors (CPU, GPU)
- Connectivity modules
- Fingerprint sensors
- Micro-electromechanical systems (MEMS)
- Solid-state drives (SSD)

Depending on the application requirements and product complexity, there are advanced SiP configurations ranging from conventional 2D modules with multiple active and passive components, interconnected through flip chip, wire bonding and SMT to more complex modules such as Package-in-Package (PiP), Package-on-Package (PoP), 2.5D and 3D integrated solutions. The advanced SiP module configurations (2D/2.5D/3D) are customized for specific end applications to leverage a variety of potential benefits including performance, cost, form factor, and Time-to-Market (TTM). (source StatichipPad)

#### SiP Example:







Our FuzionSC<sup>™</sup>platform is ideal for (SiP) applications because of its accuracy @ 10µm, speed 10 cpk & ability to place high-accuracy actives & passives altogether!



#### Bringing high productivity

to advanced packaging assembly

advanced applications:



Full range of actives and passives: Size: 01005 - 100 x 100mm Thickness: 50µm - 25mm



Size: 20 x 20mm - 813 x 625mm Thickness: 50um - 12mm



Comprehensive process development





Advanced capabilities for



Semiconductor performance at surface mount speeds

One solution for all advanced packaging challenges

- Accuracy: 10µm, speed: 10K cph, area: 813 x 625mm
- Any feeding option (wafer, tray, tape, tube, bulk, direct die)
- Place high-accuracy actives and passives on one platform
- Pick and place on any substrate, including thin/flex
- Advanced Process Lab (APL): Leading-edge process and materials expertise; process optimization, failure analysis

#### FUZIONSC VIDEO (click here)



Want a copy of this datasheet? Click on the links below to be taken to portal to download:

English	Chinese	German	Spanish	
<u>FuzionSC</u>	<u>FuzionSC</u>	<u>FuzionSC</u>	<u>FuzionSC</u>	