

# Stack/Package On Package Assembly Workshop

"Next generation for design & assembly engineers to scream about"

*Thursday 1<sup>st</sup> May*

*The Oxfordshire, Thame*

SMART/IMAPS UK Workshop starts at 10.00am with coffee & exhibition from 9.30am. The event concludes at 4.00pm

Ball Grid Array BGAs is a widely used technology in a vast range of products including consumer, telecommunications, medical and military markets. An area array device provides high packing density with a relatively easy introduction cycle. Over the last couple of years engineers have started to experiment and in some cases implement package stacking, also called Package on Package (POP). As real estate is at a premium for memory the only way to go is up and up.

In simple terms POP represents the stacking of components one on top of the other either during the original component manufacture or during printed board assembly. POP packaging systems may include direct soldering, wire bonding or conductive adhesives for device to device interconnection.

## SMART Group in association with IMAPS UK workshop will include:

Component packaging trends

Stack silicon, SiP, POP & micro chips

Why is stack packaging important?

Who is using POP technology?

Overview of the possible assembly steps

Material sets for stack packaging

Benefits of underfilling

Drop testing performance

Using flux or paste dipping process

Placement system requirements – vision and placement force

Reflow soldering and profiling packaged stacked devices

PCB and package warping

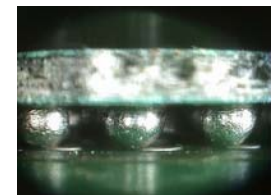
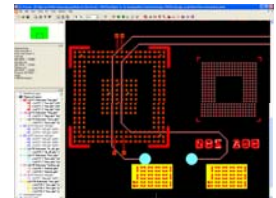
Reworking packages either the complete package or just one level

Inspection of multilevel packages

## Who should attend?

This event is ideally suited to design, production and quality engineers looking at future technology and maintaining a company technology roadmap. It's vital to subcontractors to be up-to-date with new technology and its possible implementation along with material and equipment requirements for future customers.

Delegates will have the opportunity to win SMART Group Lead-Free Training CD-ROMs



### Directions to venue

The Oxfordshire, Rycote Lane, Milton Common, Thame, Oxfordshire OX9 2PU  
(Don't follow your GPS route all the way, the post code will take you to a farm and the farmer can get a little upset with so many visitors)

#### From London

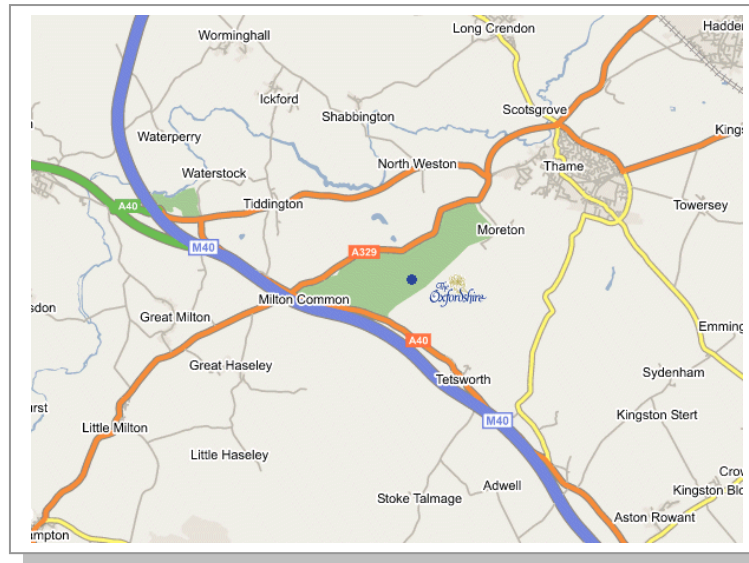
Leave the M40 at Junction 7 and take the A329 to Thame.  
 The Oxfordshire is on the right-hand side of the A329 just 1.5 miles (2.4 kms) from the motorway.

#### From Oxford

Follow the signs for the A418 and then A329 to Thame

#### From Birmingham

Leave the M40 at Junction 8a (no exit at junction 7) and take the A418 to Thame for 0.25 miles, then take the 1st right (A40). Follow this road, at the A329 and then turn left. The location is 1.5 miles on the right-hand side.



Visit SMART Diary [www.smartgroup.org/showdiary.asp](http://www.smartgroup.org/showdiary.asp)



To book your place fax your booking form to SMART Group registrations 01494 473975

Please reserve \_\_\_\_\_ places at the workshop on 1<sup>st</sup> May 2008  
 £75 SMART Group IMAPS members/ £150 Non members + VAT)

Name: \_\_\_\_\_ Email: \_\_\_\_\_ @ \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_ @ \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_ @ \_\_\_\_\_

Company: \_\_\_\_\_ Address: \_\_\_\_\_

Post Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Card type: Visa/Mastercard/AMEX Card no: \_\_\_\_\_

Card expiry date: \_\_\_\_\_ Card security code (3 numerals on signature strip) \_\_\_\_\_

Signature: \_\_\_\_\_ Pcode: \_\_\_\_\_

### SMART Group Diary 2008

Feb	27th	Land Grid Array Quad Flat No-lead Design, Assembly & Rework Workshop	Thame, Oxfordshire
Mar	12th	21st Century Art of Cleaning – Theory & Practice	St Albans, Hertfordshire
Mar	18th	Conformal Coating Workshop	Oxfordshire
Apr	17th	Improving Product Reliability - Awareness Seminar	South Queensferry, Scotland
Apr	21st	Manufacturing Process Improvement	Stellenbosch, South Africa
Apr	22-23rd	Manufacturing Process Improvement	Midrand, South Africa
Apr	24th	Manufacturing Process Improvement	Durban, South Africa
May	13th	AOI & X-Ray Inspection Workshop	Oxfordshire
May	22nd	From Silicon to Package Workshop at Intel	Leixlip, Ireland
June	10th	A-Z of SMT & Conventional Assembly	Leicestershire
Sept	10th	Solving Counterfeit Components - The Problem, Identification & Testing	St Albans, Hertfordshire
Sept	25th	Environmental Directives Update Seminar	Galway, Ireland
Dec	4th	Logistics in Electronics Workshop	Cork, Ireland

### Table Top Exhibition Space

If you would like a table top space at a SMART Group event please contact Tony Gordon to discuss availability at the date in question or go to [www.smartgroup.org/pdf/TableTopSpace2004.pdf](http://www.smartgroup.org/pdf/TableTopSpace2004.pdf)

SMART Group, 85 Easton Street, High Wycombe, Bucks HP11 1LT  
 Telephone: +44 (0) 1494 465217 Facsimile: +44 (0) 1494 473975  
[info@smartgroup.org](mailto:info@smartgroup.org) [www.smartgroup.org](http://www.smartgroup.org) [www.leadoutproject.com](http://www.leadoutproject.com)