



GLOBAL INKJET SYSTEMS
CONTROL | PERFORMANCE | INNOVATION

Software & Electronics for Industrial Inkjet Printheads

Debbie Thorp, Business Development Director

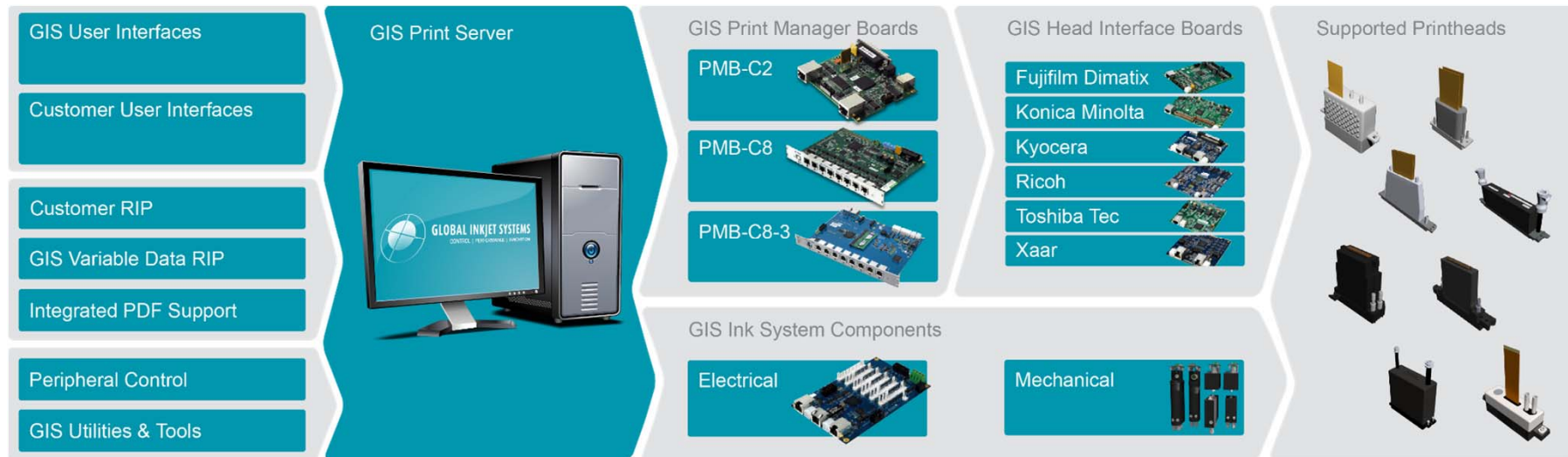
IMI Technology Showcase - Munich June 2015

GIS Product Matrix



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GIS provides a comprehensive range of critical components for industrial inkjet systems



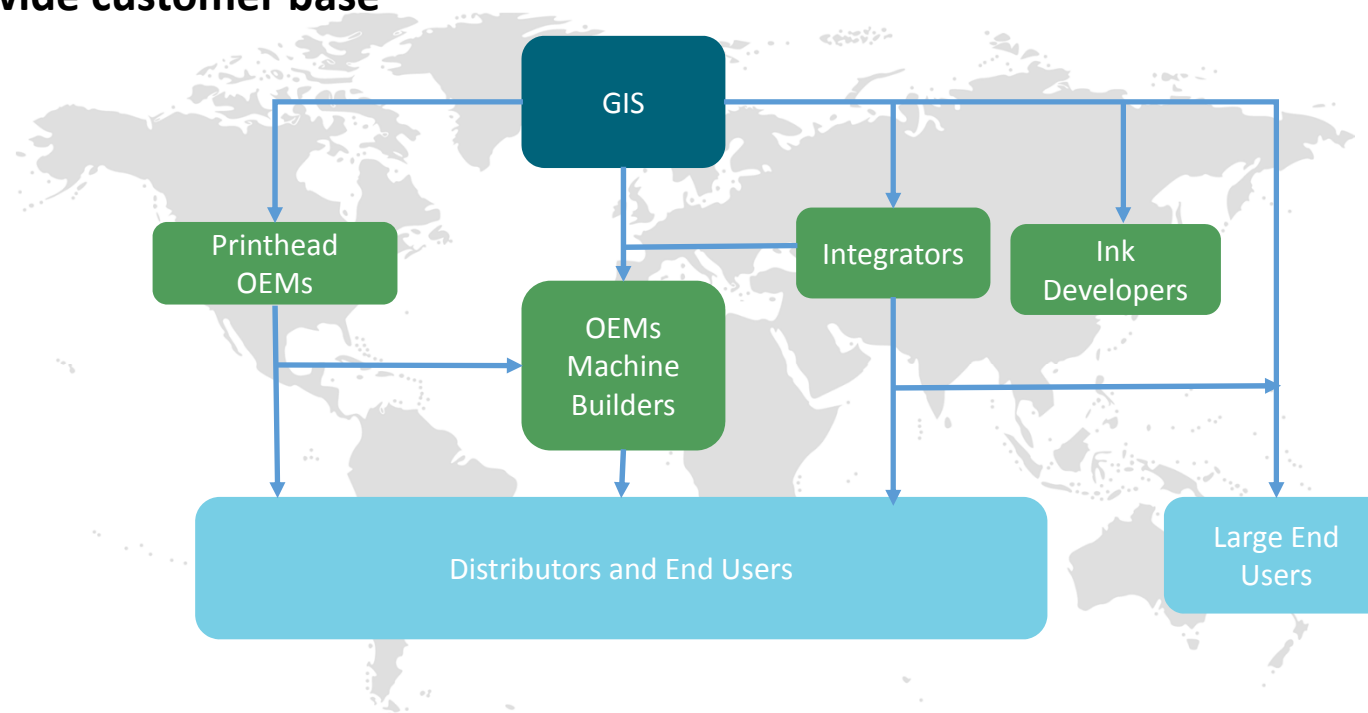
GIS products enable system builders to reduce development time and get products to market faster
We provide powerful, flexible & adaptable integration tools to suit your system and application needs

GIS Customers



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Worldwide customer base



Customer Applications



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- **Single pass, XY scanning, 3D systems**

- Specialise in challenging/complex applications
- Particular expertise in large single pass systems
- Experienced in handling high data rates (high speed, high resolution, large numbers of printheads)
- Significant presence in ceramic tile printing, security printing, labels, packaging, textiles, product decoration, demanding variable data applications, 3D printing, coatings and materials deposition



Supported Printheads



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Fujifilm Dimatix	Konica Minolta	Kyocera	Ricoh	SII	Toshiba Tec	Xaar
<ul style="list-style-type: none">• Nova• Galaxy• S-Class• Polaris• Sapphire/Emerald• StarFire SG1024• Samba 1200	<ul style="list-style-type: none">• KM512• KM1024• KM512i• KM1024i• KM1800i	<ul style="list-style-type: none">• KJ4A-AA 20khz• KJ4A-TA 20kHz• KJ4A-RH 30kHz• KJ4B-QA 30kHz• KJ4B-YH 40kHz• KJ4A/B-03 30kHz	<ul style="list-style-type: none">• MH2420 (Gen4)• MH2620/2820 (Gen4L)• MH5420/5440 (Gen 5)	<ul style="list-style-type: none">• In development	<ul style="list-style-type: none">• CF1ou• CF1L• CF1LX• CK1	<ul style="list-style-type: none">• 1002 GS6• 1002 GS12• 1002 GS40• 1001 GS6• 1001 GS12

- GIS provides access to all the standard printhead settings including voltage levels, binary & greyscale mode and waveform settings
- Standard data and power connectors
- HIBs typically drive from 1 to 4 printheads per board



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New GIS Products – Supported Printheads

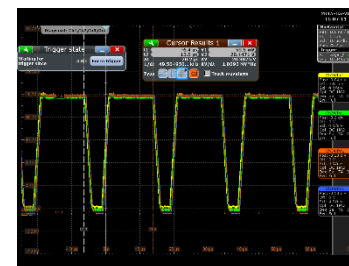
Ricoh MH5420/MH5440 (Gen 5)



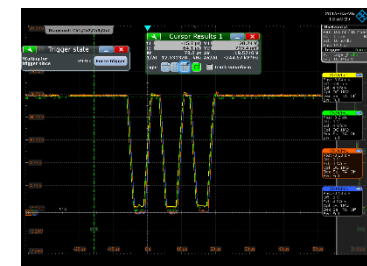
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- **GIS Head Interface Board HIB-RH-1280**

- 1/2/4 colour support
- One HIB per head
- High quality trapezoidal waveforms
- Binary, greyscale and multi-pulse waveforms
- Fully configurable independent waveforms x 4 per head
- Supports all print modes and resolutions
- Integrated cooling system
- 24V



1 Pulse, 20Vpp 50Khz



3 Pulses, 20Vpp 15Khz

Fujifilm Samba 1200



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- **GIS Head Interface Board HIB-FD-1200**
 - Supports 2 x Samba heads per board
 - Fully configurable waveforms
 - Binary, greyscale and multi-pulse waveforms
 - Accurate slew rate and amplitude control
 - Printhead temperature monitoring and thermal cut-out
 - Energy recovery
 - 24V





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Update on GIS Ink System Components

Ink System Components



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- **Launched September 2014**
 - Beta trials at OEM customers
 - Systems now installed in the field – in production
 - No flow
 - Low recirculating flow
 - Adjustable recirculating flow
 - Controlled flow
- **Extended range of header tank options**
 - Three core designs – all customisable
 - New disposable header tanks for ink/fluid developers
- **Additional peripherals in development**
 - Flushing station
- **Flexible business model enabling OEMs to take control of sourcing and manufacturing of standard components to reduce cost**



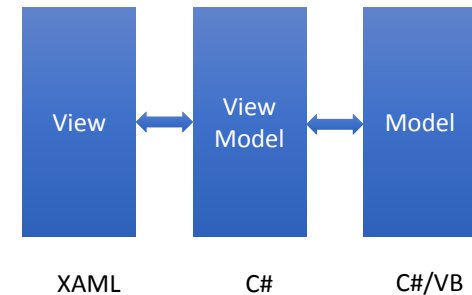


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New GIS Products – Atlas User Interface and System Control SDK



- **User Interface and system control software development (SDK) tool**
 - Built around industry standard Model View Controller (MVC) software
 - Microsoft MVVM (Model - View Model - View)
 - Model – communicates with all the systems in the printer
 - View Model – the glue layer
 - View – what the user sees; can be rapidly changed



- Atlas offers customisation and brand identity for OEM/system builders who do not want to write own UI
 - Provides varying levels of customisation depending on the needs of OEM/system builders

Standard Atlas GUI Components



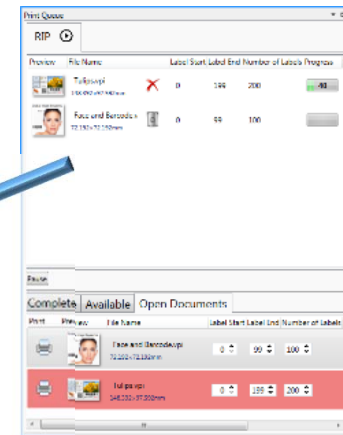
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Job design & review



Atlas
Container

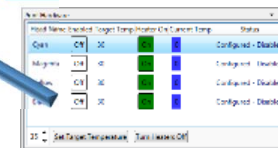
Job queue



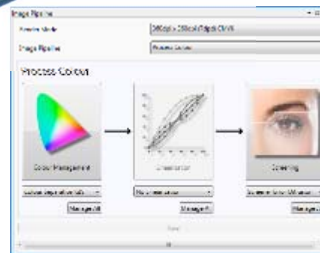
Transport control



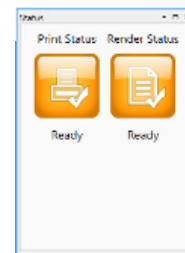
Head status



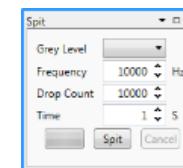
RIP set up



System status



Spit control

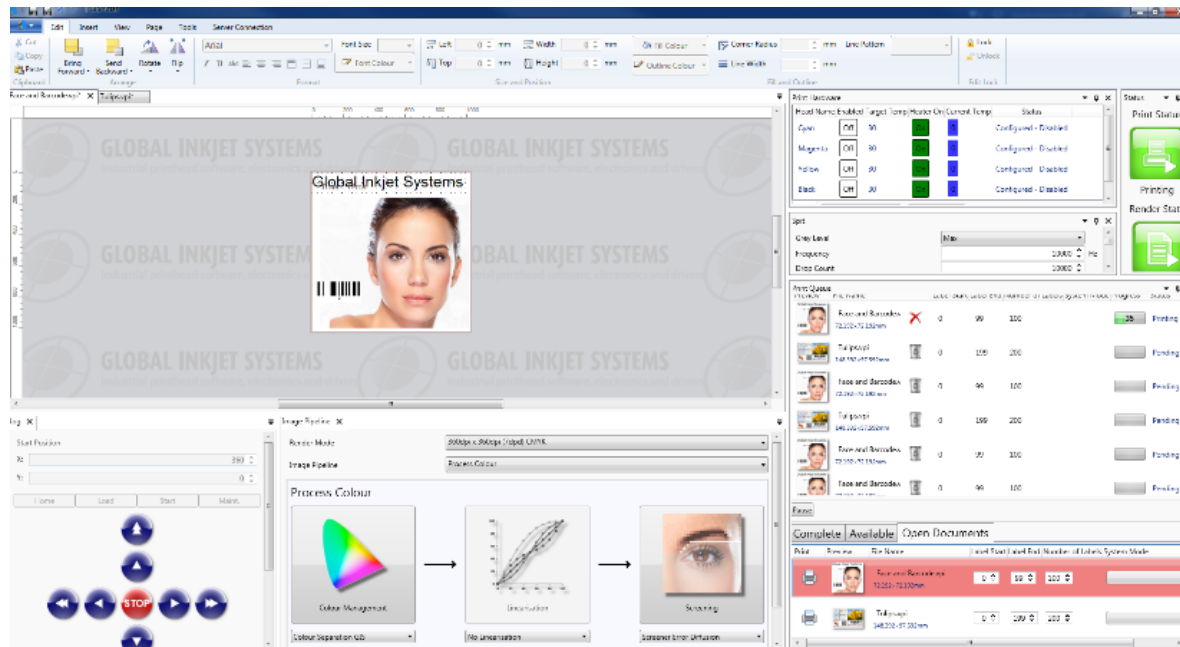


Atlas - Flexible View



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System builders can set up their custom UI to have many features...

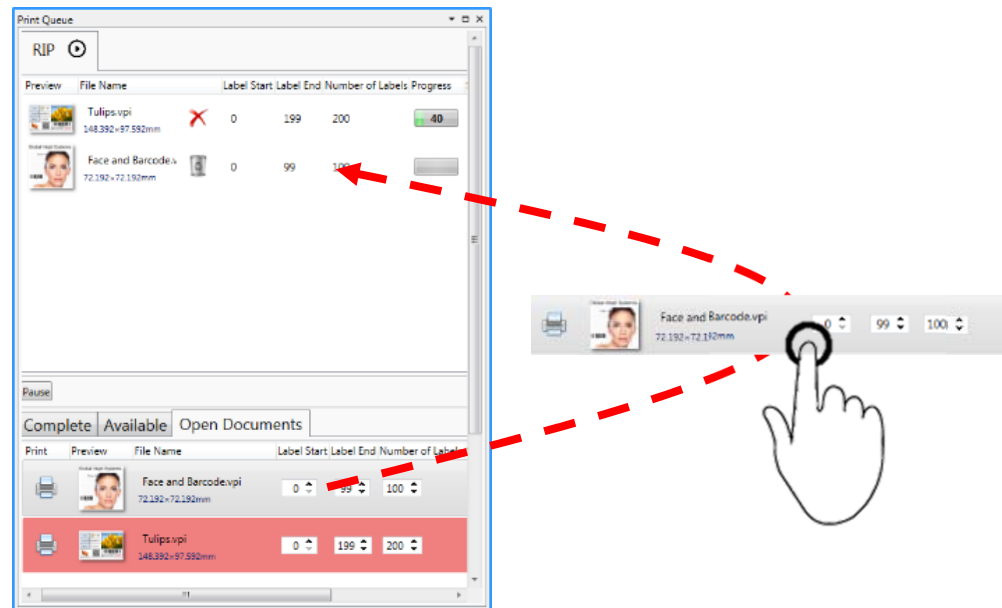


Atlas - Flexible View



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or to be as simple as just a job queue....



Customisation of Atlas



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- **Changing Layout and Options**

- The standard views are modified by the machine builder
- Logos, buttons, shadows, colours transparencies, backgrounds can be deleted, added, moved and modified
- No programming is required - some graphic designers can operate entirely at this level

- **Re-skinning/branding**

- The view has a modified theme or may even be completely replaced by the machine builder
- Information and user control can be displayed in whichever format the machine builder wishes
- No programming is required for cosmetic changes
 - Some C# may be required for custom user interface controls

- **Adding new functionality**

- A new Model, View Model and View are added
- This allows machine builders to interface to additional systems (Ink systems / UV lamps / motion control / PLC etc.)
- The new functionality appears along side the existing views and works with them seamlessly
- Programming required C#/C++/VB

Working with GIS



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- **Committed to long term relationships with customers**
- **Passionate about customer service**
 - Technical support based in UK & China
- **Innovative software capability**
 - Significant R&D investment and expanded team
- **Roadmap of technology developments**
 - Support for new printheads
 - Atlas UI development
 - Ink system components
- **Enabling OEMS to shorten development time/time to market**
 - Any number of printheads
 - Any number of inks
 - Ultra-high data rate capability

Print faster
Print smarter
Print better

Contacts



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