Software & Electronics for Industrial Inkjet Printheads

Debbie Thorp, Business Development Director

IMI Technology Showcase - Munich June 2015
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

Worldwide customer base

GIS

- Printhead OEMs
- OEMs Machine Builders
- Integrators
- Ink Developers

Distributors and End Users

Large End Users
Customer Applications

- **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
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
New GIS Products – Supported Printheads
Ricoh MH5420/MH5440 (Gen 5)

- **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

© Global Inkjet Systems Ltd
Fujifilm Samba 1200

• **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
Update on GIS Ink System Components
Ink System Components

- **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**
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

- Job design & review
- Transport control
- RIP set up
- System status
- Head status
- Spit control
- Atlas Container
- Job queue
System builders can set up their custom UI to have many features...
or to be as simple as just a job queue....
Customisation of Atlas

• **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-skinnin/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 alongside the existing views and works with them seamlessly
  • Programming required C#/C++/VB

© Global Inkjet Systems Ltd
Working with GIS

- 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

© Global Inkjet Systems Ltd
Contacts

Nick Geddes, CEO  
nick.geddes@globalinkjetsystems.com  
Debbie Thorp, Business Development Director  
debbie.thorp@globalinkjetsystems.com

Global Inkjet Systems Limited  
The Jeffreys Building  
Cowley Road  
Cambridge CB4 0DS  
Tel: +44 (0)1223 426 595  
Web: www.globalinkjetsystems.com