GIS | GLOBAL INKJET SYSTEMS

A NANODIMENSION DIVISION

XAAR

Product catalogue

GIS drive electronics for Xaar 2002 printheads



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Overview

GIS electronics enable precise, scalable and reliable control of XAAR 2002 printheads using an indirect architecture on the Ethernet platform. Designed for OEMs and machine integrators, the GIS solution combines compact printhead cards, high-capacity manager cards and the Atlas® software platform to accelerate development while ensuring production-grade performance.

Key Benefits

High-fidelity waveform control: binary, greyscale and multi-pulse with fine slew-rate and amplitude shaping.

Scalable system architecture: distributed Ethernet option.

Small form factor printhead cards designed for single head or large arrays.

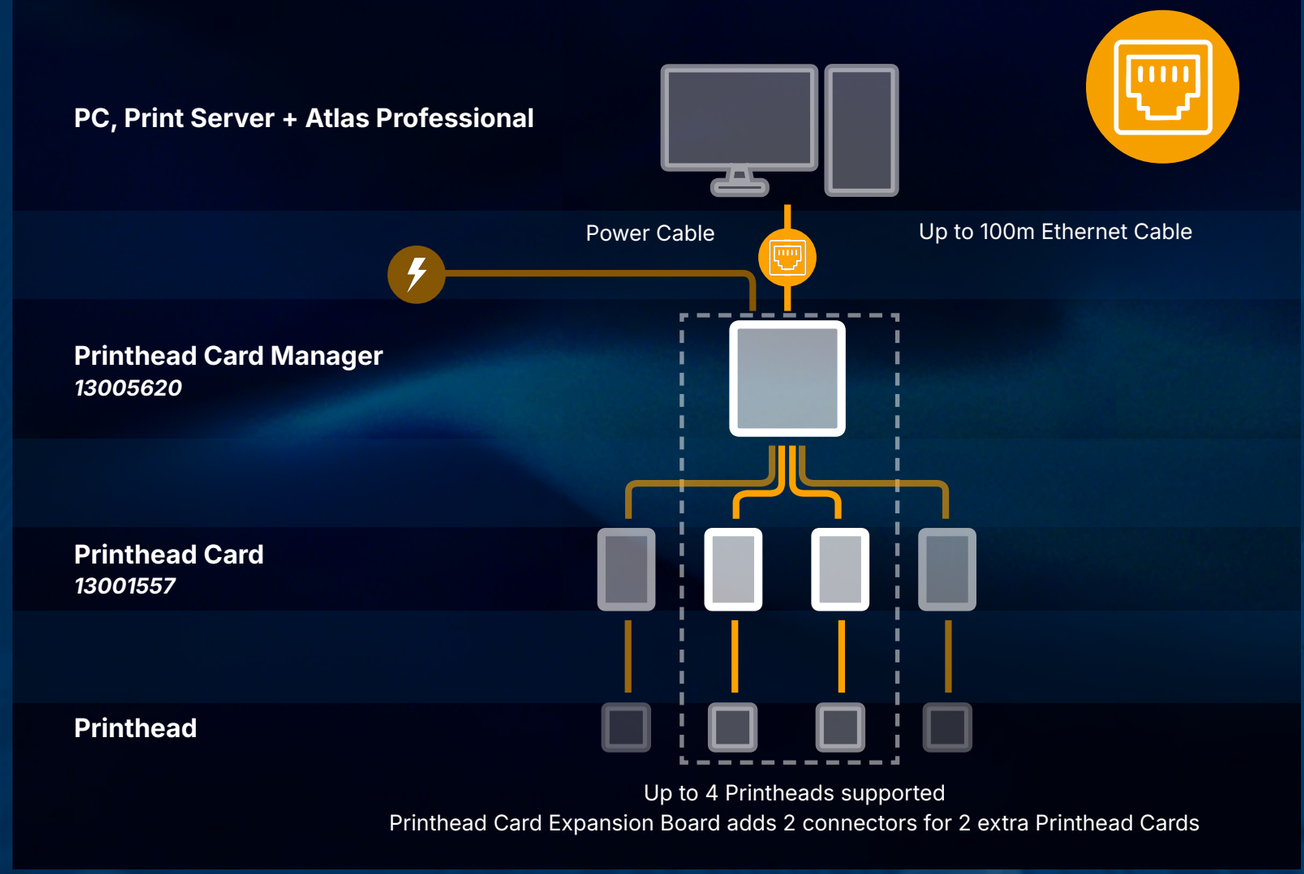
Integrated safety and diagnostics: temperature monitoring, thermal cut-out and EEPROM readback.

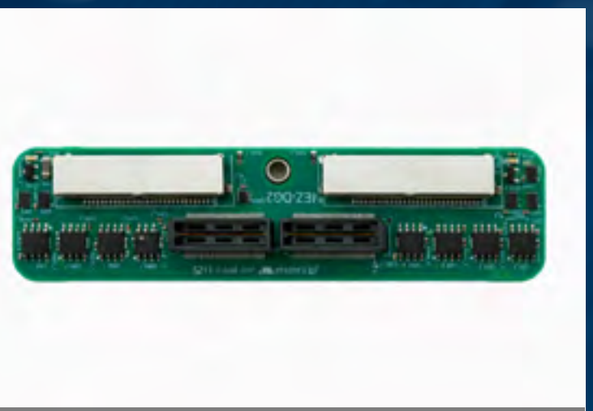
Seamless integration with GIS Atlas software, Professional and Server.

Architecture Overview

GIS implements an indirect architecture: the Printhead Card interfaces directly with the XAAR 2002 printhead, while a Printhead Card Manager handles data distribution, synchronisation and power management. Systems can be configured on the Ethernet platform to suit throughput and scaling needs.

XAAR 2002 Printhead Card Manager (InDirect) Configuration via Ethernet





Printhead Card Expansion Board 1200491



Signal Manager with Master Relay 1200607

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Ethernet Platform

Printhead Card (Product code: 13001557); each card connects to one XAAR 2002 printhead. The Ethernet platform supports distributed architectures and scaling via the Ethernet Printhead Card Manager.

Supported printheads	XAAR 2002 printhead
Max printheads per card	1
Power supply	48V DC, 20A max
Dimensions (H×W×D)	200 × 66 × 20mm
Weight	200g
Waveforms	Binary, greyscale and multi-pulse
Monitoring & safety	Printhead temperature monitoring; thermal cut-out
Diagnostics	Printhead EEPROM readback
Cable length: Manager → Card	Up to 1m
Cable length: Card → Printhead	N/A
Software compatibility	Atlas Server, Atlas Professional

Compatible Components

- Product detect / encoder signal manage modules.
- Ink delivery system components for controlled flow to Xaar 2002 printheads.



Printhead Card Manager 13005620

Type	Product codes	Max connected Printhead Cards	Notes
Printhead Card Manager (Ethernet)	13005620	Connects up to 2 Printhead Cards	Base configuration
Expansion Board	1200491	+2 Printhead Cards per expansion board (up to 4 total*)	

**Maximum achievable printheads may be limited by data rate, firing frequency and power consumption.*

Connectivity & Cabling - Ethernet

Data:
- PC to Printhead Card Manager: Up to 100m
- Printhead Card Manager to Printhead Card: 1m
- Printhead Card to Printhead: N/A

Power:
- 48V DC to supply the Printhead Card Manager.
- No separate printhead PSU required.

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Ordering Information

Speak to our experts for guidance on how to configure your system to your exact needs, the part codes for this example system are below.

Category	Product	Code
Printhead Card (Ethernet)	XAAR 2002	13001557
Ethernet Printhead Card Manager	Base card	13005620
Ethernet Expansion Board	Adds 2 cards per expansion (up to 6 total)	1200491

Notes & Disclaimers

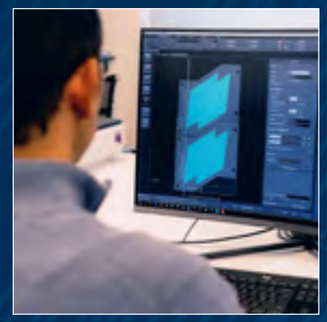
- Specifications are subject to change without notice.
- Performance characteristics depend on system configuration, ink and operating conditions.
- All trademarks are the property of their respective owners. Atlas® is a registered trademark of Global Inkjet Systems (GIS).

Typical Applications

- Ceramics.
- Coding and marking.
- Graphics.

Software – Atlas® Platform

Atlas is a software platform for the rapid development of industrial inkjet user interface and machine control systems. Atlas can control a complete machine or act as a component in larger systems. Its unique modular and open design allows you to customise, as well as to integrate additional tools to enable a quicker route to market for your product.


Ink Management Systems

GIS ink management systems provide controlled ink supply, pressure regulation and flow management for industrial inkjet systems. Designed to support stable jetting across a wide range of printhead technologies, they can be configured for different flow requirements, ink types and machine architectures. GIS can advise on the appropriate ink delivery configuration to match the selected printhead, application and production environment.





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Speak to GIS

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