

# GIS

GLOBAL  
INKJET  
SYSTEMS

A NANODIMENSION DIVISION

# Dimatix

TM

## Product catalogue

GIS drive electronics for  
Dimatix Starfire  
SG1024 printheads



## Overview

GIS electronics enable precise, scalable and reliable control of Fujifilm Dimatix SG1024 printheads using an indirect architecture on USB 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: compact USB2, high-capacity USB3.

Form factor printhead cards designed around the width of the printhead making ideal both for single head and 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 SG1024 printhead, while a Printhead Card Manager handles data distribution, synchronisation and power management. Systems can be configured on the appropriate USB platform to suit throughput and scaling needs.

## SG1024 Printhead Card (InDirect) Configuration via USB

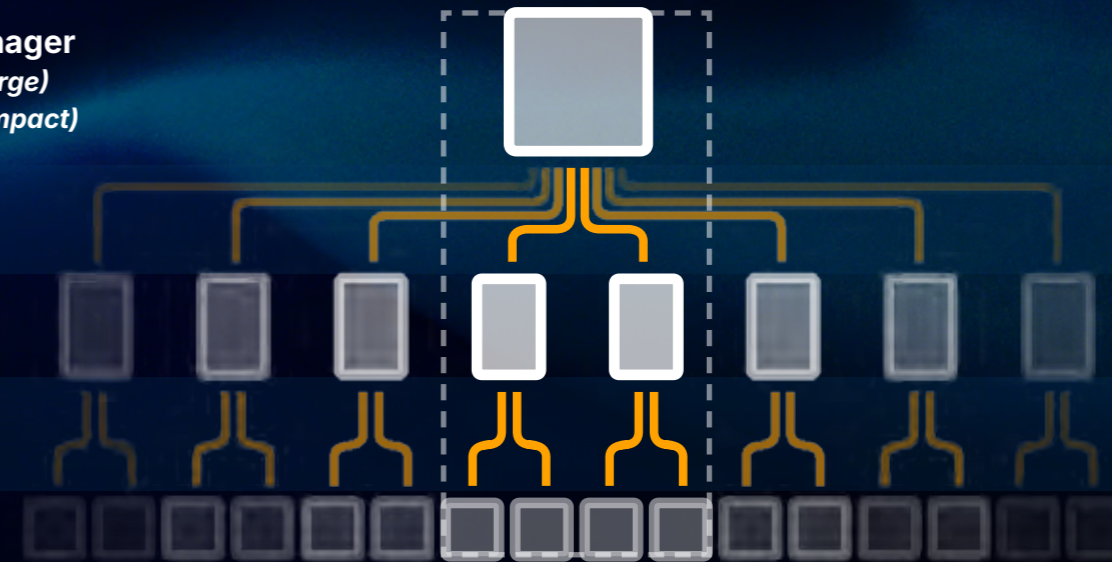
PC, Print Server + Atlas® Professional



**Printhead Card Manager**  
1200505 / 1200506 (Large)  
1200001 / 1200131 (Compact)

**Printhead Card**  
1200320

**Printhead**

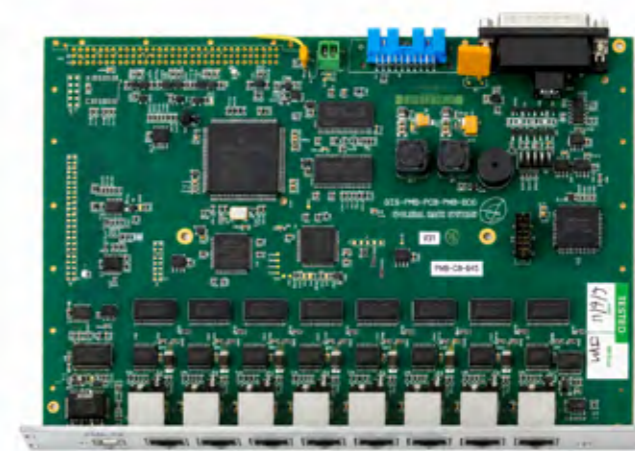


Compact platform for up to 4 printheads per manager\*  
High-capacity platform for up to 16 printheads per manager\*

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



Printhead Card Manager (Compact) 1200001



Printhead Card Manager (Large) 1200505

**USB Platform**

Printhead Card (Product code: 1200235); each printhead card can drive up to two SG1024 printheads. The card exposes all standard SG1024 settings with precise control of waveform shape across time-slices. A compact form factor supports both small systems and large arrays.

Supported printheads	StarFire SG1024 (All variants)
Max printheads per card	2
Power supply	24V DC, 6.2A max
Dimensions (H×W×D)	144 × 140 × 37mm
Weight	515g
Waveforms	Independent waveform shaping, binary, greyscale and multi-pulse
Monitoring & safety	Printhead temperature monitoring; thermal cut-out
Diagnostics	Printhead EEPROM readback
Cable length: PC → Manager	Up to 5m
Cable length: Manager → Card	Up to 10m
Software compatibility	Print Server, Atlas® Professional for Print Server

- Compatible Components**
- Product detect / encoder modules.
  - Ink delivery system components for controlled flow to SG1024 printheads.



Type	Product codes	Max connected Printhead Cards	Notes
USB2 (Compact System)	1200001 (uncased) / 1200131 (cased)	2	Compact platform for up to 4 SG1024 printheads per manager*
USB3 (Large System)	1200505 (uncased) / 1200506 (cased)	8	High-capacity platform for up to 16 SG1024 printheads per manager*

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

- Connectivity & Cabling - USB**
- Data:**
- PC to Printhead Card Manager > up to 5m
  - Printhead Card Manager to Printhead Card > RJ45 CAT6a shielded cabling (up to 10 m)
- Power:**
- 12V DC (USB2 Compact) or 24V DC (USB3 Large) to supply the Printhead Card Manager.
  - No separate printhead PSU required.

## GIS 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

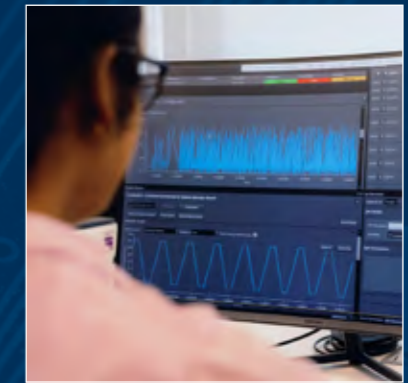
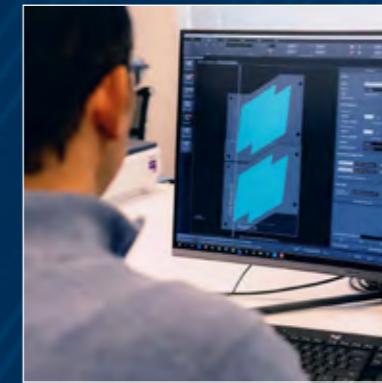
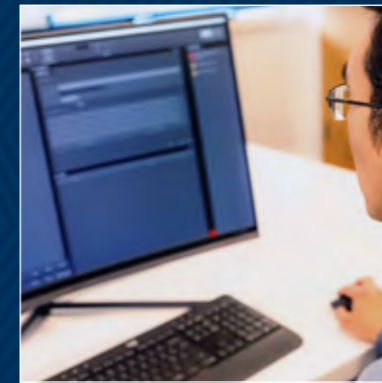
Category	Product	Code	Comment
Printhead Card (USB)	SG1024	1200235	This supports up to 2 printheads
	Fire Pulse and Data Cables for SG1024 (1000mm/350mm)	1200635 / 1200636	Each printhead requires one of these cable sets
	Printhead Card U for Dimatix SG1024 Speacial	1200200	Each printhead requires one of these
	Printhead Card U Earthing Cable for Dimatix SG1024	1200236	Each printhead requires one of these
USB Printhead Card Manager (Compact)	Uncased / Cased	1200001 / 1200131	
USB Printhead Card Manager (Large)	Uncased / Cased	1200505 / 1200506	

## GIS 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).

## GIS 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. Developed by GIS using the latest Microsoft .NET platforms, Atlas® comprises a flexible user interface platform (Atlas® User Interface), as well as machine control services (Atlas® Control Software), a powerful server technology for managing the entire printing and sub-system process.



## GIS 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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