

# GIS DRIVE ELECTRONICS

GIS, through its cutting-edge electronic design and high-quality components, achieves exceptional waveform generation, precise monitoring, and digital control of printheads. Collaborating with leading printhead manufacturers, GIS delivers production-proven electronics for a wide range of industrial inkjet printers, including label presses, packaging systems, textile printers, and 3D additive manufacturing setups. Across the globe, GIS technology powers thousands of inkjet printheads in single-pass, multi-pass scanning, 3D, and custom-shaped configurations.

GIS Drive Electronics provide versatile, high-performance data path solutions that seamlessly support printheads from major manufacturers such as Epson, Fujifilm Dimatix, Konica Minolta, Kyocera, Ricoh, Riso Technologies, SII Printek and Xaar. Additionally, GIS maintains an ongoing development program to ensure compatibility with new printhead technologies.

At GIS, we foster collaborative partnerships with our customers. This, coupled with our industry-leading expertise, empowers you with the control and performance necessary for faster, smarter, and better printing. For expedited market entry, regardless of your application, choose GIS as your inkjet system partner.

## PERFORMANCE

Each printhead within GIS's systems benefits from a dedicated high-speed channel. This channel ensures efficient delivery of print data precisely when needed, even in the most demanding printing applications. On-Board RAM provides robust buffering capability allowing specialized software drivers to seamlessly deliver continuous static and variable data streams to the printheads.

## CONNECTIVITY AND SCALABILITY

Printhead Managers can be interconnected to drive large arrays of printheads, with full software configuration and master-slave architecture to simplify setup and maintenance.

## DROP PLACEMENT CONTROL

Signal Managers support widely used encoders and handles Product Detect and PrintGo signals. Additionally, it offers per-printhead encoder division and sub-pixel adjustment, ensuring precise drop placement control and consistent results.

## ADVANCED APPLICATIONS

The power to simultaneously drive multiple printhead technologies off the same system at different resolutions, opens up a world of possibilities for printer development and manufacturing.

# GIS PRINTHEAD ELECTRONICS PLATFORM

**At GIS we provide all the components required to develop an industrial inkjet solution.**

The GIS printhead drive electronics platform employs a robust combination of Signal Managers, Printhead Managers, Printhead Card Managers and Printhead Cards. These components work in unison to power a diverse array of industry-leading printheads. The outcome is a dedicated high-speed data path directly to the printhead, facilitating seamless delivery of print data and precise printhead control. This sophisticated system caters to the most demanding requirements of industrial inkjet applications.

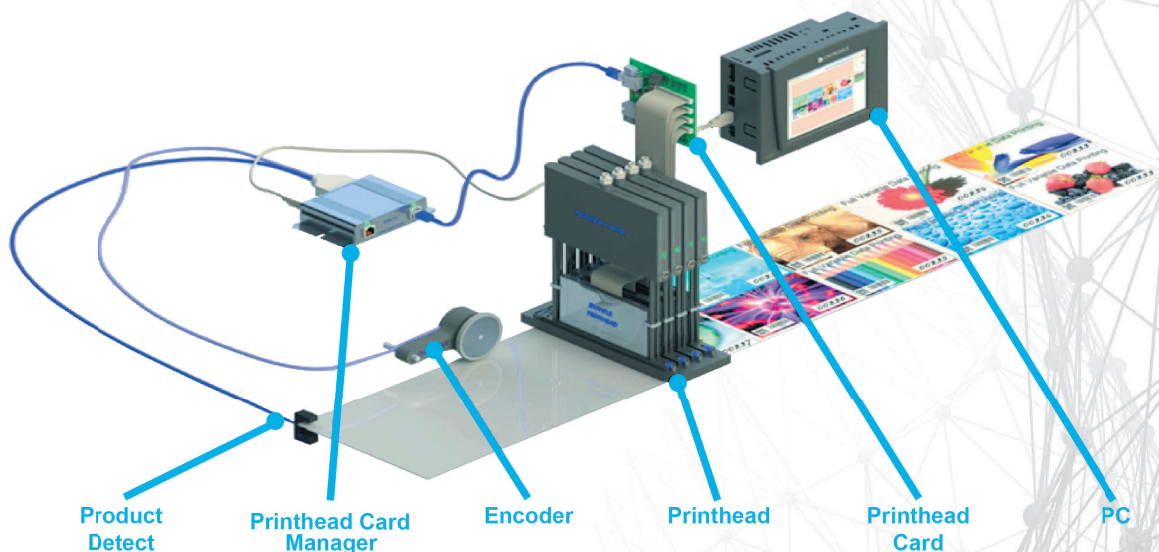
The GIS platform leverages a powerful combination of core technologies:

**INTELLIGENT DRIVE ELECTRONICS:** These form the backbone of the system, ensuring precise control over printhead operations. They facilitate seamless communication between the PC and the printhead, enabling high-speed data streaming

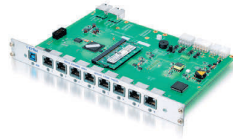
**HIGHLY OPTIMISED RIP SOFTWARE:** The RIP (Raster Image Processor) software plays a crucial role in translating complex image data into printable instructions. Our sophisticated RIP software ensures efficient data processing, colour management, and seamless integration with other components

**SOPHISTICATED SYSTEM CONFIGURATION AND DIAGNOSTICS:** Our platform is meticulously configured to handle diverse industrial inkjet applications. Advanced diagnostic tools allow for real-time monitoring, troubleshooting and optimisation.

The outcome of this synergy is a robust system that streams data from the PC to the printhead, delivering exceptional performance for even the most demanding printing tasks.



# SIGNAL MANAGERS



Feature	PHCM-C2 (USB Compact System)	PHCM-C8-3 (USB Large System)	PHCM (Ethernet System)	SM-200 (Advanced System)
<b>PC to PCM Comms (Mb/s)</b>	USB 2.0 (370) Up to 2m length	USB 3.0 (2600) Up to 3m length	Ethernet 1Gb	Ethernet 1Gb
<b>Channels</b>	2 x 200Mb	8 x 400Mb	6, up to 1.3Gbps per channel	N/A
<b>Max memory</b>	64	4096	N/A	N/A
<b>Encoder</b>	RS422, NPN, PNP & TTL, 32 quad	RS422, NPN, PNP & TTL, 32 quad, isolated high speed	RS422, NPN & TTL, 32 quad, isolated high speed	RS422, NPN, PNP & TTL, 32 quad, isolated high speed
<b>Product Detect</b>	RS422 & TTL, 32 deep	RS422 & TTL, 32 deep	RS422 & TTL, up to 512 deep	RS422 & TTL, 512 deep
<b>Maximum system size</b>	No limit	No limit	No limit	No limit
<b>Cable length</b>	15m, RJ45/CAT 6A	15m, RJ45/CAT 6A	100m, RJ45/CAT 6A /Fibre	100m, RJ45/CAT 6A /Fibre
<b>Encoder/ Product Detect Daisy Chain</b>	Yes, RS422	Yes, RS422	Yes, RS422, NPN, TTL (3.3V up to 24V)	Yes, Fibre Optic
<b>Dimensions (LxWxD, Weight)</b>	100 x 80 x 20mm 85g	233 x 160 x 20mm 330g	140 x 100 x 35mm 320g	140 x 120 x 45mm 400g
<b>Power requirements</b>	12V (0.3-1.0A, use dependent on EMS)	24V (0.3-1.0A, use dependent on EMS)	24 to 48V (Up to 20A use dependent on EMS + number of attached PHCs )	24 to 48V (0.3-1.0A use dependent on EMS)

# SUPPORTED PRINTHEADS

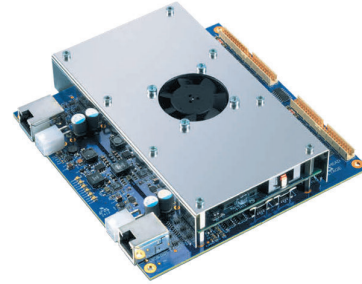
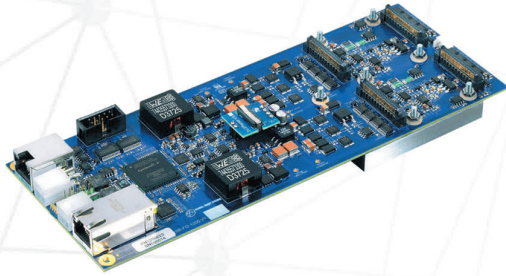


Dimatix	Epson	Konica Minolta	Kyocera	Ricoh	RISO	SII	Xaar
S-Class	D3000	KM512	KJ-4A-AA	MH2XXX Gen4/4L	CF1	RC1536	1003
Q-Class Polaris Sapphire Emerald	S800	KM1800i	KJ-4A-TA	MH54XX Gen5	CF1L	RCE2560	Nitrox
Galaxy	S3200*	KM1800i -C-2	KJ-4A-RH	MH5220 Gen5S	CF1XL		2002
Nova		KM1800i SHC-C	KJ-4B-QA	MH53XX Gen6			Aquinox
Samba G3L/G5L		KM1024i	KJ-4B-YH	TH6310F			
StarFire SG600		KM1024i SAE-C	KJ4A/B -0300				
StarFire SG1024		KM1024a SHE	EX600				
SkyFire SF600		KM1024a LHG-RC	EX1200				
Samba		KM1280i					

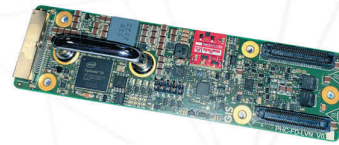
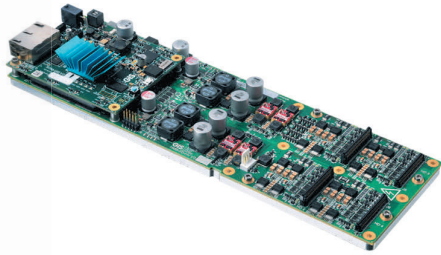
\* Product to be released in 2025

## Common features to all manager boards and cards:

- Binary and greyscale printing
- Configuration and PC driver software
- Printhead EEPROM read back
- High precision waveform
- Drive electronics temperature feedback on supported products
- Integrated encoder and product detect management
- Automatic thermal cutout
- Density and missing nozzles compensation
- Wide-range of interhead stitching and screeners
- Single-pass, multi-pass scanning, cylinder print, cones/cups/tubs
- In field firmware upgrade
- Easy mounting

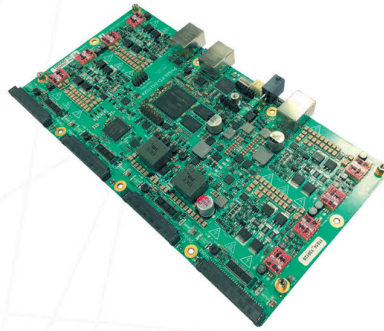


	Printhead Card U for Dimatix Samba	Printhead Card U for Dimatix SG1024
<b>Supported printheads</b>	Samba G3L/G5L	StarFire SG1024 (All variants)
<b>Printhead Card Manager</b>	PHCM-C8-3 (USB Large System)	PHCM-C2 or C8-3 (USB Compact or Large System)
<b>GIS Product Code &amp; Identifier</b>	1200320 - HIB-FD-1200B	1200235 - HIB-FD-A4D
<b>Dimensions (L x W x D, Weight)</b>	218 x 82 x 26mm, 311g	144 x 140 x 37mm, 515g
<b>Power requirements</b>	24V DC, 3A max	24V DC, 6.2A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives up to two printheads Supports drive frequencies up to 100kHz Mezzanine and multi-pulse waveforms Printhead temperature monitoring ( $\pm 1^{\circ}\text{C}$ ) No print gap between labels	Drives up to two printheads Supports drive frequencies up to 50kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Independent waveform shaping No print gap between labels
<b>Software required</b>	Print Server Atlas Professional for Print Server	Print Server Atlas Professional for Print Server



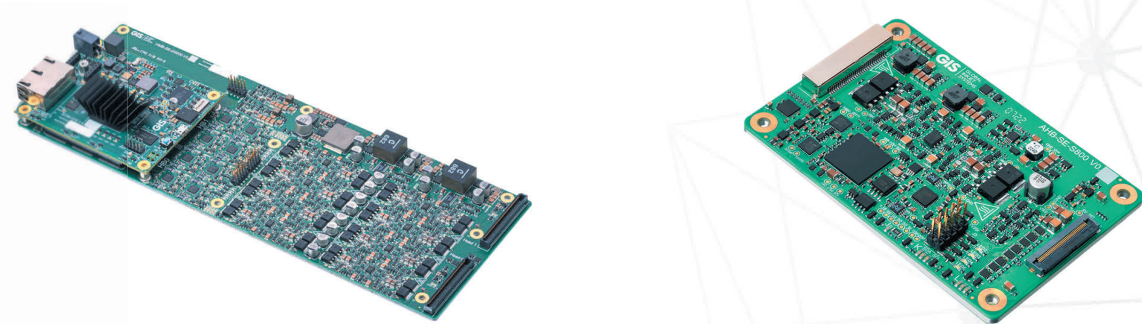
	<b>Printhead Manager E for Dimatix SG600</b>	<b>Printhead Card E for Dimatix Samba &amp; SF600</b>
<b>Supported printheads</b>	StarFire SG600 (All variants, exc. 2C models)	Skyfire SF600 & Samba
<b>Printhead Card Manager</b>	Not required	PHCM (Ethernet System) Each PHCM drives up to six PHCs*
<b>GIS Product Code &amp; Identifier</b>	13003432 - PHM-FD-HV	1200609 - PHC-FD-LVN
<b>Dimensions (L x W x D, Weight)</b>	300 x 96 x 38mm, 544g	159.2 x 40 x 35.7mm, 129g
<b>Power requirements</b>	24 to 48V DC, 20A max	24 to 48V DC, 20A max
<b>Cable length</b>	PC to Printhead Manager: Up to 100m Printhead Manager to Printhead: 400mm	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: Up to 1m Printhead Card to Printhead: 100mm
<b>Features</b>	Drives up to four printheads Supports drive frequencies up to 50kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support High-speed data channel No print gap between labels	Drives a single printhead Supports drive frequencies up to 250kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support No print gap between labels
<b>Software required</b>	Atlas Server Atlas Professional	Atlas Server Atlas Professional

\* Dependent upon power consumption



	Printhead Manager E for Dimatix SG1024
<b>Supported printheads</b>	StarFire SG1024
<b>Printhead Card Manager</b>	Not required
<b>GIS Product Code &amp; Identifier</b>	1200645 - PHM4-FD-SG1024
<b>Dimensions (L x W x D, Weight)</b>	240 x 128 x 18mm, 229g
<b>Power requirements</b>	48V DC, 20A max
<b>Cable length</b>	PC to Printhead Manager: Up to 100m Printhead Manager to Printhead: 400mm
<b>Features</b>	Drives up to four printheads Supports drive frequencies up to 50kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support High-speed data channel No print gap between labels
<b>Software required</b>	Atlas Server Atlas Professional

**EPSON®**

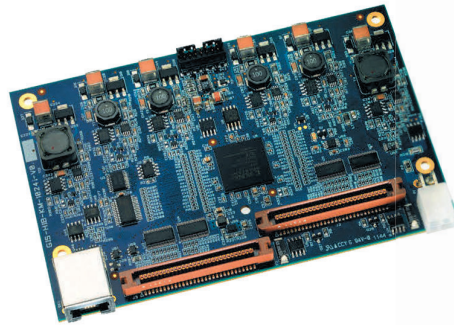
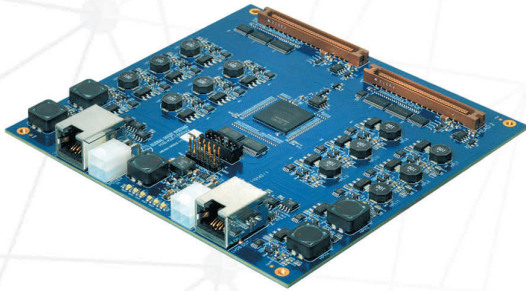


	Prthead Manager E for Epson D3000	Prthead Card E for Epson S800
<b>Supported printheads</b>	D3000-A1R	S800 Series
<b>Prthead Card Manager</b>	Not required	PHCM (Ethernet System) Each PHCM drives up to six PHCs*
<b>GIS Product Code &amp; Identifier</b>	1200479 - PHM-SE-D3000	1200500 - PHC-SE-S800
<b>Dimensions (L x W x D, Weight)</b>	300 x 110 x 31mm, 487g	100 x 66 x 15mm, 73g
<b>Power requirements</b>	24 to 48V DC, 20A max	24 to 48V DC, 20A max
<b>Cable length</b>	PC to Prthead Manager: Up to 100m Prthead Manager to Printhead: Up to 400mm	PC to Prthead Card Manager: Up to 100m Prthead Card Manager to Printhead Card: Up to 1m Prthead Card to Printhead: 100mm
<b>Features</b>	Drives up to two printheads Supports drive frequencies up to 63kHz Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support Printhead temperature monitoring ( $\pm 1^{\circ}\text{C}$ ) No print gap between labels	Drives a single printhead Supports drive frequencies up to 48kHz Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support Printhead temperature monitoring ( $\pm 1^{\circ}\text{C}$ ) No print gap between labels
<b>Software required</b>	Atlas Server Atlas Professional	Atlas Server Atlas Professional

\* Dependent upon power consumption



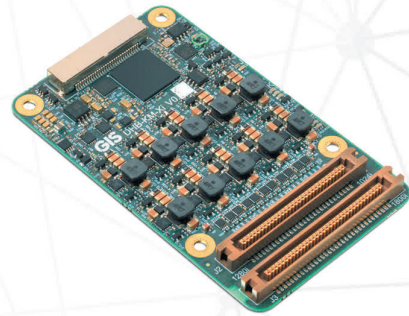
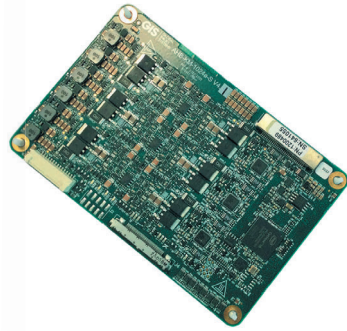
KONICA MINOLTA



	Printhead Card U for KM1800i	Printhead Card U for KM1024i
<b>Supported printheads</b>	KM1800i, KM1800i-C-2, KM1800iSHC-C	KM1024i, KM1024iSAE-C, KM1280i
<b>Printhead Card Manager</b>	PHCM-C2 or C8-3 (USB Compact or Large System)	PHCM-C2 or C8-3 (USB Compact or Large System)
<b>GIS Product Code &amp; Identifier</b>	1200036 - HIB-KM-1800i	1200033 - HIB-KM-1024i
<b>Dimensions (L x W x D, Weight)</b>	140 x 140 x 15mm, 168g	90 x 137 x 22mm, 92g
<b>Power requirements</b>	24V DC, 5.7A max	24V DC, 5A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives up to two printheads Supports drive frequencies up to 84kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Waveform Manager for defining waveform pulses No print gap between labels	Drives up to two printheads Supports drive frequencies up to 62kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Waveform Manager for defining waveform pulses No print gap between labels
<b>Software required</b>	Print Server Atlas Professional for Print Server	Print Server Atlas Professional for Print Server

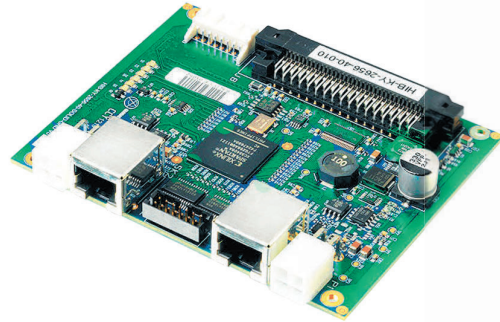
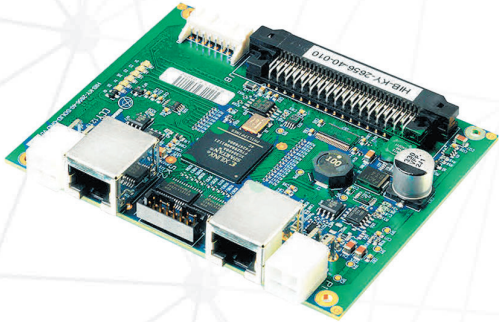


KONICA MINOLTA

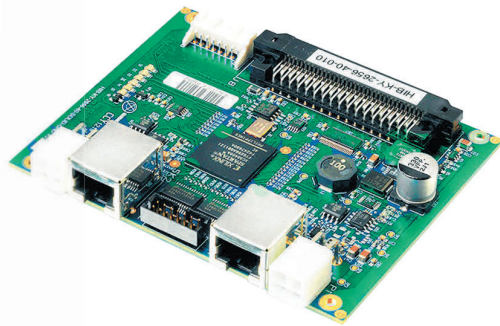


	Printhead Card E for KM1024a	Printhead Card E for KM1024i & KM1800i
<b>Supported printheads</b>	KM1024aSHE, KM1024aLHG-RC	KM1024i / KM1800i, KM1800i-C-2
<b>Printhead Card Manager</b>	PHCM (Ethernet System) Each PHCM drives up to six PHCs*	PHCM (Ethernet System) Each PHCM drives up to six PHCs*
<b>GIS Product Code &amp; Identifier</b>	1200489 - PHC-KM-1024a-L	1200437 - PHC-KM-Xi
<b>Dimensions (L x W x D, Weight)</b>	130 x 85 x 10mm, 118g	100 x 60 x 9mm, 66g
<b>Power requirements</b>	24 to 48V DC, 20A max	24 to 48V DC, 20A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: 1m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: 1m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives a single printhead Supports drive frequencies up to 40kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Compatible with the SM-200 Signal Manager for product detect and encoder signal support No print gap between labels	Drives a single printhead Supports drive frequencies up to 84kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) Compatible with SM-200 Signal Manager for product detect and encoder signal support No print gap between labels
<b>Software required</b>	Atlas Server Atlas Professional	Atlas Server Atlas Professional

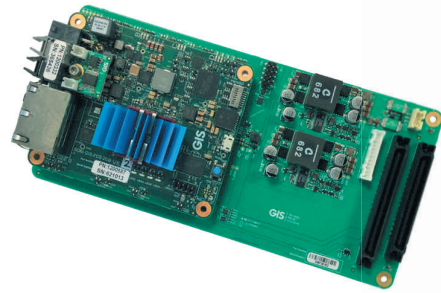
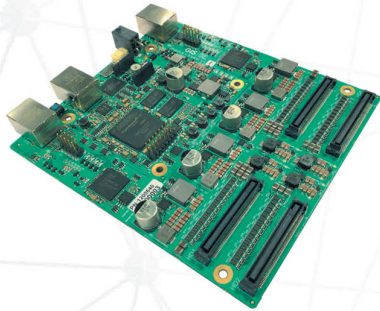
\* Dependent upon power consumption



	Printhead Card U for Kyocera KJ4A-AA	Printhead Card U for Kyocera KJ4A-TA/RH
<b>Supported printheads</b>	KJ4A-AA	KJ4A-TA/RH
<b>Printhead Card Manager</b>	PHCM-C2 or C8-3 (USB Compact or Large System)	PHCM-C2 or C8-3 (USB Compact or Large System)
<b>GIS Product Code &amp; Identifier</b>	1200203 - HIB-KY-KJ4A-AA	1200040 - HIB-KY-KJ4A-RH
<b>Dimensions (L x W x D, Weight)</b>	80 x 100 x 20.5mm, 60g	80 x 100 x 20.5mm, 60g
<b>Power requirements</b>	24V DC, 4A max	24V DC, 4A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives a single printhead Supports drive frequencies up to 30kHz Clock 2 period settings Voltage trimming Waveform upload and read back Left and right nozzle bank voltage trim ( $\pm 0.1V$ steps) Printhead heater centralised monitoring and control ( $\pm 1^{\circ}C$ ) No print gap between labels	Drives a single printhead Supports drive frequencies up to 30kHz Clock 2 period settings Voltage trimming Waveform upload and read back Left and right nozzle bank voltage trim ( $\pm 0.1V$ steps) Printhead heater centralised monitoring and control ( $\pm 1^{\circ}C$ ) No print gap between labels
<b>Software required</b>	Print Server Atlas Professional for Print Server	Print Server Atlas Professional for Print Server

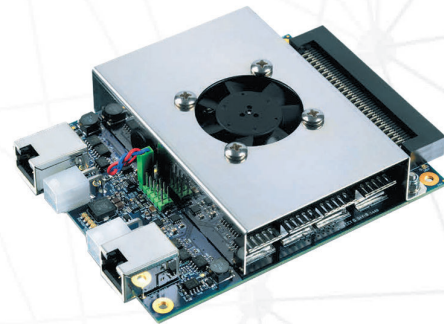
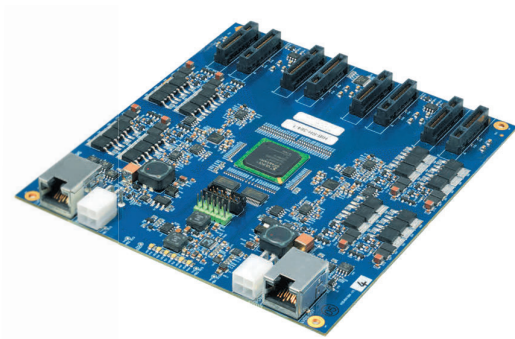


	Printhead Card U for Kyocera KJ4B QA/YH	Printhead Card U for Kyocera KJ4A-0300 & KJ4B-0300
<b>Supported printheads</b>	KJ4B-QA/YH	KJ4A/B-0300 300dpi 30kHz
<b>Printhead Card Manager</b>	PHCM-C2 or C8-3 (USB Compact or Large System)	PHCM-C2 or C8-3 (USB Compact or Large System)
<b>GIS Product Code &amp; Identifier</b>	1200155 - HIB-KY-KJ4B	1200213 - HIB-KY-KJ4-2C
<b>Dimensions (L x W x D, Weight)</b>	80 x 100 x 20.5mm, 60g	80 x 100 x 20mm, 85g
<b>Power requirements</b>	24V DC, 4A max	24V DC, 4A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm
<b>Features</b>	<ul style="list-style-type: none"> <li>Drives a single printhead</li> <li>Supports drive frequencies up to 30kHz</li> <li>Clock 2 period settings</li> <li>Voltage trimming</li> <li>Waveform upload and read back</li> <li>Left and right nozzle bank voltage trim (<math>\pm 0.1V</math> steps)</li> <li>Printhead heater centralised monitoring and control (<math>\pm 1^{\circ}C</math>)</li> <li>No print gap between labels</li> </ul>	<ul style="list-style-type: none"> <li>Drives a single printhead</li> <li>Supports drive frequencies up to 30kHz</li> <li>Voltage trimming</li> <li>Waveform upload and read back</li> <li>Left and right nozzle bank voltage trim (<math>\pm 0.1V</math> steps)</li> <li>Printhead heater centralised monitoring and control (<math>\pm 1^{\circ}C</math>)</li> <li>No print gap between labels</li> </ul>
<b>Software required</b>	Print Server Atlas Professional for Print Server	Print Server Atlas Professional for Print Server



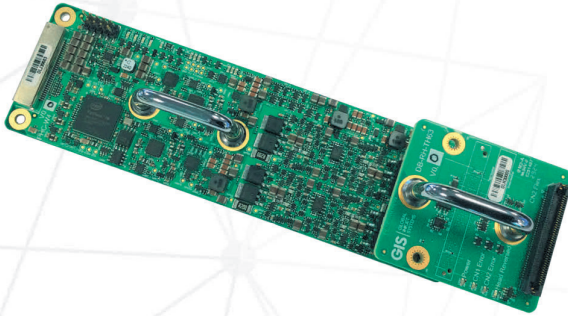
	Printhead Manager E for Kyocera EX600	Printhead Manager E for Kyocera EX1200
<b>Supported printheads</b>	EX600	EX1200
<b>Printhead Card Manager</b>	Not required	Not required
<b>GIS Product Code &amp; Identifier</b>	1200641 - PHM4-KY-EX600	13004981 - PHM-KY-EX1200
<b>Dimensions (L x W x D, Weight)</b>	150 x 135 x 18mm, 85g	200 x 96 x 31.4mm, 302g
<b>Power requirements</b>	48V DC, 20A max	48V DC, 20A max
<b>Cable length</b>	PC to Printhead Manager: Up to 100m Printhead Manager to Printhead: 400mm	PC to Printhead Manager: Up to 100m Printhead Manager to Printhead: 400mm
<b>Features</b>	<p>Drives up to four printheads</p> <p>Supports drive frequencies up to 40kHz</p> <p>Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support</p> <p>Printhead heater centralised monitoring and control (<math>\pm 1^{\circ}\text{C}</math>)</p> <p>No print gap between labels</p>	<p>Drives a single printhead</p> <p>Supports drive frequencies up to 40kHz</p> <p>Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support</p> <p>Printhead heater centralised monitoring and control (<math>\pm 1^{\circ}\text{C}</math>)</p> <p>No print gap between labels</p>
<b>Software required</b>	Atlas Server Atlas Professional	Atlas Server Atlas Professional

# RICOH



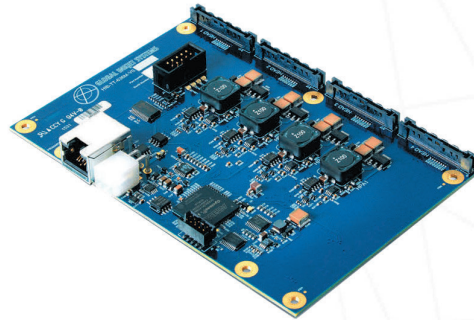
	Printhead Card U for Ricoh Gen4 & Gen4L	Printhead Card U for Ricoh Gen5 & Gen6
<b>Supported printheads</b>	Gen4 (MH2420), Gen4L (MH2620, MH2820)	Gen5 (MH5420, MH5421, MH5441, MH5421F, MH5421MF) Gen5S (MH5220), Gen6 (MH5320, MH5340, MH5422)
<b>Printhead Card Manager</b>	PHCM-C2 or C8-3 (USB Compact or Large System)	PHCM-C2 or C8-3 (USB Compact or Large System)
<b>GIS Product Code &amp; Identifier</b>	1200042 - HIB-RH-384	1200185 - HIB-RH-1280
<b>Dimensions (L x W x D, Weight)</b>	160 x 144.5 x 23mm, 197g	100 x 120 x 29.2mm, 193g
<b>Power requirements</b>	24V DC, 4A max	24V DC, 3A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives up to four printheads Supports drive frequencies up to 30kHz Printhead heater centralised monitoring and control ( $\pm 1^\circ\text{C}$ ) No print gap between labels	Drives a single printhead Supports drive frequencies up to 30kHz Printhead heater centralised monitoring and control ( $\pm 1^\circ\text{C}$ ) High quality trapezoidal waveforms 4 x fully independent waveforms Integrated air cooling system No print gap between labels
<b>Software required</b>	Print Server Atlas Professional for Print Server	Print Server Atlas Professional for Print Server

# RICOH

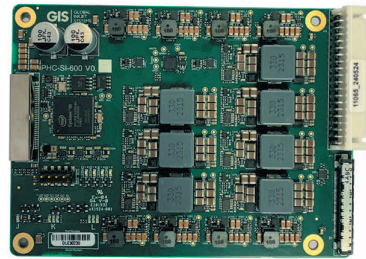
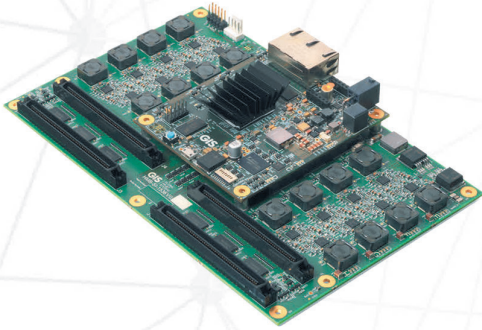


	Printhead Card E for Ricoh TH6310F	Printhead Card E for Ricoh Gen5 & Gen6
<b>Supported printheads</b>	TH6310F	Gen5 (MH5420, MH5421, MH5441, MH5421F, MH5421MF) Gen5S (MH5220), Gen6 (MH5320, MH5340, MH5422)
<b>Printhead Card Manager</b>	PHCM (Ethernet System) Each PHCM drives up to six PHCs*	PHCM (Ethernet System) Each PHCM drives up to six PHCs*
<b>GIS Product Code &amp; Identifier</b>	1200615 - PHC-W4 1200639 - DB-RH-TH63	1200634 - PHC-RH-MH5x
<b>Dimensions (L x W x D, Weight)</b>	198.4 x 52.2 x 26.9mm, 125g	100 x 95 x 21.8mm, 80g
<b>Power requirements</b>	24 to 48V DC, 20A max	24 to 48V DC, 20A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: Up to 1m Printhead Card to Printhead: 400mm	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: Up to 1m Printhead Card to Printhead: 400mm
<b>Features</b>	Drives a single printhead Supports drive frequencies up to 80kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) High quality trapezoidal waveforms No print gap between labels	Drives a single printhead Supports drive frequencies up to 80kHz Printhead heater centralised monitoring and control ( $\pm 1^{\circ}\text{C}$ ) High quality trapezoidal waveforms No print gap between labels
<b>Software required</b>	Atlas Server Atlas Professional	Atlas Server Atlas Professional

\* Dependent upon power consumption



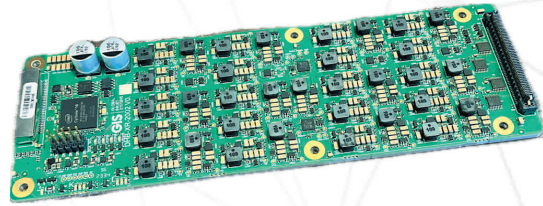
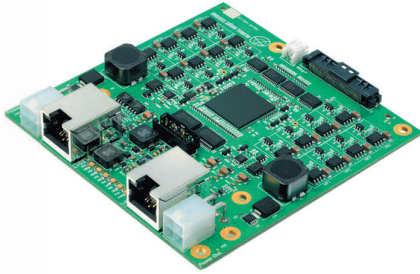
	<b>Printhead Card U for Toshiba 636M</b>
<b>Supported printheads</b>	CF1, CF1L, CF1XL
<b>Printhead Card Manager</b>	PHCM-C2 or C8-3 (USB Compact or Large System)
<b>GIS Product Code &amp; Identifier</b>	1200246 - HIB-TT-636M
<b>Dimensions (L x W x D, Weight)</b>	145 x 100 x 15mm, 105g
<b>Power requirements</b>	24V DC, 8A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives up to four printheads Supports drive frequencies up to 30kHz Left and right nozzle bank trim Printhead temperature monitoring ( $\pm 1^{\circ}\text{C}$ ) No print gap between labels
<b>Software required</b>	Print Server Atlas Professional for Print Server



	Printhead Manager E for Seiko RC1536	Printhead Card E for Seiko RCE2560
<b>Supported printheads</b>	RC1536	RCE2560
<b>Printhead Card Manager</b>	Not required	PHCM (Ethernet System) Each PHCM drives up to six PHCs*
<b>GIS Product Code &amp; Identifier</b>	1200382 - PHM-SI-1536	1200602 - PHC-SI-0600
<b>Dimensions (L x W x D, Weight)</b>	210 x 135 x 38mm, 282g	130 x 95 x 15mm, 198g
<b>Power requirements</b>	24 to 48V DC, 20A max	24 to 48V DC, 4A max
<b>Cable length</b>	PC to Printhead Manager: Up to 100m Printhead Manager to Printhead: 300mm	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: 1m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives up to four printheads Supports drive frequencies up to 37kHz Voltage trimming Waveform upload and read back Left and right nozzle bank voltage trim ( $\pm 0.1V$ steps) Printhead temperature monitoring ( $\pm 1^\circ C$ ) No print gap between labels	Drives a single printhead Supports drive frequencies up to 40kHz Printhead temperature monitoring ( $\pm 1^\circ C$ ) No print gap between labels
<b>Software required</b>	Atlas Server Atlas Professional	Atlas Server Atlas Professional

\* Dependent upon power consumption

# XAAR



	Printhead Card U for Xaar 1003/Nitrox	Printhead Card E for Xaar 2002/Aquinox
<b>Supported printheads</b>	1003, Nitrox	2002, Aquinox
<b>Printhead Card Manager</b>	PHCM-C2 or C8-3 (USB Compact or Large System)	PHCM (Ethernet System) Each PHCM drives up to six PHCs*
<b>GIS Product Code &amp; Identifier</b>	1200190 - HIB-XR-1003	13001557 - PHC-XR-2002
<b>Dimensions (L x W x D, Weight)</b>	98 x 100 x 15mm, 90g	200 x 66 x 20mm, 200g
<b>Power requirements</b>	24V DC, 4A max	24 to 48V DC, 20A max
<b>Cable length</b>	PC to Printhead Card Manager: Up to 5m Printhead Card Manager to Printhead Card: Up to 10m Printhead Card to Printhead: 300mm	PC to Printhead Card Manager: Up to 100m Printhead Card Manager to Printhead Card: 1m Printhead Card to Printhead: 300mm
<b>Features</b>	Drives a single printhead Supports drive frequencies up to 48kHz Left and right nozzle bank voltage trim (1/16V steps) Grey level drop count control and palette remap Supports Xaar's High Laydown mode Printhead temperature monitoring ( $\pm 1^{\circ}\text{C}$ ) No print gap between labels	Drives a single printhead Supports drive frequencies up to 36kHz Left and right nozzle bank voltage trim (1/16V steps) Grey level drop count control and palette remap Supports Xaar's High Laydown mode Printhead temperature monitoring ( $\pm 1^{\circ}\text{C}$ ) Compatible with GIS SM-200 Signal Manager for product detect and encoder signal support No print gap between labels
<b>Software required</b>	Print Server Atlas Professional for Print Server	Atlas Server Atlas Professional

\* Dependent upon power consumption