

XAAR2001+ HPC

PRODUCT GUIDE

Overview

The Xaar 2001+ Head Personality Card (Xaar 2001+ HPC) provides optimal and dependable data communication between a Xaar 2001+, Xaar 2002 and Xaar Aquinox printheads and the remainder of the digital inkjet print management chain.

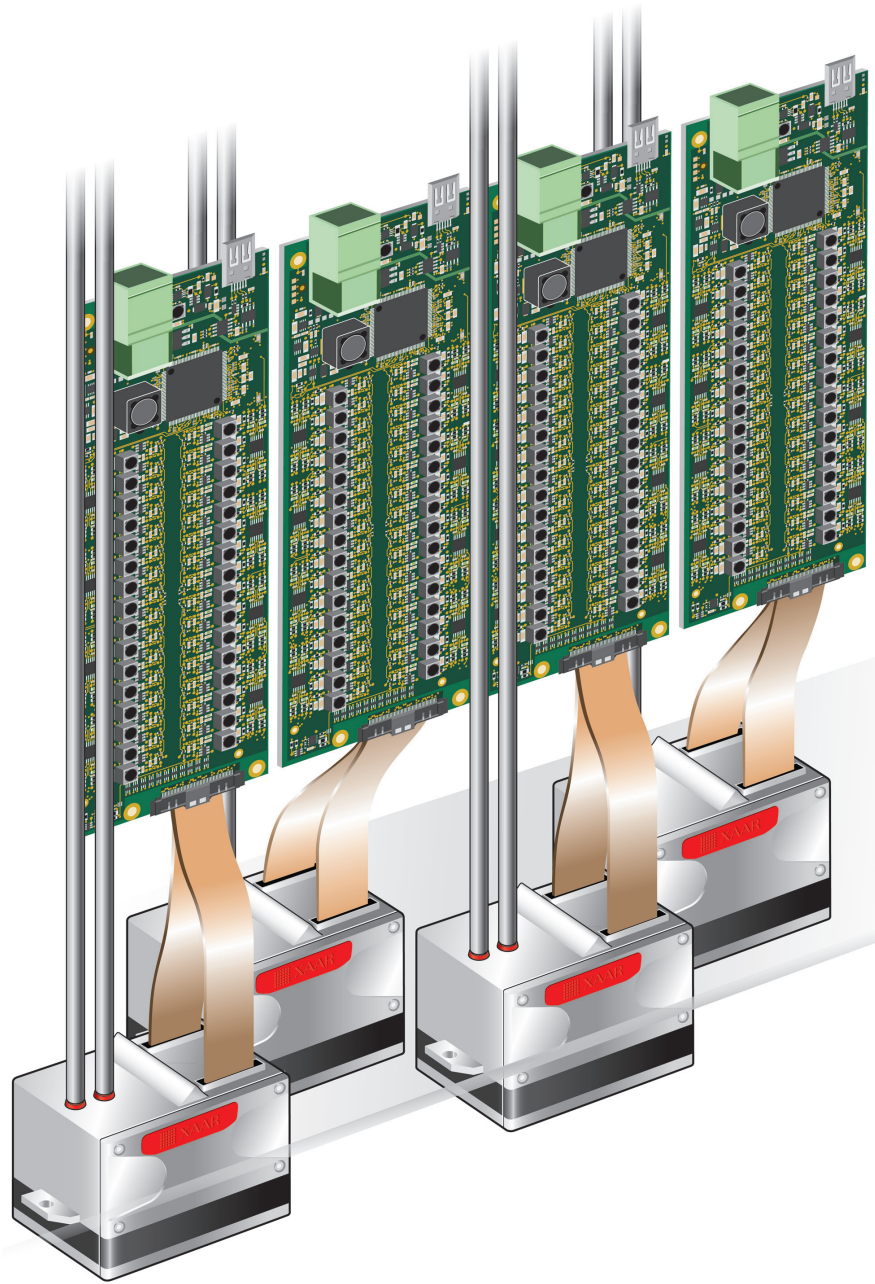
This proven solution significantly reduces costs and risks faced by Original Equipment Manufacturers (OEMs) developing bespoke printing systems leading to a faster time-to-market.

The Xaar 2001+ HPC is extremely mechanically robust and reliable, and has a similar footprint to the Xaar HPC3 (compatible with the Xaar 1003 family of printheads). The Molex connector ensures precise alignment with the Xaar printhead and the inherent locking mechanism prevents accidental disconnection.

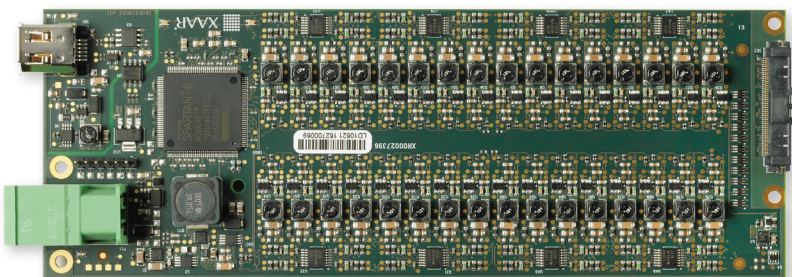
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The Xaar 2001+ HPC's narrow form factor (width) allows for flexibility in the design of the print bar. The Xaar 2001+ HPC can be located directly above the printhead and accessed via the printhead aperture which means that maintenance is easy.

A bi-coloured diagnostic LED provides an immediate indication of system, print and power status.



The Xaar 2001+ HPC supports all variants of the Xaar 200x series and Xaar Aquinox printhead. It is part of Xaar's range of system components which includes the XPM and Xaar's Hydra. The range is designed to optimise the performance of Xaar printheads and to provide system components that are easy to configure and integrate, reducing time-to-market.



PART NAME: XAAR 2001 HPC
PART NUMBER: XP55402001

Xaar2001+ HPC

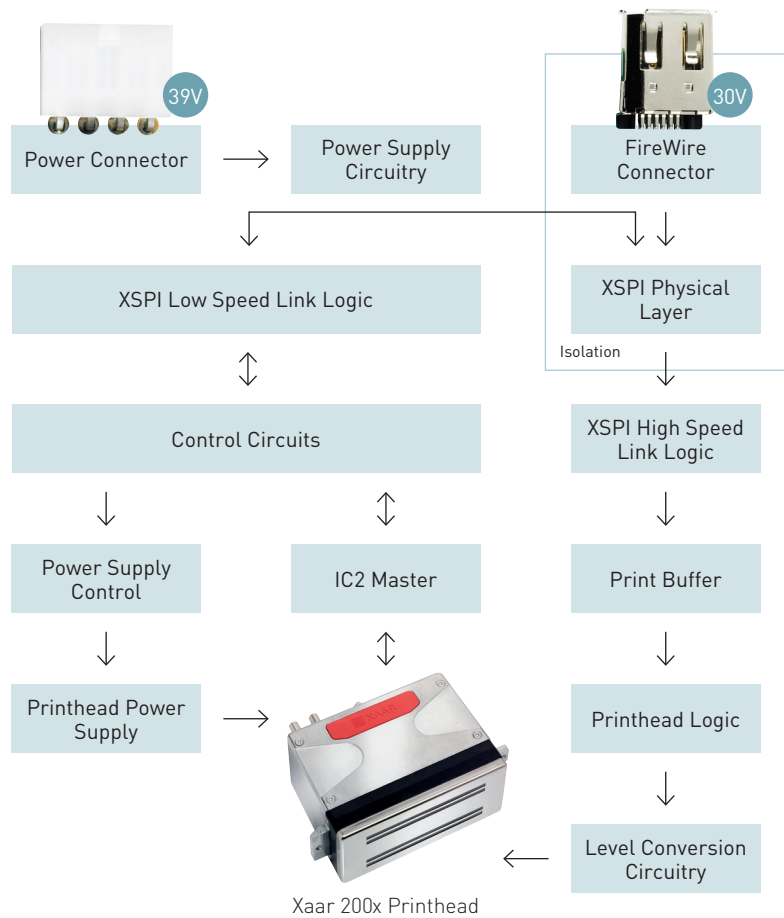
The Xaar 2001+ HPC block diagram (right) shows the key functional modules of the Xaar 2001+ HPC architecture.

The Xaar 2001+ HPC is designed to:

- Pass timing commands for print triggering to the Xaar 200x series and Xaar Aquinox printheads
- Convert the print data received over the Xaar Serial Printhead Interface (XSPI) High Speed Link to the format required for the Xaar 200x series and Xaar Aquinox printhead. The High Speed Link maintains low latency and reduces jitter
- Provide control signals and voltage supplies to Xaar 200x series and Xaar Aquinox printheads. This ensures the correct power sequencing
- Provide feedback from the printhead and Xaar 2001+ HPC to the Xaar Printhead Manager (XPM).

The XPSI cabling and interconnect are physically compatible with the IEEE 1394 specification and are a cost effective solution.

The Power Supply Control block maintains thirty-two (32) independently controllable power supplies for the drive channels embedded within the printhead, enabling voltage trimming in blocks of 64 nozzles for uniform drop volume and velocity.



Generic system design

Xaar offers a scalable data path solution. An example of a typical Xaar inkjet print chain is shown in the diagram below.

The Xaar 2001+ HPC connects directly to the Xaar Printhead Manager (XPM) via the Xaar Serial Printhead Interface (XSPI).

The Xaar XPM is available in two configurations:

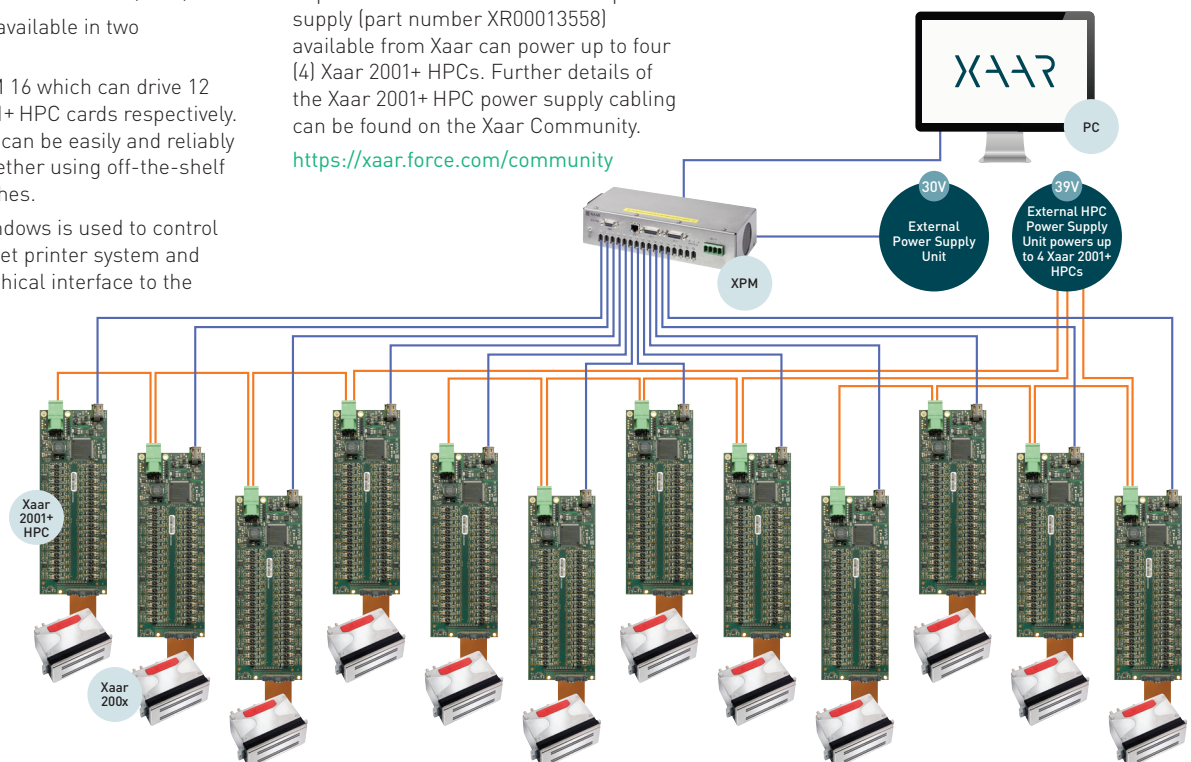
- XPM 12 or XPM 16 which can drive 12 or 16 Xaar 2001+ HPC cards respectively. Multiple XPMs can be easily and reliably networked together using off-the-shelf Ethernet switches.

A PC running Windows is used to control the complete inkjet printer system and provides the graphical interface to the end user.

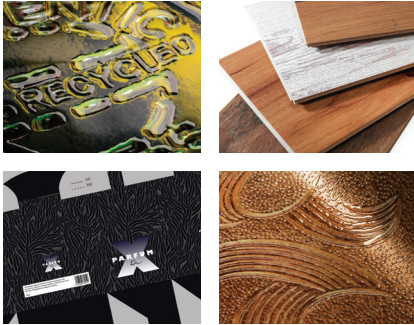
The XPM connects via a Gigabit Ethernet Connection to the OEM Windows based PC and is controlled by XPM Suite software supplied by Xaar.

An external 39V power supply is required to power the Xaar 2001+ HPC. The power supply (part number XR00013558) available from Xaar can power up to four (4) Xaar 2001+ HPCs. Further details of the Xaar 2001+ HPC power supply cabling can be found on the Xaar Community.

<https://xaar.force.com/community>



Xaar2001+ HPC



Xaar 2001+ HPC Specification

Power supply

Xaar 2001+ HPC Input voltage (Dedicated power connector)	39V DC, 4A
Xaar 2001+ HPC Input voltage (FireWire connector)	30V DC, 1.5A
Input power (max)	97.5W
Voltage per output	Up to 35V DC
Current per output	125mA @ 35V DC
Power per output	4.4W
Total power	70W

Physical characteristics

Height	125mm
Width	66mm
Depth	20mm
Weight	200g
Operating temperature	0°C to 40°C
Humidity	85% RH (non condensing)
Storage temperature	0°C to 65°C

Connections

Power input	1 x IEEE 1394, 1 x 4-way socket
Data and power to printhead	2 x 50 way – FCC-FPC
Data input	Xaar Serial Peripheral Interface
Software	Xaar Print Manager Suite

The Xaar 2001+ HPC complies with European EMC directives. However any system incorporating the Xaar 2001+ HPC must be independently tested for EMC conformity.



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