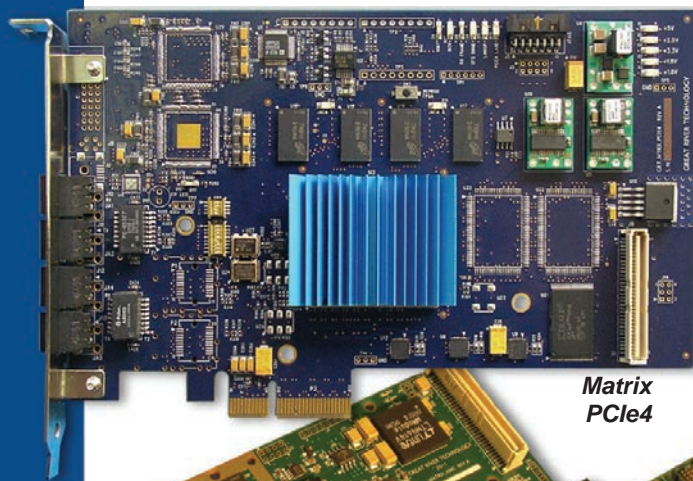




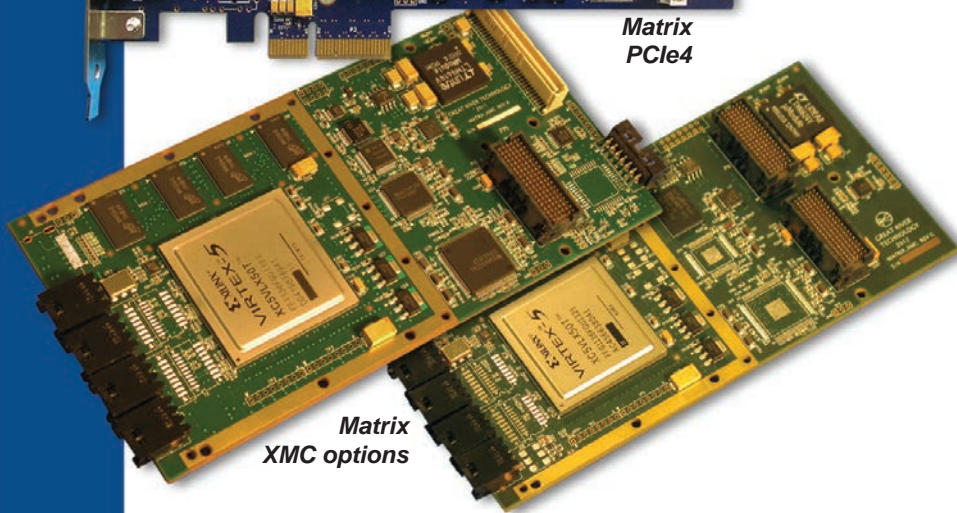
# HOTLink II Video Cards

## Frame Grabber and Video Generator

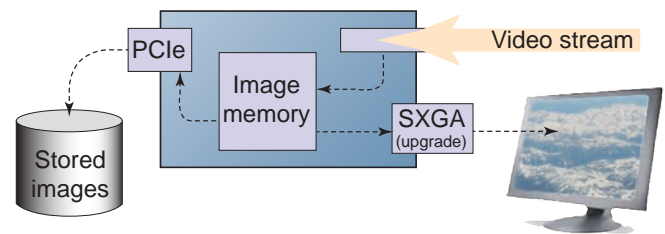
Great River offers form factors and test software to support a range of video formats at link rates from 160 Mb/s to 1.5 Gb/s. HOTLink II™ video (HL2V) cards are based on Cypress HOTLink II interfaces that are Fibre Channel-compatible at the FC-0 and FC-1 layers.



Matrix  
PCIe4



Matrix  
XMC options

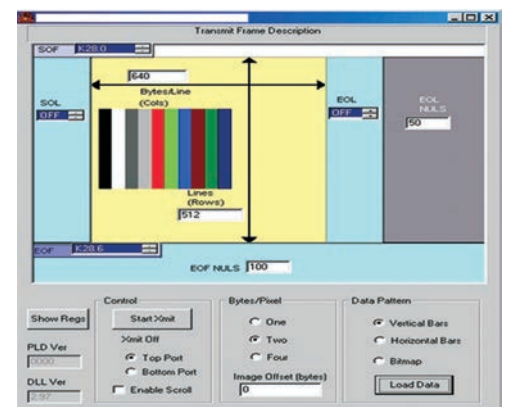


Matrix card set up as a receiver for HOTLink II

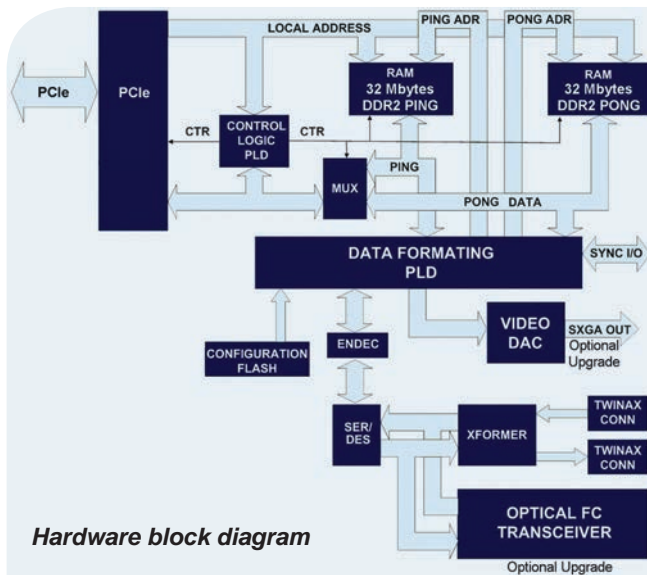
Two image stores allow uninterrupted throughput from the HOTLink II port to PCIe. View camera or sensor output via a Windows GUI or (as an upgrade) via a SXGA port. The HL2V and associated drivers use DMA to move video frames to and from on-board memory. The cards have two 32 MB image stores (ping and pong) to access image memory while receiving live video, enabling uninterrupted data transfer. Transfer rates of up to 500 MB/s can be achieved, depending on system configuration.

### Key applications and features

- IR/optical frame grabber: View and save received image.
- Graphic generator: Upload bit map image or test pattern, set up transmit parameter, and enable the transmitter within minutes.
- Feature-rich test software, including a flexible GUI (right); easily configure a HOTLink transmitter or receiver.
- Detailed user manual.



Input special characters, resolutions, etc., in test software GUI.



## Specifications

Standards	FC-PH Revision 4.3 (layers FC-0 and FC-1)
Bus configuration	Matrix PCIe4 and XMC, four PCIe lanes
Memory	32 megabytes
PCIe4 throughput	Up to 500 megabytes per second
Interface	Copper (FCN or SMA) or Fibre
Form factor	Matrix PCIe4: 18.9 x 11.2 cm (7.44 x 4.41"); stack height: 2.2cm (0.87") Matrix XMC: 15.8 x 7.5cm (6.22 x 2.95"); stack height: 1.5cm (0.59")
Power requirement	8W (2.66A @ 3.3V)
Operating system	Win XP, 32-bit; Win 7-10, 32- and 64-bit; purchased Linux device drivers
Operating temp.	PCIe, PCIe4: 0-50°C (32-122°F) XMC: 0-70°C (32-158°F) XMC (industrial version): -40-85°C (-40-185°F)

## Software Development Kit

A Software Development Kit (SDK) is an option with HL2V cards. Use it to quickly deploy:

- Real-time image and data acquisition systems
- Camera and sensor emulators
- Graphics generators
- Other video-intensive applications

Available for Windows or Red Hat® Enterprise Linux®. For those using LabVIEW™ to develop systems with Matrix cards, GRT offers SDKs with sample and functional code that can be quickly customized.

The SDK includes: Application Programming Interface (API) User Guide, Programmer Guide, sample code, and four hours technical support.



**Incorporate Matrix HOTLink II cards into high-performance record and playback systems with up to 24 terabytes storage. See GRT's HOTLink II Recorder and Playback System web page.**

## How to buy

Determine your part number\* for Matrix Series (MX) HOTLink II (HV) cards as follows:

Not all combinations are valid. If in doubt, call.

**Form factor**  
E4 = PCIe4  
X4 = XMC4  
R4 = XMC4 industrial version

**Interface**  
C1 = FCN copper  
C2 = Dual FCN  
MT = MTA (Micro Twinax)  
P4 = Rear I/O (PN14)  
RO = Rear I/O (P16)  
SA = SMA 50Ω  
ZZ = Custom

Custom characters assigned by GRT

**Video or HL2V port**  
00 = none  
HR = HL2V rx  
HT = HL2V tx  
HH = HL2V tx/rx  
DT = DVItx  
VG = VGA  
VT = VGA and DVI-i

**Link rate**  
16 = 160 Mb/s  
20 = 200 Mb/s  
2A = 221.184 Mb/s  
25 = 250 Mb/s  
3A = 330 Mb/s  
40 = 400 Mb/s  
55 = 550 Mb/s  
1X = 1.0625 Gb/s  
F2 = 2 frequencies  
ZZ = custom to 1.5 Gb/s

For example:

**MX-X4-HV-SA-40-DT-0000 or MXX4HVSA40DT0000**

\*Great River Technology revised its part numbering system effective April 2013. Legacy part numbers are still honored.

For details, see Part Numbers:  
(<http://www.greatrivertech.com/pns.html>).

To order, consult our Distributors page:

(<http://www.greatrivertech.com/distributors.html>)

If no distributor is listed for your region or country or if you need additional information about our custom firmware, contact our headquarters in Albuquerque.