

Gen2lock Kits

For NVIDIA® or ATI® Graphics Cards

Overview

Gen2lock solution for commercial graphics cards

Adaptable to virtually any vendor's video card

Locks video vertical intervals from master to slaves

One master - any number of slaves

Locks slaves to within approximately 1 μ Sec of master

Short lock interval ensures application jitter free operation

Kit form

Installed by RPA on customer provided cards

Involves modification of the graphics card

Kit consists of

Gen2Lock board (fits in any single PC slot)

(with integral single / dual link DVI support)

Master / Sync cable assembly

(CAT 5e with RPA signal splitter)

Reference clock cable assembly

(to be attached to graphics card)

Dual Link DVI-D cable (12")



Applications

- Visual Simulation Systems
- Side by Side Display Systems
- Image Processing Systems

Description

The RPA Gen2lock kit provides a generic solution for image generating applications that require multiple channels of imagery to be synchronized to one another.

With all video channels operating on the same video frame - full time - the task of process scheduling of data which controls the image generators can be greatly simplified as intervals become deterministic.

RPA's solution involves modifying the video card by removing the reference oscillator for the Graphics Processing Unit (GPU). The oscillator is replaced with a cable which allows the Gen2lock controller to provide a new reference clock to the GPU. The Gen2lock kit can be installed on virtually any vendor's NVIDIA or ATI video card provided the reference oscillator is accessible.

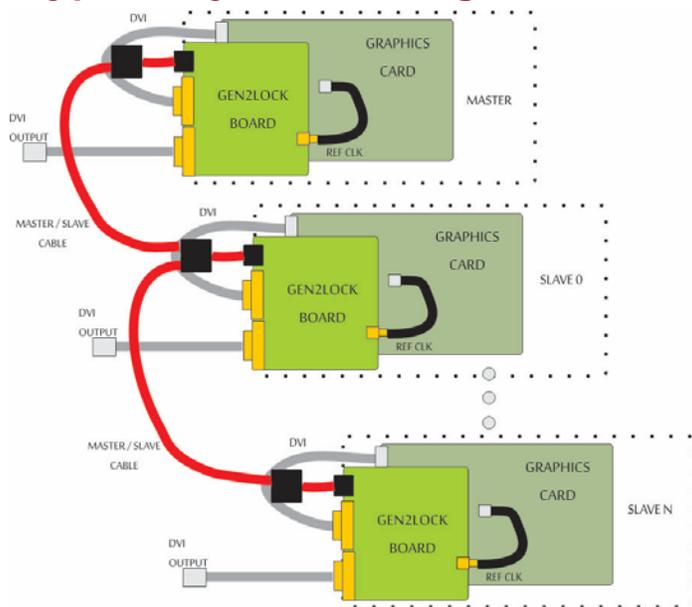
The Gen2lock controller drives the reference clock depending on its mode of operation. In its default master mode (no master cable connected to the slave input), the controller sends it's fixed reference signal identical to the original reference oscillator.

To operate the Gen2lock in slave configuration, the user simply connects the slave input to a master output of another Gen2lock board. The slave controller will then vary the video reference frequency to bring the card into 'lock' with the master. It will then monitor the video frame relationship between master and slave and adjust the reference clock as need to maintain a narrow lock window (~ 1 μ sec).

Using a variable reference clock design, the Gen2Lock system is capable of synchronizing to external timing sources. To lock to an external source, the user need only adjust the graphics card frame rate to match that of the sync source. Virtually any video format can be locked to one another or to an external frame sync signal. The card accepts VSYNC, composite sync, and HD Tri-level external sync signal types.

The RPA Genlock kit is a simple, cost-effective solution to many multi-channel image generation and synchronization problems.

Typical System Configuration



Ordering Information

Part Number

KIT-2035 Video Gen2lock Kit

NVIDIA is the registered trademark name of the NVIDIA Corp.
ATI is the registered trademark name of the ATI Technologies Inc.

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