

Setting Gap Count for Long Cables

Technical Application Note TAN2008003

Revised January 30, 2012

1.1 Subject

Technical Application Note (TAN2008003): Setting Gap Count for Long Cables

1.2 Applicable Product(s)

- PGRFlycapture software dated June 6, 2008 and later using the FirePRO driver dated June 6, 2008 and later incorporates the automatic gap count setting.
- PGRFlycapture software version dated February 29, 2008 (version 1.7.2.15) and later using the FirePRO driver dated February 29, 2008 (version 1.7.2.15) and later incorporates the manual gap count setting.

1.3 Application Note Description

The purpose of this Technical Application Note is to describe how to set the gap count automatically or manually.

1.4 Introduction

The following procedure allows the user to increase the gap count on the FireWire bus. This is a requirement for cables longer than 10 meters. If gap counts are not increased appropriately, bus resets, dropped data, poor performance, etc. can occur.

Note: To access the registry key, the FirePro driver (PGR1394.sys) must be installed on your 1394 card(s). This driver is required for this feature to work.

1.5 Automatic Setting of Gap Count

- a) In the registry, go to
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{361A40FB-DC46-4ED9-BFF4-068E83D5C8AF}\xxxx\Parameters where 'xxxx' is the installed card number.
- b) In the parameters key, you should find 'BufferFill'. Simply add 'UsePingGapCount' as a DWORD value and set it to '1'.

- c) Disable/Enable the card in device manager
- d) Automatic gap count should be set.

Notes:

- Each time a new card is installed the new card will require the above changes to make it work.
- The gap count should be maintained through reboots, etc.
- To revert back to the normal gap count calculation, remove the 'UsePingGapCount' key or set it to '0'

1.6 Manual Setting of Gap Count

- a) In the registry, go to
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{361A40FB-DC46-4ED9-BFF4-068E83D5C8AF}\xxx\Parameters where 'xxx' is the installed card number.
- b) In the parameters key, you should find 'BufferFill'. Simply add 'GapCount' as a DWORD value and set it to the gap count you would like.
- c) Disable/Enable the card in device manager.
- d) Do a bus reset by unplugging/replugging a camera
- e) Wait about 15 seconds for gap count to be set.

Notes:

- Each time a new card is installed the new card will require the above changes to make it work.
- The gap count should be maintained through reboots, etc.
- To revert back to the normal gap count calculation, remove the 'GapCount' key or set it to something more than 63 (0x3F).

1.7 Additional Downloads and Support

Access more Technical Application Notes on the web at [our downloads site](#).

Point Grey Research Inc. endeavors to provide the highest level of technical support possible to our customers. Most support resources can be accessed through the [Product Support](#) section of our website.

Creating a Customer Login Account

The first step in accessing our technical support resources is to obtain a Customer Login Account. This requires a valid name, e-mail address, and camera serial number. To apply for a Customer Login Account go to [our downloads site](#).

Knowledge Base

Our on-line [knowledge base](#) contains answers to some of the most common support questions. It is constantly updated, expanded, and refined to ensure that our customers have access to the latest information.

Product Downloads

Customers with a Customer Login Account can access the latest software and firmware for their cameras from [our downloads site](#). We encourage our customers to keep their software and firmware up-to-date by downloading and installing the latest versions.

Contacting Technical Support

Before contacting Technical Support, have you:

1. *Read the product documentation and user manual?*
2. *Searched the Knowledge Base?*
3. *Downloaded and installed the latest version of software and/or firmware?*

If you have done all the above and still can't find an answer to your question, contact our [Technical Support team](#).