

Subject: Intermittent Operation of IEEE 1394 Cameras with the M4-200 FireWire Repeater System

1) Field Report

In 4Q 2005, Opticis Co. received two customer queries in which commercial/industrial grade imaging devices did not function properly with the M4-200 800 Mbps FireWire repeater system. The subject camera was the German FOculus FO432C and a similar report was also received regarding high resolution imaging devices from Point Grey Research in Vancouver, BC.

2) Background

Based on Opticis' system integration testing going back to 4Q 2000 when the M4-100 S400 repeater system was introduced, it is not unexpected to have integration issues emerge as time progresses. The operation of a high speed intelligent controller on a serial bus will invariably be challenged by hardware, software and firmware alterations as time passes.

3) Observation

Opticis obtained the FO432C camera and observed the sluggish operation of the video stream as compared to a standard 1394 copper link. The OS was Windows XP SP2. However, the camera performed flawlessly on Windows XP SP1 with the M4-200.

4) Diagnosis

In their Knowledge Base, Microsoft Ltd. identified a known bug with SP2, Article ID 885222, *Performance of 1394 devices may decrease after you install Windows XP Service Pack 2*. Refer to, <http://support.microsoft.com/kb/885222/en-us>
The SP2 upgrade changed the 1394b port to S100 when installed.

5) Final Disposition

- i) Windows 2000 SP4 solved the problem for one customer without further intervention.
- ii) The #885222 download patch for WinXP and WinXP Pro SP2 users will work for some, but not all systems, by modifying the registry to default to the highest speed.
- iii) For users with multiple 1394 host controllers or virgin SP2 software installations, manually updating the OS Registry will be required. It will be necessary to locate the VEND_ID of the host controller from the Device Manager and change the SidSpeed in the Registry for that specific controller. The Microsoft article provides the specific steps.
- iv) Although not possible at this time to verify the patch for Point Grey Research products, it seems reasonable to extrapolate this solution to their products.

Please forward any further questions to the Opticis NA office or Opticis Co. HQ in South Korea

Opticis North America Ltd.
330 Richmond Street, Suite 100
Chatham, Ontario
Canada N7M 1P7
Tel: (519) 355-0819
Fax: (519) 355-0520
Email: roger@opticis.com

Opticis Co., Ltd.
Suite 501, ByuckSan Technopia
434-6 Sandaewon-Dong, Chungwon-Ku
SungNam City, KyungKi-Do, 462-120
Tel: +82 (31) 737-8033
Fax: +82 (31) 737-8079
Email : techsupp@opticis.com