Release Notes

MVA version 1.2.6

June 30, 2020

Summary

The Machine Vision Accelerator (MVA) v1.2.6 solution greatly improves performance of machine vision applications processing data from GigE Vision devices. MVA dramatically reduces the host processor overhead while providing maximum throughput when receiving GigE Vision Stream Protocol (GVSP) content. MVA was designed for easy integration into existing GigE Vision Software Development Kits (SDKs) and native application. MVA leverages Myri-10G programmable 10-Gigabit Ethernet network adapters with custom firmware to divert GVSP data directly to user-space memory, bypassing the operating system and legacy network software stacks.

This document describes the new features associated with v1.2.6.

New Features

1. (ID #36) Added support for variable-sized buffers. By default, the buffer size is 60 MB but it can be increased up to 508 MB.

2. (ID #37) Added a parameter named `myri_mva_desc_count` that allows you to adjust the number of descriptors for larger buffers.

<table>
<thead>
<tr>
<th>descriptors x size</th>
<th>max buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>512 x 256</td>
<td>60 MB</td>
</tr>
<tr>
<td>256 x 512</td>
<td>124 MB</td>
</tr>
<tr>
<td>128 x 1024</td>
<td>252 Mb</td>
</tr>
<tr>
<td>64 x 2048</td>
<td>508 MB</td>
</tr>
</tbody>
</table>

3. (ID #38) Added support for CentOS 8.2 and Linux kernels up to 5.5.
Setting Descriptors in Linux

**To set the number of descriptors in Linux:**

1. Modify and uncomment the module parameter for `myri_mva_desc_count` in the script `/opt/mva/sbin/myri_start_stop`.

   ```bash
   # add/modify/uncomment MYRI_MODULE_PARAMS lines to change defaults
   #MYRI_MODULE_PARAMS=" myri_mva_desc_count=64 $MYRI_MODULE_PARAMS"
   ```

2. Restart the driver.

   ```bash
   sudo /opt/mva/sbin/myri_start_stop restart
   ```

Setting Descriptors in Windows

**To set the number of descriptors in Windows:**

1. Set the registry key

   ```bash
   PS C:\MVA_Myri-10G> REG ADD HKLM\SYSTEM\CurrentControlSet\services\mva /v myri_mva_desc_count /t REG_DWORD /d 64
   ```

2. Restart the network devices:

   a. Select Control Panel > Network and Internet > **Network Connections**.
   b. Click the first Myri-10G PCIe NIC with MVA and select **Disable this network device**.
   c. Click the second Myri-10G PCIe NIC with MVA and select **Disable this network device**.
   d. Click the first Myri-10G PCIe NIC with MVA and select **Enable this network device**.
   e. Click the second Myri-10G PCIe NIC with MVA and select **Enable this network device**.