icron

Release Notes

N11 Firmware for the USB 2.0 Ranger®/RG23XX ASIC-Based Family of Extender Systems

Contents

1.   Firmware Release Notes

The following notes are applicable to the N11 (1.8.5) firmware release associated with Icron's ExtremeUSB® ASIC based USB 2.0 Ranger®/RG23XX Series of Extenders.

NOTE: N11 is backwards compatible with N-Stream firmware releases N09, N08, N07, N06, and N05 when using ASIC based extenders.

IMPORTANT: Complete systems (LEX = Local Extender and REX = Remote Extenders) should always be upgraded to the most recent firmware version. In order to provide support, Icron Technical Support will require both the LEX and REX be on the same firmware, and ideally the most recent firmware.

1.1   Included Features and Fixes

The N11 firmware release is built on top of the advancements made in the N09 (1.7.6) firmware release and includes the following updates:

- Improved Mass Storage Acceleration mechanism for handling UASP on newer operating systems/USB 3.0 host controllers.
- Additional device class filtering mechanism to block all devices except audio and vendor specific devices
- Enhanced Simultaneous Users Interaction feature from 1:4 to 1:7 (Local:Remotes)
- Support for DHCP Option 60
- Added LED unit location indicator when used over LAN
- Added Link status of paired USB devices over LAN
- Ability to reset device over LAN
- More comprehensive configuration status parameters
- Forced re-tries for GMII link when only MII offered
- Block UDP commands configuration supported for USB 2.0 RG2301N/2304N models
- Fixed minor bug where switching from Static IP to DHCP would initially fail

1.2   Identified Firmware Issues

No new firmware issues have been identified as a result of this firmware release.

1.3   Date of Effect

It is estimated this firmware change will occur in some shipments from Icron beginning December 15, 2016. The actual shipping date will depend on sell-through rates of individual impacted SKUs. Please contact your account manager for more details.

1.4   Upgrade Notes

The process to upgrade firmware to N11 requires a Windows computer running Icron's ExpressLink™ software application. The computer is connected by a special programming cable to the extender. The upgrade process takes approximately 3 minutes for each of the LEX and REX units, totaling approximately 6 minutes per complete system.

Please contact Icron's Technical Support Team at http://icron.com/support to determine how best to proceed on upgrading your ExtremeUSB based extenders.

NOTE: all configurations for your application should be tested prior to any production installation or upgrade roll-out.

2.   Impacted Products

Supported Icron product part numbers include, but are not limited to the following ExtremeUSB extenders:

Extender Model	Part Numbers
USB 2.0 Ranger® 2301	00-00391, 00-00392, 00-00393, 00-00394, 00-00395
USB 2.0 Ranger® 2301GE-LAN	00-00396, 00-00397, 00-00398, 00-00399, 00-00400
USB 2.0 Ranger® 2304	00-00347, 00-00348, 00-00349, 00-00350, 00-00373
USB 2.0 Ranger® 2304GE-LAN	00-00376, 00-00377, 00-00378, 00-00379, 00-00380
USB 2.0 Ranger® 2311	00-00401, 00-00402, 00-00403, 00-00404, 00-00405
USB 2.0 Ranger® 2312	00-00406, 00-00407, 00-00408, 00-00409, 00-00410
USB 2.0 RG2300A Core Modules	02-00074, 02-00075
USB 2.0 RG2310A Core Modules	02-00076, 02-00077
USB 2.0 RG2301	01-00570, 01-00571, 01-00572, 01-00573, 01-00574
USB 2.0 RG2301N	01-00604, 01-00605, 01-00606, 01-00607, 01-00608, 10-00529, 10-00530
USB 2.0 RG2301S	10-00540, 10-00541
USB 2.0 RG2301GE-LAN	01-00575, 01-00576, 01-00577, 01-00578, 01-00579
USB 2.0 RG2304	01-00448, 01-00449, 01-00450, 01-00451, 01-00537
USB 2.0 RG2304N	01-00609, 01-00610, 01-00611, 01-00612, 01-00613, 10-00531, 10-00532
USB 2.0 RG2304S	10-00538, 10-00539
USB 2.0 RG2304GE-LAN	01-00453, 01-00454, 01-00455,01-00456, 00-00529
USB 2.0 RG2311	01-00580, 01-00581, 01-00582, 01-00583, 01-00584
USB 2.0 RG2312	01-00585, 01-00586, 01-00587, 01-00588, 01-00589

The above is not an exhaustive list of impacted extension products. Please review your own ExtremeUSB ASIC-based extender models, or consult with your account manager to determine if this release applies to you.

3.   Definitions

ASIC – Application Specific Integrated Circuit

Device Cycle – Unplug and plug back in, or turn OFF and turn back ON a USB device.

DHCP - Dynamic Host Configuration Protocol is a client/server protocol that automatically provides an IP host with its address and other related configuration information such as the subnet mask and default gateway.

FPGA – Field Programmable Gate Array

GMII – Gigabit Media Independent Interface, supporting throughputs up to 1,000 Mbps.

HID – Human Interface Device such as mouse, keyboard.

IP – Internet Protocol

LAN – Local Area Network.

LEX – Local Extender module, which is the module that is connected to the host computer.

Link Cycle – Unplug and plug back in the link between the Local and Remote Extenders. This is typically the Category 5e/6/7 cable or Fiber cable between the units.

Local Extender Cycle – Unplug the Local Extender unit from the host computer, and plug it back in.

MII – Media Independent Interface also known as "Fast Ethernet", supporting throughputs up to 100 Mbps.

Power Cycle – Power OFF a unit and powering it back ON. A power cycle may apply to an extender module, USB device, or a host computer.

Remote Extender Cycle – Unplug the Remote Extender from the power source, and plug it back in. One some systems this may be the same as a Link Cycle.

REX – Remote Extender module, which is the module that is connected to the USB device(s).

SKU – Stock Keeping Unit

Suspend Cycle – Allowing a host computer to suspend the USB bus, ports, and then forcing the host computer to bring the USB bus or ports out of the suspend state.

UASP – USB Attached SCSI (Small Computer System Interface) Protocol

UDP – User Datagram Protocol

USB – Universal Serial Bus, a communication standard between devices and computers.

UTP – Unshielded Twisted Pair consists of two unshielded cable twisted to each other and is commonly used in Local Area Network.

4.   Notes

As a result of transmission delays, and other aspects inherent to USB extension, some device and host controller combination may not work as expected in certain situations, such as during power cycles, or when bandwidth requirements increase.

If you have concerns, questions or comments about specific devices, controllers, operating systems or these release notes, please contact Icron Technologies Technical Support at http://icron.com/support in advance so we are better able to assist you.

4.1   Related documents

Previous N-stream firmware release notes are available in the following documents:

90-01119-A01	N04 Firmware Release Notes	Apr 2013
90-01242-A01	N05 Firmware For Ranger/RG2304 Family of USB 2.0 Extenders Systems	May 2014
90-01276-A01	N06 Firmware For RG2300 Core Series of USB 2.0 Extenders Systems	May 2014
90-01283-A01	N07 Firmware for the USB 2.0 Ranger/RG2300 Family of Extender Systems	Oct 2014
90-01356-A01	N08 Firmware for the USB 2.0 Ranger/RG2300 Family of Extender Systems	Oct 2015
90-01378-A01	N09 Firmware for the USB 2.0 Ranger/RG2300 Family of Extender Systems	Dec 2015