icron

Release Notes

N07 Firmware for the USB 2.0 Ranger/RG2300 Family of Extender Systems

EXTREME
USB®

Contents

1.   Firmware Release Notes

The following notes are applicable to the N07 (1.3.8) firmware release associated with Icron's ExtremeUSB® based USB 2.0 Ranger/RG2304 and USB 2.0 RG2300 Core Series of USB 2.0 Extenders.

NOTE: N07 is backwards compatible with N-Stream firmware releases, N06, N05, N04 and N03.

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 LEX and REX be on the same firmware, and the most recent firmware.

1.1   Included Features and Fixes

The N07 firmware adds the following features:
- The activity LED of the Core2300 series is pulsed briefly on system startup to allow customers with existing designs based around the Core2100 to identify which product is in the SO-DIMM slot.
- Added support for using Valens chipset as the link mechanism

The N07 firmware adds the following fixes:
- Corrected a defect where mass storage interface filtering only worked if mass storage acceleration was enabled (Note: mass storage acceleration is disabled in the USB 2.0 Ranger/RG 2304-LAN model).
- Stability improvement for CLEI link type
- Improved handling of invalid data on the USB bus
- Improved support for devices with high bandwidth isochronous in endpoints (e.g. webcams)
- Fixed a defect pertaining to non-volatile memory storage system where it was possible for certain elements to become corrupted.
- Corrected a bug in the local extender USB retry mechanism.
- Mass storage acceleration improvements.

The N07 firmware release is built on top of the advancements made in the N06 firmware release. N06 was not released for Ranger/RG2304 customers, so the changes between N05 and N06 are summarized below.

The N06 firmware added the following features:
- Interoperability support between different Core 2300 series models

The N06 firmware added the following fixes:
- Improved support for mass storage devices
- Support for external pull-down and pull-up resistors required on current RG2300 Core Series boards

1.2   Identified Firmware Issues

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

1.3   Date of Effect

Firmware N07 was released to the factory on October 8, 2014 however the shipping date is dependent on the sell-through rates of various product models. See the table below for estimated ship dates:

USB 2.0 RG2300/2310 Core Modules	January 2015
USB 2.0 Ranger/RG 2304 Series	January 2015

1.4   Upgrade Notes

The process to upgrade to firmware N07 requires a Windows computer running Icron's ExpressLink™ software application connected by a specialty programming cable to the extender. The upgrade process takes approximately 3 minutes for each of the local and remote extender units, totaling approximately 6 minutes per complete set.

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

Please note: all configurations 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 2304	00-00347, 00-00348, 00-00349, 00-00350
USB 2.0 Ranger 2304-LAN	00-00335, 00-00336, 00-00337, 00-00338
USB 2.0 RG2304	01-00448, 01-00449, 01-00450, 01-00451
USB 2.0 RG2304-LAN	01-00397, 01-00398, 01-00399, 01-00400
USB 2.0 RG2304GE-LAN	01-00453, 01-00454, 01-00455,01-00456
USB 2.0 RG2300 Core Module	02-00042, 02-00043
USB 2.0 RG2310 Core Module	02-00044, 02-00046

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

3.   Definitions

Device Cycle – unplugging and plugging back in, or turning off and turning back on a USB device.

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

Link Cycle – unplugging and plugging back in the link between the Local and Remote Extenders. This is typically the Cat X cable or Fiber cable between the units.

Local Extender Cycle – unplugging the Local Extender unit from the host computer, and plugging it back in.

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 – unplugging the remote extender from the power source, and plugging it back in. One some systems this may be the same as a Link Cycle.

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

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.

USB – Universal Serial Bus. Communication standard between devices and computers.

UTP – Unshielded Twisted Pair. CatX cabling with no shielding against electromagnetic interference.

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	April 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

4.2   Revision Control

90-01283-A01	Initial release	October 8, 2014
90-01283-A02	Updated timelines and minor wording clarification	October 27, 2014
90-01283-A03	Updated timeline for USB 2.0 Ranger/RG 2304 Series and minor wording clarification	December 8, 2014