



Release Notes

R06 Firmware for 2200 Series Products

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1. Firmware Release Notes

The following notes are applicable to the R06 firmware release associated with the USB 2.0 Ranger® 2200 family of extenders, USB 2.0 Core 2200 family of extenders, and the LionsGate™ ASIC.

NOTE: R06 is backwards compatible with R-Stream firmware releases, R03 through R05. However, the R06 release is not compatible with earlier R-Stream releases of R01 and R02.

IMPORTANT: Complete systems (Local and 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 R06 firmware adds the following features and fixes:

- Support for alternate interfaces where the endpoint type differs between alternate settings
- Improves support for USB transaction timeouts
- Increases the number of devices and hubs that can be connected to the REX from 14 to 15
- Improved support for hosts that perform issuing reset/suspends and resumes using out of spec times
- Increases support for some newer BIOSes
- Resolves some lockups when used with ASUS AMD A75 BIOS

1.2 Identified Firmware Issues

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

1.3 Observed Device Issues

The following is a list of issues observed in this firmware QA cycle with specific devices, operating systems, and host controller combinations. It is not an exhaustive list of all known issues and is provided for informational purposes only. Issues may be discovered in other combinations.

The installer or end user is responsible to test any configurations prior to an installation or upgrade roll-out. Icron Technologies is not responsible for any loss or costs as a result of incompatibilities or issues, regardless of if they have been identified or not by Icron.

Any issue that occurs without USB extension is not listed here and is deemed to not be an extension related issue.

Typical workarounds for any “cycle” related issue is to try cycling the device or component again.

Icron Tracking ID	Device	Controller	Host	Frequency	Issue Description
3698 3700	Low Speed/High Speed Devices	AMD A75	Windows 7	Occasional	After cold boot, device will enumerate but not work
3816	N/A	VIA USB 3.0	N/A	Frequent	Extenders fail to enumerate. Workaround by placing hub between LEX and host
3711	Belkin Hub-To-Go	ASMedia ASM1023	Windows 7	Frequent	Devices connected to hub may not operate properly, or may crash

1.4 Upgrade Procedure

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 about specific devices, controllers or operating systems, please contact Icron Technologies Customer Support at <http://icron.com/support> in advance so we are better able to assist you.

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:

- **USB Ranger 2212 P/N:** 00-00252, 00-00253, 00-00254, 00-00255
- **USB Ranger 2204 P/N:** 00-00256, 00-00257, 00-00258, 00-00259
- **USB Ranger 2224 P/N:** 00-00260, 00-00261, 00-00262, 00-00263
- **USB Ranger 2244 P/N:** 00-00264, 00-00265, 00-00266, 00-00267
- **USB Ranger 2201 P/N:** 00-00297, 00-00298, 00-00299, 00-00300
- **USB Ranger 2211 P/N:** 00-00315, 00-00316, 00-00317, 00-00318
- **Core 2200 Modules P/N:** 10-00221, 10-00222, 10-00223, 10-00224
- **Custom P/N:** 01-00286, 01-00287, 01-00288, 01-00289, 01-00290, 01-00291, 01-00292, 01-00293, 01-00294, 01-00295, 01-00296, 01-00297, 01-00298, 01-00299, 01-00300, 01-00301, 01-00302, 01-00303, 01-00304, 01-00305, 01-00306, 01-00307, 01-00308, 01-00309, 01-00310, 01-00311, 01-00312, 01-00313, 01-00314, 01-00315, 01-00316, 01-00317, 01-00324, 01-00325, 01-00328, 01-00329, 01-00330, 01-00332, 01-00333, 01-00334, 01-00335, 01-00337, 01-00338, 01-00339, 01-00340, 01-00341, 01-00342, 01-00344, 01-00345, 01-00346, 01-00349, 01-00350, 01-00350, 01-00351, 01-00361, 01-00364, 01-00370, 01-00372, 01-00373, 01-00374, 01-00375, 01-00376, 01-00377, 01-00378, 01-00379, 01-00382, 01-00383, 01-00384, 01-00385, 01-00388, 01-00389, 01-00390, 01-00391, 01-00408, 01-00409, 01-00410, 01-00411, 01-00412, 01-00430, 01-00431, 01-00432, 01-00433, 01-00434, 01-00436, 01-00471, 01-00472, 01-00478, 01-00479, 01-00481, 01-00482
- **Turnkey P/N:** 02-00015, 02-00016, 02-00017, 02-00018, 02-00020, 02-00021, 02-00026, 02-00027, 02-00040, 02-00041
- **Module P/N:** 10-00151, 10-00152, 10-00153, 10-00154, 10-00155, 10-00156, 10-00161, 10-00162, 10-00163, 10-00164, 10-00165, 10-00166, 10-00167, 10-00168, 10-00169, 10-00170, 10-00173, 10-00174, 10-00175, 10-00176, 10-00177, 10-00178, 10-00179, 10-00180, 10-00181, 10-00182, 10-00191, 10-00192, 10-00193, 10-00194, 10-00195, 10-00196, 10-00208, 10-00209, 10-00216, 10-00217, 10-00218, 10-00219, 10-00220, 10-00222, 10-00223, 10-00224, 10-00227, 10-00228, 10-00229, 10-00230, 10-00231, 10-00232, 10-00233, 10-00234, 10-00237, 10-00238, 10-00239, 10-00240, 10-00247, 10-00248, 10-00255, 10-00256, 10-00257, 10-00258, 10-00259, 10-00260, 10-00261, 10-00276, 10-00277, 10-00278, 10-00279, 10-00280, 10-00281, 10-00295, 10-00296, 10-00297, 10-00298, 10-00299, 10-00300, 10-00301, 10-00302, 10-00303, 10-00304, 10-00319, 10-00320, 10-00321, 10-00322, 10-00325, 10-00326, 10-00355, 10-00356, 10-00357, 10-00358, 10-00363, 10-00364, 10-00365

Please review your own Icron based extenders, or consult with your account manager to determine if this release applies to your extenders.

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. On 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

For wired USB 2.0 Ranger® extension units, the minimum requirements for the UTP extension cable used are as follows:

- It is recommended that the following cabling be used to ensure operation of the wired USB 2.0 Ranger units (USB 2.0 Ranger® 2201, 2204, 2211, 2212).
 - Cat-5e UTP solid core cable with two RJ-45 connectors if using surface cabling.
 - Cat-5e UTP solid core cabling with two information outlets and two Cat-5e UTP patch cords with RJ-45 connectors if using premise cabling.
- Cat-5e UTP solid core cabling is the minimum requirement for proper operation at 100 meters. Category 6 (or better) UTP or STP cable may be substituted.
- The maximum length of the Cat-5e UTP cable must not exceed 100m. If Cat-5e patch cable is used, the length of each patch cable should not exceed 5m (EIA/TIA-568 specification).