

LongView™ IP KVM Extender System

Firmware Revision 4.0.0.9

Release Notes

January 17th 2011

This document outlines:

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LongView IP Extender System Firmware Version and Compatibility Version 4.0.0.9

Version 4.0.0.9 is intended to be used in a system with the following LongView extender system component revisions:

- LVIPDH-T transmitter revision 4.0.0.9
- LVIPDH-R user station revision 4.0.0.9
- LVIPHR-R user station revision 4.0.0.9
- LVIPHR-T transmitter revision 4.0.0.9
- LVIP-T transmitter revision 4.0.0.9
- LVIP-R user station revision 4.0.0.9
- LVIPVG-R user station revision 4.0.0.9
- LVIPVG-T transmitter revision 4.0.0.9

Important Installation Notes

The new Share Mode software version 4.x.x.x for the LongView IP extender system firmware is NOT compatible with older versions of LongView IP extender system firmware! All transmitters and receivers on your network MUST be upgraded to firmware version 4.x.x.x or higher, if they are not already at that level. If you have purchased a completely new system, please check the software versions of each device to ensure that they are all at level 4.x.x.x or higher.

Important Share Mode Notes

New Network Requirements for Share Mode

Using the LongView IP extender system in Share Mode requires IGMP protocol version 2 or higher network capabilities. In addition, all Ethernet switches to which the LongView IP extender system user stations and transmitters are connected must be IGMP Snooping capable and have IGMP Snooping enabled. Transmitters in Share Mode send out multicast IP packets to the Ethernet switch. If the switch used is a non-IGMP capable switch, the switch will broadcast the packets to every port, causing undesirable results.

For Private Mode only users, IGMP is not required, and no changes to any current network settings are required.

Monitor Requirements

All monitors connected to receivers that are sharing a particular transmitter have to be capable of displaying the same resolution and frequency. The transmitter cannot transmit multiple resolutions at the same time.

Important Parameters to Configure when Setting up for Share Mode

- *The gateway addresses have to be set on the transmitters and receivers when Share Mode is used.* If you do not have a default gateway IP address, then use the IP address of the Ethernet switch as the gateway address. For Private Mode operation only, the gateway addresses for the transmitter and receiver do not have to be set, but they still may be set for consistency if the user desires.
- For Share Mode, both the transmitters and the receivers have to be set to Share Mode. Setting Share Mode is done from the serial interface.
- For Share Mode, it is recommended that Monitor Resolution Checking at the receivers be set to "off". This can be set by the serial interface.
- Up to eight receivers can share a target (computer) that is connected to a single transmitter. If there are two targets and each target is connected to its own transmitter, then 16 receivers can share the two transmitters, but no more than eight receivers may be connected to the same target at a time. This multiplying effect can continue, allowing for hundreds of transmitters and receivers to be connected concurrently on a single system.
- See the LongView IP Extender System Installer/User Guide for more information.

How to Update Firmware

The transmitters and receivers can be upgraded using a serial or http upgrade procedure, as described below.

Prior to upgrading/downgrading:

1. Remove any attached vMedia devices (memory key or CD/DVD ROM).
2. When reverting to a previous version of firmware, always set the Network Speed on both the transmitter and receiver to Auto-Negotiate.

Procedure 1 - Serial port upgrade

1. Both the transmitter and receiver must be upgraded to 4.0.0.9, with the transmitter being upgraded first.
2. Power up the receiver and transmitter and make sure there is a connection between them.
3. Connect the receiver via a null modem cable to a PC running HyperTerminal or equivalent. Configure the HyperTerminal session for 57600 bits per second, 8 data bits, no parity, 1 stop bit and no flow control.
4. From the first screen on the console, select option 2 to access the Transmitter menu. If the password option is enabled, you will be prompted for a password ("password" is the default).
5. From the Transmitter menu, select *Firmware Management*.
6. Choose *Transmitter Flash Upgrade Via XMODEM*.
7. You will see the letter C moving across the screen. In HyperTerminal, go to the Transfer pull-down menu and choose *Send file*.
8. In the Filename field, specify the location of the upgrade file. In the Protocol pull-down menu, select *Xmodem*. Click the *Send* button to initiate the file transfer. The upgrade should be completed in approximately 6 to 35 minutes. The filename to load in the unit is listed in the following table.

Note: In the table, 4.x.x.x is a place holder for the code version you desire to load. For example, you may wish to load 4.0.0.9.

<i>Transmitter or Receiver</i>	<i>Filename</i>
<i>LVIP-R</i>	<i>RX0000_4.x.x.x</i>
<i>LVIP-T</i>	<i>TX0000_4.x.x.x</i>
<i>LVIPDH-R</i>	<i>RX1000_4.x.x.x</i>
<i>LVIPDH-T</i>	<i>TX1000_4.x.x.x</i>
<i>LVIPHR-R</i>	<i>RX2000_4.x.x.x</i>
<i>LVIPHR-T</i>	<i>TX2000_4.x.x.x</i>
<i>LVIPVG-R</i>	<i>RX0000_4.x.x.x</i>
<i>LVIPVG-T</i>	<i>TX0000_4.x.x.x</i>

9. When upgrading from some versions of 3.x.x.x software to 4.x.x.x software, near the end of the upgrade there may be serial channel activity scrolling on the screen. This is an indication that the upgrade is complete. Upgrading from other versions of 3.x.x.x may not result in the same scrolling activity on the serial channel.
10. Disconnect the Ethernet (Cat 5) cable from the back of the transmitter, and proceed with the upgrade of the receiver.
11. Cycle power on the receiver.
12. From the first screen on the console, select option 1 to access the Receiver menu. If the password option is enabled, you will be prompted for a password ("password" is the default).
13. From the Receiver menu, select option 3, *Firmware Management*.
14. Then select *Receiver Upgrade Via XMODEM*.
15. You will see the letter C moving across the screen. In HyperTerminal, go to the Transfer pull-down menu and choose *Send file*.
(Continue instructions on the next page of this document)

16. In the Filename field, specify the location of the upgrade file XXXXXX_4.x.x.x.dld. In the Protocol pull-down menu, select *Xmodem*. Click the *Send* button to initiate the file transfer. The upgrade should be completed in approximately 6 to 35 minutes. The filename to load in the unit is listed in the following table.

Note: In the table, 4.x.x.x is a place holder for the code version you desire to load. For example, you may wish to load 4.0.0.9.

<i>Transmitter or Receiver</i>	<i>Filename</i>
<i>LVIP-R</i>	<i>RX0000_4.x.x.x</i>
<i>LVIP-T</i>	<i>TX0000_4.x.x.x</i>
<i>LVIPDH-R</i>	<i>RX1000_4.x.x.x</i>
<i>LVIPDH-T</i>	<i>TX1000_4.x.x.x</i>
<i>LVIPHR-R</i>	<i>RX2000_4.x.x.x</i>
<i>LVIPHR-T</i>	<i>TX2000_4.x.x.x</i>
<i>LVIPVG-R</i>	<i>RX0000_4.x.x.x</i>
<i>LVIPVG-T</i>	<i>TX0000_4.x.x.x</i>

17. Confirm the new revision is displayed on the serial console of the receiver.
18. Once the receiver has been upgraded, re-connect the Ethernet (Cat 5) cable to the transmitter, and re-establish connection with the transmitter. Then, confirm the new revision of the transmitter by displaying it on the serial console of the transmitter.

Procedure 2 - Upgrade using HTTP

1. Both the transmitter and receiver must be upgraded to 4.0.0.9, with the transmitter being upgraded first..
2. Power up the receiver and transmitter and make sure there is a connection between them.
3. Connect the receiver via a null modem cable to a PC running HyperTerminal or equivalent. Configure the HyperTerminal session for 57600 bits per second, 8 data bits, no parity, 1 stop bit and no flow control.
4. Choose option 2 on the Main Menu to access the Transmitter menu. If the password option is enabled, you will be prompted for a password.
5. From the Transmitter menu select option 3, *Firmware Management*.
6. Choose *Transmitter Flash Upgrade Via HTTP*. You will be prompted to enter the URL for the upgrade file. The filename to load in the unit is listed in the following table.

Note: In the table, 4.x.x.x is a place holder for the code version you desire to load. For example, you may wish to load 4.0.0.9.

<i>Transmitter or Receiver</i>	<i>Filename</i>
<i>LVIP-R</i>	<i>RX0000_4.x.x.x</i>
<i>LVIP-T</i>	<i>TX0000_4. x.x.x</i>
<i>LVIPDH-R</i>	<i>RX1000_4. x.x.x</i>
<i>LVIPDH-T</i>	<i>TX1000_4. x.x.x</i>

LVIPHR-R	RX2000_4.x.x.x
LVIPHR-T	TX2000_4.x.x.x
LVIPVG-R	RX0000_4.x.x.x
LVIPVG-T	TX0000_4.x.x.x

7. Enter the URL for the upgrade file using the following syntax:
`http://<server IP address>[:server port]/<upgrade file path>`
For example:
`http://192.168.0.1:8080/TX1000_XXXX.dld`
Note: If the server is set up on standard port 80, the port information can be omitted.
The upgrade should take approximately five minutes.
8. When upgrading from some versions of 3.x.x.x software to 4.x.x.x software, near the end of the upgrade there may be serial channel activity scrolling on the screen. This is an indication that the upgrade is complete. Upgrading from other versions of 3.x.x.x may not result in the same scrolling activity on the serial channel.
9. Disconnect the Ethernet (Cat 5) cable from the back of the transmitter, and proceed with the upgrade of the receiver
10. Cycle power on the receiver.
11. Connect the receiver via a null modem cable to a PC running HyperTerminal or equivalent. Configure the HyperTerminal session for 57600 bits per second, 8 data bits, no parity, 1 stop bit and no flow control.
12. Choose option 1 on the Main Menu to access the Receiver menu. If the password option is enabled, you will be prompted for a password.
13. From the Receiver menu select option 3, *Firmware Management*.
14. Choose *Receiver Flash Upgrade Via HTTP*. You will be prompted to enter the URL for the upgrade file. The filename to load in the unit is listed in the following table.

Note: In the table, 4.x.x.x is a place holder for the code version you desire to load. For example, you may wish to load 4.0.0.9.

<i>Transmitter or Receiver</i>	<i>Filename</i>
LVIP-R	RX0000_4.x.x.x
LVIP-T	TX0000_4.x.x.x
LVIPDH-R	RX1000_4.x.x.x
LVIPDH-T	TX1000_4.x.x.x
LVIPHR-R	RX2000_4.x.x.x
LVIPHR-T	TX2000_4.x.x.x
LVIPVG-R	RX0000_4.x.x.x
LVIPVG-T	TX0000_4.x.x.x

15. Enter the URL for the upgrade file using the following syntax:
`http://<server IP address>[:server port]/<upgrade file path>`
For example:
`http://192.168.0.1:8080/RX1000_XXXX.dld`
Note: If the server is set up on standard port 80, the port information can be omitted.
The upgrade should take approximately five minutes.
16. Confirm the new revision is displayed on the serial console of the receiver.
17. Once the receiver has been upgraded, re-connect the Ethernet (Cat 5) cable to the transmitter, and re-establish connection with the transmitter. Then, confirm the new revision of the transmitter by displaying it on the serial console of the transmitter.

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Enhancements above 4.0.0.0 software

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1. When Share Mode was used with a VGA target, the extenders would occasionally lock up . 4.0.0.9 corrects this problem.
2. In the previous version of software, the transmitter or receiver would reset would eventually reset due to a memory leak. This is now corrected.
3. If the LVIP-R receiver connects to a target that has no video, a *NO VIDEO DETECTED FROM THIS TARGET* message would display after 20 seconds. This behavior was already in the LVIPHR and LVIPDH receivers.
4. Further improvements in WACOM tablet performance were added to this version. HID optimized mode should be enabled when WACOM tablets are being used.
5. An F12 key command was added in the OSD and will attempt to re-establish keyboard/mouse functionality between transmitter and receiver. If the mouse and/or keyboard stop working or aren't working on the computer end, then if you can bring up the OSD, you can use the F12 option to attempt to restart them.
6. Information about DVDs:
 - Limited support for DVD writing has been added to 4.0.0.9. Due to the large number of combinations of OS, drivers, platforms, and hardware devices, support is very limited.
 - The following are some recommended devices:
 - Samsung SE S084
 - Sony DRX-S77U
 - LaCie Sam Hecht Design
 - Under Windows® systems, DVDs can be written reliably with Nero and Roxio software, but the built-in Windows writing capability is not recommended.
 - Macs used with the LongView IP extender units can read DVDs but writing is not supported.
7. Issues with TG82tp LCD Tray keyboard have been corrected. No action is required on the part of the user.
8. Issues related to HP Z800 and HP Z600 target computers have been corrected.
The following two issues with target computers HP Z800 and HP Z600 are fixed by 4.0.0.9
 - A user can enter the BIOS menu for the workstation. Prior to 4.0.0.9, a user could not enter the BIOS menu for the workstation.
 - The keyboard and mouse will function when in BIOS mode for HP Z800 Workstation when extended with LongView IP extender system using 4.0.0.9 firmware.
9. Switching time has been improved.
10. OSD performance was enhanced and the following issues have been resolved:
 - a. Display of garbage characters on the OSD.
 - b. OSD not being functional in certain cases.
 - c. Issue with double-clicks in the OSD.
 - d. Issue with displaying the correct transmitter information.
11. Revision 4.0.0.9 continues to allow users to set the IP address of the transmitters and receivers from the OSD.
12. Boot Protocol Mode –
In the Transmitter Serial Console Settings menu, the Toggle AIX USB Mode option has been renamed Boot Protocol. The underlying functionality is unchanged. This setting was formally AIX mode and the logical meaning was reversed to reflect the new terminology.

Disabling the Boot Protocol option tells the transmitter to ignore attempts by the computer to put the USB keyboard/mouse into "boot protocol" mode. This "boot protocol" mode is typically only used during the BIOS phase of booting, and when the OS boots up, it switches into "report protocol" mode for normal operation.

The default for the Boot Protocol setting is ENABLED. ENABLED should be used in most cases unless directed by Tech Support or Engineering to correct a keyboard/mouse problem on certain rare computers.

13. An explanation of Video Power Savings Mode is not yet in the manual. Details of that feature are included here.

The Display Power Saving Mode controls the way that this receiver signals the attached video monitor to go into power save mode, when there is no video content being received from the computer that is connected to the paired transmitter. Not all power saving modes are supported by all monitors. Some modes may save more/less power and result in slower or faster recovery.

The recommended option setting is "none". If power saving is necessary, the recommendation is "Auto-Detect". If Auto-Detect fails, the user is likely unable to use video power savings. If advanced users wish to use one of the specific modes below, the monitor should be checked for power saving capabilities.

None:

Power save is not activated.

Standby:

Power save is activated by sending the attached monitor a Standby signal (h-sync off, v-sync on).

Suspend:

Power save is activated by sending the attached monitor a Suspend signal (h-sync on, v-sync off).

Active Off:

Power save is activated by sending the attached monitor an Active Off signal (h-sync off, v-sync off).

Auto-Detect:

The appropriate signaling is used to activate power save mode based on information reported by the monitor itself (from the EDID).

14. In Share Mode, a problem with vMedia devices becoming unusable after switching between MAC targets has been fixed.

15. The following serial mode options have been added.

Toggle VMedia Support

The Toggle VMedia Support option was added to the Receiver Serial Console menu (under Virtual USB settings). This option may be used to disable/enable support for USB Mass Storage devices such as flash drives.

Toggle Short Packet Mode

The Toggle Short Packet Mode option was added to the Transmitter Serial Console menu (under USB Settings). This option configures the transmitter to use short (8 byte) or normal (64 byte) USB packets for the keyboard and mouse endpoints. Unless there is a known problem with the target computer handling 64-byte packets, Short Packet Mode should be set to DISABLED.

Debug Information

Config Information and All Information options were added to the Debug Information menus on both the Transmitter and Receiver Serial Console menus. These options output additional information that is intended to help Tech Support and Engineering investigate reported problems.

If you are upgrading transmitters and receivers from 3.x.x.x, the following additional enhancements and fixes apply. These were originally added with the 4.0.0.0 release, and are, of course, carried forward into 4.0.0.9.

Enhancements above 3.x.x.x software

1. Share Mode functionality added to LVIPHR-T, LVIPHR-R, LVIPDH-T, and LVIPDH-R transmitters and receivers
2. Added capability for 4.0.0.9 LVIP-T, LVIP-R, LVIPVG-T and LVIPVG-R transmitters and receivers to co-exist on a network with 4.0.0.9 versions of LVIPHR-T, LVIPHR-R, LVIPDH-T, and LVIPDH-R transmitters and receivers. Note: While the LVIPHR-T, LVIPHR-R, LVIPDH-T, and LVIPDH-R transmitters and receivers can co-exist on the same Ethernet network with other units that are operating in Share Mode, the LVIP-T and LVIPVG-T transmitters cannot be shared.
3. Added Video Power save option.
4. Added OSD tabs for network configuration.
5. *No video detected* message appears when DUS is connected to DIP but DIP has no video connection.

Fixes above 3.x.x.x software

1. Wacom speed improvement .
2. Enhancements for switching connectivity when connected to VGA video.

Known Issues

1. Writing to a DVD is not supported on a Macintosh computer.
 2. Problems displaying video with Apple Cinema Displays or any display that does not support 800x600@60Hz resolution.
 - The cause has been isolated and a fix will be provided in the next release. Please check the Avocent web site at:
http://www.avocent.com/Support_Firmware/LongView/LongView_IP_Digital_Extender.aspx for revision 4.0.0.10 or higher for a fix to this problem.
 3. Issue with Intel Q45 Express Graphics chipset and Intel G41 Express Graphics chipset not outputting video.
 4. For HP Z800 and HP Z600 target computers, upon wakeup from standby mode, the KVM connected USB mouse and keyboard are not functional.
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Next planned release

The next release after 4.0.0.9 is planned for sometime in April 2011. The following changes are planned to get included in that release. More details will be provided with the release notes at that time. Even though the plan is to include everything listed below, it is possible some changes may not make the release.

1. In the case of when no video is detected from the server --- Change that removes the OSD immediately after video is detected, instead of allowing it to timeout.
2. Fix for the Apple Cinema Display (model A1082 23") issue listed above.
3. A fix for a Mac Bootcamp issue
4. Adding support for Signotec Signpad.
5. Adding support for some XKeys devices.
6. Change to eliminate the need for setting a Gateway in Share Mode.