



Release Note

Streaming Client V2.17

Firmware name:	Streaming Client V2.17		
Released:	31. May. 2010		
Package name:	streaming_client_kit_v0217_20100531.zip		
Version overview:	Type	File name	Version Date
	Firmware	stream.rom	V02.17_20100531
	WEB UI	streamapp.cob	V04.00_20
	FW Ext. 1	sg.bin	VA8.05_20100531
	FW Ext. 2	fs.bin	VA2.05_20100113
	FW Ext. 3	bclio.bin	V01.14_20100421
	Bootloader	unifull.spb	V99.15_20100512

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I Hardware Compatibility

This firmware is intended to run on the following devices:

- Exstreamer 100, 110, 200, 1000
- IPAM 100, 200, 300

Note: The firmware can run on any other Barix audio devices (e.g. Annunicom, Exstreamer Digital), however the functionality is not guaranteed.

AAC+ decoding is available only on IPAM 300 based hardware (Exstreamer 100, 110 and 200 labeled “AAC+ capable”).

2 New Features

The following new features have been implemented in the Streaming Client v2.16 (compared to version 2.12):

- implemented frame based buffering allowing much more accurate decoding latency
- new parameters in Status and Barimon: latency, duplicated frames, dropped frames
- #052.49: Advanced configuration upgraded so “Apply” needs to be done only once; no need to reboot the device with every configuration page
- #052.62: Shoutcast re-uses TCP connection to avoid problems with non-standard media servers which cannot handle 2 consecutive connections per stream
- #063.24: supports FAT format on "Linux" partition type
- FAT32 support
- new format of the rescuekit

3 Bugs Fixed In This Version

- #047.19: Exstreamer I10 resets if DHCP server responds too quickly
- #052.32: dropouts in 48kHz AAC+ at 48kbit/s
- #052.52: commands in `update.txt` (remote update) cause permanent message "Updating..." on the display
- #052.53: missing "http://" prefix in the Barimon URL
- #052.55: "yesno" in "Filesystem present" on the status page
- #052.56: wrong title with HTTP/RTP
- #052.67: port number overflow in proxy request
- #052.69: fixed possible temporary deadlock when primary stream immediately stops and backup is a file
- #053.15: broken MP3 frame can freeze AAC+ capable devices (mostly happened with Shoutcast)
- #053.18: most WMA files fail to play (in FW version 2.14 and 2.15)
- #053.19: RTP decoder hangs if SSRC changes during buffering
- #063.11: device does not start up if the USB stick is read-only and USB Autoplay is on
- #063.25: Access beyond end of media if file ends at cluster boundary
- #066.01: ping to a device on a LAN with the incoming router distinct to the gateway not working (answer sent to the incoming routing rather than to the gateway)
- #066.07: WEB server sometimes rejects the connection (main page stops reloading)
- #066.08 and #066.09: TCP windowing bugfixes
- #076.01: wrong evaluation of space in WEB file names

- TCP optimizations
- fixed instability in PCM playback on Micronas based devices
- reduced audio latency in low bitrate PCM modes on Micronas based devices
- stability issues with various USB sticks

4 Known Limitations

- I/O over RTP (contact closures sent by the Instreamer) are not 100% in sync with audio, the audio buffer is not respected
- #052.57: changing channel via reset button is unstable
- #052.59: Click in the priority message during HTTP streaming

4.1 Volume Source Control

The Volume Source Control panel (VSC) uses a serial polling protocol to transfer data between the Barix unit and the VSC. This protocol causes additional load, which on some devices may cause audio dropouts while playing very high bitrate audio.

5 Major Modifications

5.1 RTP Streaming

New buffering method has been implemented in the RTP decoder (standard stream as well as priority), allowing stable synchronisation within one RTP frame.

The decoder delay is configured in milliseconds rather than in bytes as in the previous versions.

Multiple devices can be synchronised by configuring to the same delay.

5.2 WEB UI

RTP settings

The RTP delay is defined in milliseconds rather than in bytes. The default latency is 300ms for the priority port and 600ms for the standard stream.

NOTE:

The RTP delay uses the same location in the EEPROM Setup as was previously used for the buffer level in bytes. Therefore when upgrading from a previous version via Web Update or Remote Update do not forget to set the RTP delay in milliseconds.

Status page

New RTP status parameters have been introduced:

- current and average latency
- number of dropped and duplicated frames

Configuration

The “Apply” and “Cancel” buttons in the Configuration

section has moved to the left column below the menu.

In “Advanced Settings” there is no more need to reboot the device when changing parameters in multiple tabs. All configuration parameters are sent to the device in once when “Apply” is pressed.

5.3 Barimon

Three new parameters related to the RTP decoder have been added to the Barimon report:

- Latency – delay of the RTP decoder
- FrameDup - number of duplicated frames due to RTP buffer management
- FrameDrop – number of dropped frames due to RTP buffer management

5.4 Remote Updates

The former parameters *rtp_buffer_bytes* and *priority_buffer_bytes* have been renamed to *rtp_latency_ms* and *priority_latency_ms*.

5.5 File system

USB disks formatted to FAT32, “super floppy” disks and multiple partitions (first FAT partition is taken) are supported by this package.

A wide range of various USB stick vendors and brands is supported.

5.6 Rescue Kit

Tools for MAC OS X have been added, now the rescue-kit runs on Windows, Linux and MAC. For MAC users the same scripts as for Linux should be used, the platform is auto-detected. Refer to the Readme file for more details.

The scripts in the rescue kit (update_rescue folder) have been renamed:

- ipamres.bat → serial.bat
- ipamresX.bat → serialX.bat
- rescue.bat → legacy.bat
- rescue1.bat, ... rescue4.bat were removed

The folder “linux” was renamed and merged with the “mac” folder into “linux_mac”. The scripts were renamed and simplified:

- ipamresl → seriall.sh
- ipamresd → seriald.sh
- ipamres2, ipamres3, ipamres4 were removed
- rescued → legacyd.sh
- rescue1, ... rescue4 were removed

6 References

	Document
[1]	Streaming Client Technical Documentation V02.16
[2]	Streaming Client WEB Page
[3]	Streaming Client Update Kit V02.16

7 Legal Information

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