Release Note

ABCL Va1.00

Firmware name:	ABCL Va1.00		
Released:	10. Jan. 2012		
Package name:	abcl_kit_va100_20120110.zip		
Version overview:	**Type**	**File name**	**Version Date**
	Firmware	abclw.rom	VA1.00_20111011
	WEB UI	abclapp.cob	V01.15_20111021
	FW Ext. 1	sg.bin	V09.10_20120109
	FW Ext. 2	fs.bin	V02.05_20100826
	FW Ext. 3	bclio.bin	V01.19_20111007
	ES Module	esnd.rom	V00.05_20091230
	Bootloader	unifull.spb	V99.23_20111117

1 Hardware Compatibility

This firmware is intended to run on the new Audio Modules:

IPAM 101 and IPAM102

These modules are not yet present in any standard Barix product on the field, but are delivered specifically for OEM dedicated Hardware.

Therefore for standard devices (see list below) please keep using the existing ABCL kit version 0.39 officially released on the WEB:

- Exstreamer 100, 105, 110, 120, 200, 205, 500, 1000, P5
- Annuncicom 100, 155, 200, 1000
- Instreamer 100
- IPAM 100, 200, 300

2 New Features

The following new features have been implemented in the ABCL va1.00 (compared to version 0.39):

Driver (Song, BCL_IO) modifications to support IPAM 101 and 102:

- new interface between CPU and DSP for audio data
- encoding capability on VS1053 DSP
- new driver for VS1063 DSP
- optimized RTP buffering algorithm allowing now very low delays on IPAM 102
- features for compatibility with IPAM 100
- PIO remapping in IO drivers

3 Bugs Fixed In This Version

None.

4 Known Limitations

4.1 IPAM 101

- Sampling frequencies 44.1kHz, 22.05kHz and 11.025kHz not supported in encoding-only and full duplex modes
- Input peak level indication copies left → right if mono encoding is selected
- Mono line input settings (copy signal from left channel to the right channel) not supported in combination with stereo encoding
- Significantly higher minimum decoding latency

4.2 IPAM 102

- Sampling frequencies 44.1kHz, 22.05kHz and 11.025kHz supported in encoding only, but not in full duplex
- Input peak level indication copies left → right if mono encoding is selected
- Mono line input settings (copy signal from left channel to the right channel) not supported in combination with stereo encoding
- MP3 encoder: CRC, copyright and original/copy setting not configurable
- encoding loopback (monitoring) permanently on – not configurable
- encoding loopback 7dB weaker than IPAM 100
- 2dB output signal difference between IPAM 102 and IPAM 100 (IPAM102 weaker)

5 Major Modifications

5.1 IPAM 101/102 Support

This package is newly supports IPAM 101 and IPAM 102.

5.2 RTP Buffering Algorithm

Optimizations in the RTP buffering algorithm allow very low delay on IPAM 102. The delay is independent on decoding format and can be set as low as 2-3 frames.

6 References

	Document
[1]	BCL Programmers Manual 1.15
[2]	ABCL Technical Documentation

7 Legal Information

For information about our devices and the latest version of this manual please visit www.barix.com.

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