



Firmware Release Note

NSA-220

Release 3.22(AFB.0)C0

Date: Oct. 21st, 2009

**NSA-220 Version
Release 3.22(AFB.0)C0**

Release Notes

Date: Apr. 21st, 2009

Supported Platforms:

ZyXEL NSA-220

Notes:

- 1) Must First Clean your Browser's cache after performing upgrade
- 2) Upload Torrent File may not immediately appear in Download list. Usually will first appear in Queued first before appearing in Download.
- 3) Share Browser Copy/Move only allows One Instance of Copy and Move
- 4) **After Create First System Volume, you must Reboot!**
- 5) **Create Volume consumes more time because it uses EXT3 file system**
- 6) **Create 3TB Volume will consume about 3.5 hours; Create 2TB Volume will consume about 1 hour**
- 7) **Suggested to Rebuild database of media server after performing upgrade**

Known Issues:

- If FTP Encoding incompatible with FTP client, some files will have odd file names which Media server cannot support.
- iTunes Server may not play videos correctly if the file extension is mp4. However, if the file extension is changed to m4v the file will play correctly.
- You cannot copy or move files/folders with a name that includes any of the following characters:
 - " (double quote)
 - / (forward slash)
 - \ (backslash)
 - : (colon)
 - | (pipe)
 - < (less than)
 - > (greater than)
 - ; (semicolon)
 - , (comma)
 - ? (question mark)
 - * (asterisk)
- Media Server May Not Support the following Formats:
 - gif
 - tif
 - asf
 - m2p
 - dvr-ms
 - ogg
- iTunes 8 can not play video published by iTunes Server
- When enable Jumbo Frame and use Download Service to download BT with a lot of peers connected, there is a chance to make NSA hang. Workaround is to disable Jumbo Frame.
- There is some rare situation can not repair Raid1 and it requires below procedure to solve it: 1. Plug only the wanted Raid1 disk on disk1 slot of NSA (leave disk2 slot of NSA empty) and boot-up NSA so that NSA will solve it automatically. 2. Power-off NSA and add a spare HD and then you can repair it.
- Date of MP3 song is taken from date of it's folder, which is wrong.
- Duration of some VBR MP3 song is inaccurate and may cause player to play additional time in silent
- When using DMA-1000, thumbnail for picture bigger than 2 Mega Pixels are not supported
- Cover Thumbnails in Music Folder does not supports.
- Some video file (with file extension: mp2) published in music type and when DMA-1000 play it, it may cause DMA-1000 to hang.
- Printer Server is not able to cancel print job if the print job has not been sent to NSA.
- When quota is full, user can not use share browser to move
- Upload a file over 2 GB to a FAT32 volume via CIFS with Windows will fail. User can

modify below registry to solve it:

[HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\LANMANWORKSTATION\PARAMETERS] "SessTimeout"=dword:00000600.

- After overnight test eMule and BT download, there is a chance that the additional HTTP port can not be set, NSA will recover again after reboot.
- Some vob files will cause media server blocked at analyzing it and cause other media file not able to list.
- Clear all Recycle bin can't show the picture in GUI.
- In Flickr auto upload, last queued files(pictures) will be uploaded again after reboot.

Release Package:

File name	Description
AFB200.bm	Version: 2.00 (just the same as V20061226)
322AFB0C0.bin	NSA Firmware Package
NSA-220_SW_Package_V1.00.zip	Pluggable Package (for putting on internet server ftp://ftp2.zyxel.com/NSA-220/zypkg). Unzip this file under ftp://ftp2.zyxel.com/NSA-220/zypkg can make it <i>Note: Standard and Russia version use the same URL</i>
322AFB0C0.rom	Default Configuration File
322AFB0C0.doc	Firmware release note (This document)

Installation Notes:

Install/Upgrade Method	Procedure
FW Upgrade from GUI	<ol style="list-style-type: none">1. Login to GUI page: Administration > Maintenance -> Fw Upgrade.2. Select <firmware version>.bin and click the upgrade button. System will show progress percentage after upload <firmware version>.bin to system memory.3. System will auto reboot New Firmware should apply Note: Only Supported FW upgrade from GUI when original FW version is V3.12 or later

Default Settings:

Configuration:

- DHCP is default usage. If can't auto get an IP. Static IP address DLNA compliant Auto IP:

- (169.xxx.xxx.xxx) is used.
- FTP server: On
- Power Management Default: 3 Minutes
- BitTorrent Download Default Port: TCP 9090 & For DHT support 9089
- Web Publishing Service OFF
- iTunes Server: Off
- Samba server: On

Note: If disk volume created, then Samba server mode is On, and share resource list as following:

1. admin – admin (Read/Write)
2. photo – everyone (Read/Write)
3. public – everyone (Read/Write)
4. video – everyone (Read/Write)

Accounts:

1. GUI: admin (Password: 1234)
2. FTP: admin(Password: 1234), anonymous(Not required), ftp(Not required)

Web Interface:

- Username: admin
- Password: 1234

Feature List:

- Copy/Sync for Copy Button feature
- Link Capture Browser Plug-in: Supports IE (for Windows) and Firefox (for all)
- Menu
 - ⇒ Show System Information
 - ⇒ Show Volume Status
 - ⇒ Show Active Session(samba)
 - ⇒ Show UPS Current Capacity
 - ⇒ Show Temperature, CPU Loading, Memory Usage, Fan Speed
- Storage.
 - ⇒ RAID 0.
 - ⇒ RAID 1.
 - ⇒ JBOD
 - ⇒ Expand JBOD
 - ⇒ External Disk
(Read/write support following filesystem: NTFS, FAT16/FAT32, EXT2, EXT3, ReiserFS)
(Read only support : ISO9660, UDF)
 - ⇒ Support 3TB volume size (with two 1.5TB HD installed)
- Share Management
 - ◆ Recycle Bin
 - ⇒ Create/Modify/Delete Share.
 - ⇒ Access control (public share/private share/advanced share).
 - ⇒ Support maximum 100 share.
 - ⇒ Publish Share to Media Server.
 - ⇒ Share Browsing/Folder Browsing.
 - ◆ Copy/Move/Create Folder/Delete Folder/file
 - ◆ Upload File
 - ◆ Rename File/Folder
- Account Management
 - ◆ User Groups
 - ⇒ Create/Modify/Delete Account.
 - ⇒ Support maximum 512 user accounts.
- System
 - ⇒ Date & Time (NTP / Manual Setting)
 - ✓ Time Zone
 - ✓ Daylight Saving
- Network
 - ◆ PPPoE Client Support (also supported in NDU client)
 - ◆ No Master Browser Setting: Allow Unicode Computer Names in same workgroup
 - ⇒ Jumbo Frames
 - ⇒ Setting DHCP/Static IP.
 - ⇒ Setting DNS Server.
 - ⇒ Ftp Server.(Connection Limit range from 1~20 , Idle Timeout range from 30 ~ 300 MINUTES, Customize Passive Mode Port Range)
 - ⇒ FTP Server Custom Character Encoding

- ⇒ Support additional HTTP Configuration Port Number Selection
- AutoUpload
 - Automatically Upload Files to Flickr or YouTube
 - Having log when en-queued files, file uploaded
- FTP Uploadr
- Media Server
 - Publish file types.
 - Publish Shares.
 - iTunes Server Support
 - DLNA 1.5 Support
 - XBOX360 Support
 - File-extension support:

CATEGORY	FILE TYPE	EXTENSION
Video	MPEG-1 / MPEG-2	dat, dvr-ms, iso, m1v, m2p, m2t, m2v, mp2, mpe, mpeg, mpeg2, mpg, mpg2, ts, vob, m2ts, tts
	MPEG-4	m4v, mp4
	AVI	avi
	DivX	divx, avi
	Motion JPEG	mjpeg, mjpg
	Quick Time Video	mov, qt
	RealMedia	rmvb, rm
	Ogg	ogm
	Matroska	mkv
	ASF	asf
	Windows Media Video	wmv
	Subtitle	srt, ssa, idx, sub
Music	MP3	mp3, mpa
	Ogg Vorbis	ogg
	RealMedia	ra, ram
	WAVE	wav
	Windows Media Audio	wma
	Matroska	mka
	Monkeys Audio	ape
	MP1	mp1
	MP4	mp4, m4a, m4p
	PCM	pcm
	LPCM	lpcm

	DTS	dtc
	AC3	ac3
	Free Lossless Audio Codec	flac
	Au	au
	AAC	aac
	3GPP	3gp, 3g2
	AIFF	aif, aiff
	RIFF-based MIDI	rmi
	Playlist	wpl, pls, m3u
Photo	JPEG	jpe, jpeg, jpg
	Bitmap	bmp
	PNG	png

■ Printer Server

- ⇒ Add / Delete Printer
- ⇒ Cancel Print Job

■ Download Service

- ⇒ Download BitTorrent, HTTP, or FTP files
- ⇒ FTP authentication supported
- ⇒ Pause, Delete, Continue Downloads
- ⇒ Priority
- ⇒ Max 10 items job processing
- ⇒ When using this FW to do the first time scan disk on a volume, it will chmod 777 to all internal volume to fix V2.2 download service bug, which will have wrong permission on downloaded file in certain situation.
- ⇒ Support Configure Maximum Number of Seeding Job
- ⇒ Two Keep Seeding Criteria Support: Upload/Download Ratio and Seeding Time
- ⇒ Resume Completed Torrent Job to Do Seeding Again.
- ⇒ Support Show Detail Job Information and Configure Comment for Each Job
- ⇒ Support Download Service Download Period Control
- ⇒ Support IP Filter Table Management
- ⇒ Support Encryption in BT Protocol
- ⇒ Open Share Browser on Location of Completed Job to See Download Files.

■ Download Service Notification (RSS Server): Notify Downloaded File from Download Service / Broadcatching Torrent Job

■ Broadcatching

- ⇒ Add RSS 2.0 Feeds with enclosures Only
- ⇒ Invalid feeds will show red color
- ⇒ Support encoding other than UTF-8

- Maintenance
 - ⇒ Configuration backup/restore.
 - ⇒ UPS shutdown capacity
 - ⇒ SSL: HTTPS, FTPS, Force HTTPS support, CA Management Support
 - ⇒ FW Upgrade.
 - ⇒ System shutdown/restart.
 - ⇒ Logs

Notes:

- Item in bold are new features or changes since V2.30

Modification in V3.22(AFB.0)C0 | 10/21/2009

[Enhancement]

- Add "Expand Raid1" available action after replacing all member disks.
- Add on-line firmware upgrade feature.
- Add "Package Management" feature
- Add packages:
 - ◆ eMule
 - ◆ SqueezeCenter
 - ◆ MySQL / PHP / phpMyAdmin
 - ◆ S.M.A.R.T.
 - ◆ DyDNS Client
 - ◆ Gallery (Album)
 - ◆ WordPress (Blog)
 - ◆ NFS
 - ◆ BackupPlanner
- Mediaserver:
 - ◆ Support Thumbnail generation
 - ◆ Add server icon
 - ◆ Change default sort criteria to be title.
- Add High Temperature Buzzer alert support
- Add Over Temperature auto-shutdown support
- Add Spanish support
- Enhance accuracy of VBR MP3 music duration. (but still not accurate)

[Change]

- Allow edit "public" and "admin" share permission.
- add bin, daemon, anonymous, and ftp into the list of reserved name.

Modification in V3.12(AFB.0)C0 | 04/17/2009

[Enhancement]

- Change supported file extension for Auto Upload Flickr to be: 'bmp', 'mov', 'mpeg', 'avi', 'mp4', 'mpg', 'wmv', '3g2', '3gp'.

- Media server: add more media format. (mp4, mts)
- Media server: Support subtitle file.
- Enhance accuracy of CPU loading in status page.

[Change]

- SYS LED blinks orange when upgrading firmware. DO NOT POWER OFF NSA in this state.

Modification in V3.11(AFB.0)C0 | 03/02/2009

[New Feature]

- Copy/Sync for Copy Button feature
- Link Capture Browser Plug-in: Supports IE (for Windows) and Firefox (for all)
- Support IPOD web-streaming
- Show UPS Current Capacity
- Show Temperature, CPU Loading, Memory Usage, Fan Speed
- Support 3TB volume size (with two 1.5TB HD installed)
- Share Browser supports Rename File/Folder
- PPPoE Client Support (also supported in NDU client)
- FTP Server supports Customize Passive Mode Port Range
- AutoUpload
 - Automatically Upload Files to Flickr or YouTube
 - Having log when en-queued files, file uploaded
- FTP Uploadr
- Media Server:
 - DLNA 1.5 Support
 - Add file-extension support for: MKV, MKA, FLAC, M2TS
 - XBOX360 Support
 - Add file-extension support for:
 - ◆ Picture: ico, jpe, pcd, pnm, ppm, qti, qtf, qtif
 - ◆ Video: ogm, dat, iso, ts, rmvb, dv, mjpg, mp4ps, m2p, qt, hdmov,
 - ◆ Audio: ac3, aif, aiff, at3p, au, snd, dts, rmi, mp1, mp2, ogg, L16, rm, ram, m4p
- Download Service:
 - Support Configure Maximum Number of Seeding Job
 - Two Keep Seeding Criteria Support: Upload/Download Ratio and Seeding Time
 - Resume Completed Torrent Job to Do Seeding Again.
 - Support Show Detail Job Information and Configure Comment for Each Job
 - Support Download Service Download Period Control
 - Support IP Filter Table Management
 - Support Encryption in BT Protocol
 - Open Share Browser on Location of Completed Job to See Download Files.
- Download Service Notification (RSS Server): Notify Downloaded File from Download Service / Broadcatching Torrent Job
- Broadcatching:
 - Support encoding other than UTF-8
- UPS shutdown capacity

- SSL: HTTPS, FTPS, Force HTTPS support, CA Management Support

[Enhancement]

- Enhance FTP Download Throughput

Modification in V2.30(AFB.0)C0 | 10/01/2008

[New Feature]

- Add Group management (including share permission).
- Add enable / disable share setting.
- Recycle-Bin for share (it takes care of delete action from CIFS, FTP, Share Browser):
 - Share can enable recycle-bin individually. It is enabled by default for newly create share. If recycle-bin is enabled, the deleted files will be move to folder named "recycle" in the share.
 - User can purge all recycle-bin file in Recycle-Bin Configuration in share page
 - User can specify how often you want to clear the contents in all recycle bins. The specified days correspond to how long a file has been stored in a recycle bin. For example, if you set the interval to be 3 days, recycle bins will clean up items deleted or not accessed for 3 days.

[ENHANCEMENT]

- Enhance share browser to have more action includes: Create Folder, Upload Files, Delete/Move/Copy Folder, Delete/Move/Copy File.

[CHANGE]

- Change GUI for user and share page
- Do not let user specify share path
- When entering share page, NSA will check for any folder on HD without associated share and create a non-enabled share for this folder automatically.
- Upgrade BT engine version. The download performance on BT will be better.
- Power Management: Turn Off Hard Disk after 3 minutes idle time
- Download Service will move downloaded files to incoming folder under download folder.

Modification in V2.20(AFB.0)C0 | 03/07/2008

[NEW]

- Power Management Page Turn Off Hard Drive option

[ENHANCEMENT]

- Add FTP User login/disconnect Log message
- Improve Broadcatching support of RSS 2.0 Feeds
- Time Sync will be performed 2 times a day
- Add FTP Login Session Log Messages

[CHANGE]

- Allow Modification of Bit Torrent Network Port Setting
- Allow Modification of FTP Network port setting

Modification in V2.10(AFB.0)C0 | 11/21/2007

[New]

- Download Service: BitTorrent now Supports Distributed Hash Tables (DHT)
 - Will use TCP port 6881 & for DHT support 6880
- Download Service: Can Now Set Maximum number of Active Tasks (Downloading & Seeding) in Download Service Preferences
- Share Browsing: Can use Adobe Flash to stream only mp3 audio from the share browser page. You should see a play icon next to the mp3 file.
- Network page moved IP settings to TCP/IP
- Added Network Diagnostic Tools (PING) on Network>TCP/IP page
User can Ping to any user entered IP or domain name
user can select from DNS root servers to ping
user should see success or fail message next to ping tool

[ENHANCEMENT]

- Web GUI can auto forward user to login page after System Reboot or Network IP settings changed
- BitTorrent Seeding can be set to forever by setting the option to -1.
- Web Published Shares: "MyWeb" optional in URL
Can access Web Published shares using
http://[ip address]/[share name]/
instead of
http://[ip address]/**MyWeb**/[share name]/
- User Account: Add Warning message if user's password is more than 14 characters (since passwords use "*****" it is hard to tell if you type more than 14 characters)
- Share Browser: File Size more user friendly

Modification in V2.00(AFB.0)C0 | 11/10/2007

[New]

- Web Publishing
 - ◆ Allow users to publish shares to a web page
- Share Browser Copy and Move files
 - ◆ Copy and Move can only copy/move to a folder that current user login has access to
 - ◆ Can only have on instance of copy and move
- Download Service
 - ◆ BitTorrent now Supports Distributed Hash Tables (DHT)
 - ◆ Can Now Set Maximum number of Active Tasks (Downloading & Seeding) in Download Service Preferences
- Share Browsing: Can use Adobe Flash to stream only mp3 audio from the share browser page. You should see a play icon next to the mp3 file.
- Network page moved IP settings to TCP/IP

- Added Network Diagnostic Tools (PING) on Network>TCP/IP page
 - ◆ User can Ping to any user entered IP or domain name
 - ◆ user can select from DNS root servers to ping
 - ◆ user should see success or fail message next to ping tool
- Web GUI can auto forward user to login page after System Reboot or Network IP settings changed.
- Support ability to Expand Single JBOD.
- Full R/W Support of NTFS External Drives
- HDD Power Saving Support
- PTP Support (Digital Camera Support).
- FTP Multiple Language Encodings Support
- Jumbo Frame
- iTunes Server Support
- GUI Architecture Redesign (AJAX)
- Printer Server.
- Download Service.
- Broadcatching.

Modification in V1.04(AFB.0)C0 | 06/25/2007

[CHANGE]

- Adjust hardware fan speed to be always higher than 2000 rpm
- Remove 10G bytes limitation of USB copy.

Modification in V1.03(AFB.0)C0 | 06/04/2007

[CHANGE]

- Adjust hardware fan speed to be always higher than 2000 rpm
- Remove 10G bytes limitation of USB copy.

Modification in V1.02(AFB.0)C0 | 05/18/2007

[ENHANCEMENT]

- Enhance power button, reset button, and copy button functionality

Modification in V1.01(AFB.0)C0 | 05/08/2007

[BUG FIX]

- Modify System to prevent bootbase corruption.