

## LINUX DVR DIGITAL AUDIO VIDEO RECORDER

Enhanced Version

### What make it different — Choice of Performance

#### Embedded OS

- Embedded Linux OS
- Integrated Firewall via Port & IP Filtering
- Built-in DVD-R & USB disk interface
- ▶ Highly reliable in non-Stop Operation
- ▶ No hassle of virus, hacking or corrupted system files
- ▶ Support both video and system configuration backup

#### H.264 Encoding

- D1 video quality recording & live display
- 704x576 recording each channel
- Synchronized audio & video recording
- Small video file size
- ▶ 25fps (PAL) / 30fps (NTSC) each channel
- ▶ 4CIF each channel
- ▶ Triplex in recording/playback/remote
- ▶ Ample combination of video quality & compression



#### Optional Utility - Mascot Digital Video Management Software

- ▶ Multi-DVR/Multi-Site remote connection
- ▶ Simultaneous 36 DVR video on single screen
- ▶ Multi-Video Display up to 6x6 split screen
- ▶ Max. 4CIF remote video quality
- ▶ H.264 - Low bandwidth requirement
- ▶ Simultaneous Local Recording, Live Audio Video, Remote Audio Video, Remote Recording

# What makes Mascot II outstanding?



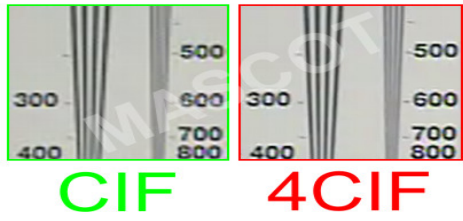
## Embedded OS

- Linux OS on Chip
- Extremely stable & reliable
- No system corruption or hang up
- Internal Port / IP Filtering
- No worry about virus, hacker or system security

Ch.	Channel Name	Brightness	DVD	4CIF	2CIF	DCIF	CIF	FPS	Video Quality
01	CAMERA 01	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
02	CAMERA 02	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
03	CAMERA 03	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
04	CAMERA 04	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
05	CAMERA 05	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
06	CAMERA 06	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
07	CAMERA 07	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
08	CAMERA 08	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
09	CAMERA 09	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
10	CAMERA 10	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
11	CAMERA 11	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
12	CAMERA 12	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
13	CAMERA 13	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
14	CAMERA 14	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
15	CAMERA 15	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH
16	CAMERA 16	240	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	HIGH

## Excellent Compression

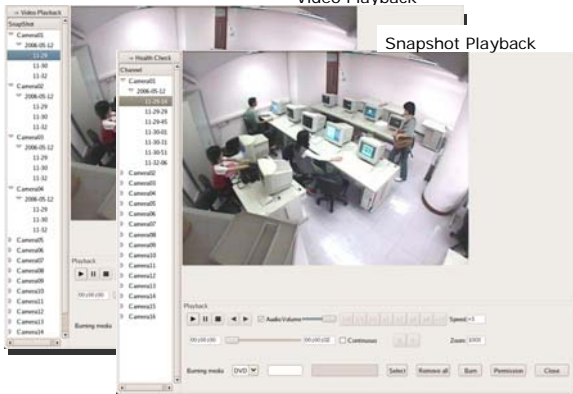
- 2~4.5KB each frame @ high resolution
- 10~390MB storage per hour @25fps hi-resolution



## True 4CIF (704 x 576) recording

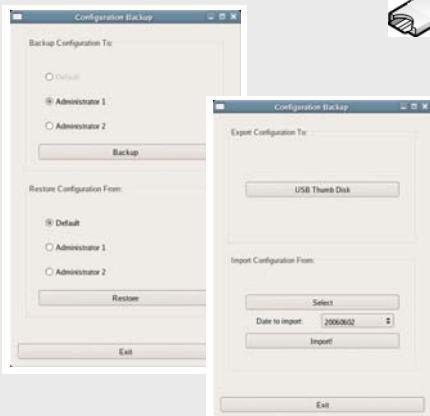
- Real time live display & audio
- Each Channel 4CIF recording & playback
- Configurable CIF / 2CIF / DCIF / 4CIF / Full D1

## Video Playback



## Video Playback <-> Health Check

- Periodic video snapshot capture
- Visual Check of video signal
- Visual Check of system health
- Verification of video motion or video loss



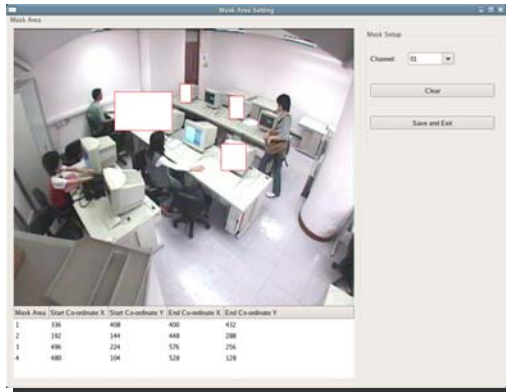
## System Setup Back up

- System Configuration import/export
- USB thumb disk media
- Effective maintenance on system recovery
- Efficient installation of multi-DVR of same setup
- Three configuration profiles each system

## Audit Export

- System audit log file backup
- Export to USB thumb disk
- Easy site maintenance and system analysis

# What makes Mascot II further outstanding?



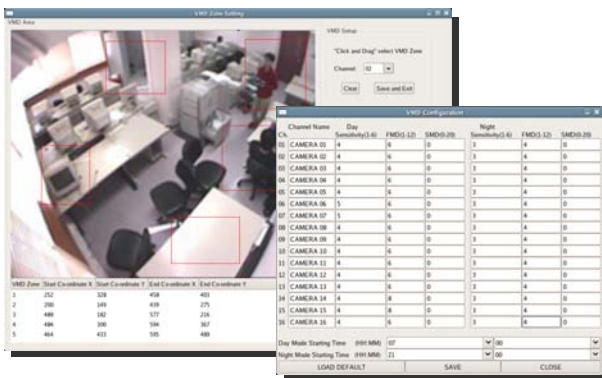
## Video Masking

- Max. 4 masks each video channel
- Complied to privacy restriction
- No video display or recording over the mask



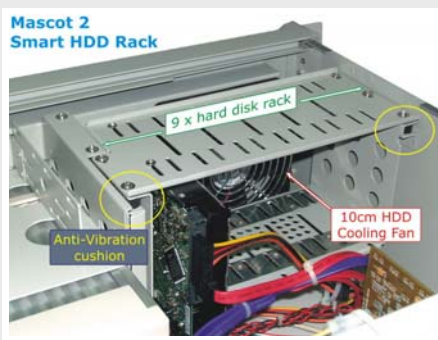
## Video Crop Tool

- Crop recorded video file at any time length
- User defined starting time
- User defined end time
- Merged into single file for evidence purpose
- Playback on Window Media Player



## VMD zone & sensitivity

- Multi-zone VMD
- Sensitivity on Object Size
- Sensitivity on Object Motion Speed
- Sensitivity on Motion Level
- Day Mode & Night Mode for different environments



## Enormous Storage

- Max. 9 hard disk internal rack
- Max. 3000GB internal storage
- Support large size hard disk (500/750GB)
- Support SATA HDD for higher reliability



## Evidence Media Options

1. DVD-RW module
2. USB thumb disk
3. USB hard disk
4. Mobile SATA hard disk rack



# True Hardware H.264 Encoding

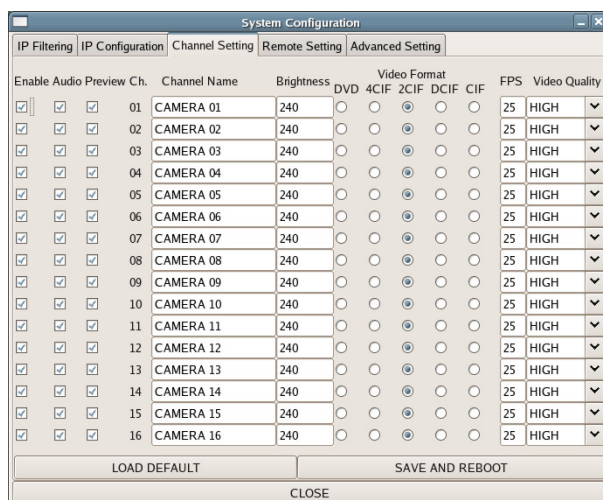
- \* Outstanding Video Quality
- \* Synchronized Audio Recording

## [1] Real Time Encoding & Compression

Real Time @25fps PAL or @30fps NTSC Each Channel

Synchronized audio video recording

Embedded Linux OS platform



## [1] 4CIF Recording Video Quality

Max. D1 high definition video (704x576)

OggVorbis high quality audio compression

## [3] Five Recording Modes

Schedule / TL / Timer Recording

VMD Recording / Alarm Recording

## [4] Network Remote Recording

Support multi-users network audio video recording

Small bandwidth requirement @~2.2kbps each channel

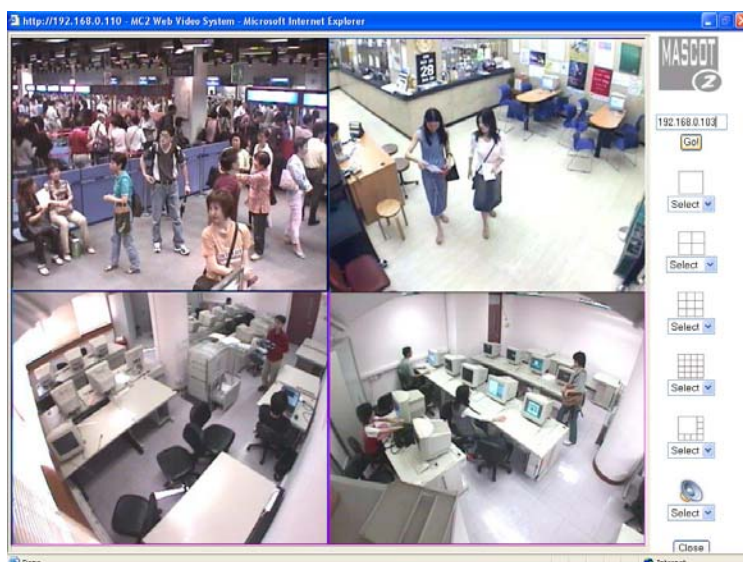
## [5] Network Remote Video & Audio

Simultaneous network live video & audio

Simultaneous network video playback

Multi-users network audio video broadcasting

Web Video & Audio Browsing



## [6] Network Remote Security

Support IP Filtering & Port Filtering

No Anti-virus, firewall or service patch needed

Remote diagnosis and configuration

## [7] System Configuration Backup

Configurations can be saved into USB thumb disk for another DVR restore

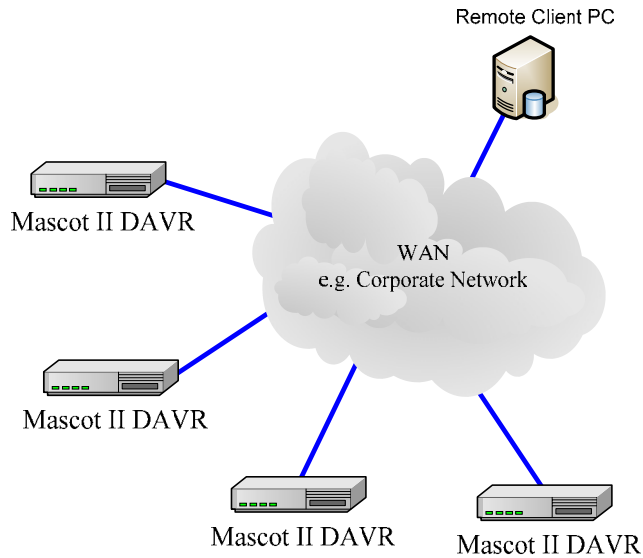
Speed up setting up a number of DVRs on different sites

Easy system maintenance and management



## Remote Client Software (Bundled Free)

- Remote Live Video & Audio
- Remote Playback
- Remote Recording



## DVMS Software (Optional)

- \* Multi-Site/Multi-DVR Support (max. 500)
- \* Multi-Video on single screen (max. 6x6)
- \* Remote Video & Audio
- \* Refer "Mascot DVMS" for detail

Remote Surveillance	
AV Encoding & Compression	Hardware H.264 Video & OggVobris Audio
Frame Size	Average 2.2k per video frame @hi-resolution
Local Recording File Size	Adjustable bit rate, frame rate and resolution for AV Recording
	Average 390MB per hour per video @25fps 4CIF
	Average 120MB per hour per video @25fps CIF
	Recycling recording mode (FIFO)
Watermark	Mascot Watermark Technology
Video Compression Bit Rate	30~9000Kbps adjustable for different quality level
Remote Bandwidth	Adjustable bit rate, frame rate and resolution for video transmission
	~384kbps @25fps hi-resolution
	~128kbps @15fps hi-resolution or @25fps low resolution
Remote Sits Per Client	128 Max.
Remote Clients Per Site	10 Max. (UDP) / 128 Max. (MultiCast)
Live & Playback	Support Remote Real Time Viewing & Playback in Audio & Video
Resilient Recording	Simultaneous Fault Tolerant & Redundant Remote Recording
Remote Management	Support Remote diagnosis & configuration
	Support Remote Configuration Recovery
Protocol	TCP/IP on Internet / LAN / WAN
	Remote Access Software over 10/100M Network
Bandwidth Optimization	Bandwidth consumption on demand

Model	MC2-04	MC2-08	MC2-12	MC2-16
<b>General Specification</b>				
Audio Video Input	4	8	12	16
Format	NTSC / PAL Analogue Composite			
Display Output	SVGA Monitor (min 1024 x 768), Optional S-Video Output			
Audio Output	Speaker Line Out			
Compression	Encrypted Hardware H.264 Audio/Video			
Frame Rate	25 (PAL) / 30 (NTSC) frame per second per video channel			
Capturing Speed	120fps	240fps	360fps	480fps
Audio Recording	Synchronized Audio & Video Recording & Playback			
Recording Resolution	NTSC Each channel — D1, 4CIF 640x480, CIF 320x240			
	PAL Each channel — D1, 4CIF 704x576, CIF 352x288			
Live View	Real Time Live Display & Audio Monitoring			
Split Screen	Full Screen / 4 / 9 / 16 / Selective Group			
<b>System Specification</b>				
Optional Video Storage	-	-	-	-
Security	Encrypted Video File & Storage Media			
Recording Time	Average 100MB per hour @25fps per channel			
Built-in SATA Storage	Max. 1000GB	Max. 2500GB	Max. 3000GB	Max. 3000GB
Optional Evidence	(1) DVD-RW (2) Mobile SATA Hard Disk Rack			
USB Interface	(1) USB thumb disk (2) USB hard disk			
Optional GP Input	2	4	4	4
Optional GP Output	2	4	4	4
Post Alarm	Post Alarm Recording Buffer			
Alarm Notification	(1) Via TCP/IP (2) Optional SMS Alarm unit			
VMD	Multi-Channel & Multi-Zone, Day & Night Mode			
Recording Mode	Continuous, Timer Schedule, VMD & Alarm Activated			
Video Mask	4 Video Mask zones for privacy in banking application			
Playback View	Instant Video & Audio Playback—simple mouse operation			
Search / Restore	Per camera / date / time / location / triggered event			
Speed Dome	Via RS232 / RS485			
Remote Video	Web Video Browser / Single DVR Remote Client / Multi-DVR Remote Client			
<b>System Management</b>				
DVMS Support	Mascot Digital Video Management System			
Configuration Backup	Import / Export via USB thumb disk — easy maintenance			
Watchdog	Automatic Self Testing, Diagnosis, Recovery & Disk Maintenance			
System Disk On Chip	Support Hot Power On/Off			
Disk Tracker	Keeps checking the files & disk reading and writing			
Network Security	IP Filtering Support			
Recording Diagnosis	Built-in periodic snapshot capture ensure health recording, disk & video signal			
Health Checking	Centralized System Diagnosis , Remote Health Check Software			
Chassis	19" Rack Mounted Steel Chassis 420x460mm (WxD)			
	2U	3U	4U	4U

**Mascot II MC2-04**  
4-Channel Digital Audio Video Recorder

**Dimension:**  
a. 89 x 430 x 490 mm  
b. ~16kg



**Mascot II MC2-08 / 12 / 16**  
8 / 12 / 16-Channel Digital Audio Video Recorder

**Dimension:**  
a. 178 x 430 x 490 mm  
b. ~25kg

**Accessories:**  
a. 4 way video & audio connectors  
b. Mouse, keyboard & power cord



Mascot II (RAID 1)  
RAID 1 Internal Disk Storage  
SATA HDD

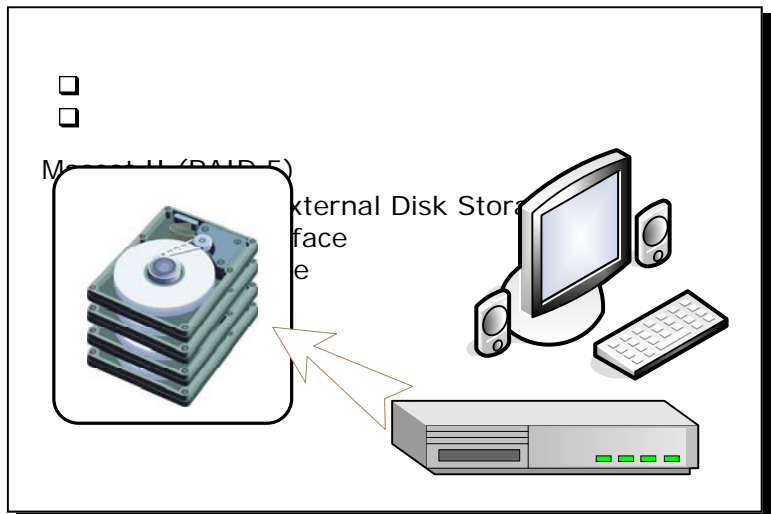
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**In additional to the standard Mascot II system, two storage options are provided for clients' demanding application.**

- Mascot II (Internal RAID1 multiple hard disk mirroring)
- Mascot II (External RAID1/5 disk storage)

### Internal RAID 1 multiple hard disk mirroring

- ▶ Max. 4 sets internal hard disks
- ▶ Max. 1000GB mirroring storage
- ▶ SATA HDD supported
- ▶ Optional 4 x SATA HDD Mobile Racks



### External RAID 1/5 disk storage

- ▶ RAID 0, 1, 5 supported
- ▶ 1TB, 1.6TB, 2TB options

