

# SA Series Standalone DVR/NVRs



Affordable hybrid NVR solution; best for convenience stores and small businesses



# **Overview**

- Affordable hybrid NVR solution; best for convenience stores and small businesses
- 8 channels Video and Audio input with 120 fps recording rate
- POS Integration allows for easy association of retail transaction data and corresponding video images
- Equipped with advanced Video encryption that prevents unauthorized viewing of video footage
- Compact size to minimize shipping costs

<b>SA5108 Specification</b>	ns
Operating System	Embedded Windows XP
Disk-on-Module (DOM)	2 GB
Hybrid	Yes - use any combination of IP or Analog inputs
IP Camera Support	Over 100 major IP camera brands supported including Megapixel
Video Format	NTSC
Software Compression	MJPEG, MPEG4 and H.264
Video Output	CCTV or TV monitors
Video Input	8 channels (BNC connectors)
Audio Input	4 channels
Video Loop Output	n/a
Display Rate	120 fps
CIF Recording Frame Rate	120 fps
VGA Recording Frame Rate	60 fps
DVD-RW	Yes - 16 x DVD-RW
Removable HDD Tray	2 HDD tray (up to 3 HDD)
Ethernet	RJ-45, 10/100/1000 Mbps
USB 2.0	Front - 2 ports, Rear - 4 ports
Recording Resolution	up to 720x480
LCD Display	Temperature
Power Consumption	220 Watt
Dimensions (WxHxD)	290 x 160 x 480 mm or approximately 11 x 6 x 19 inches
Rack Mountable	Yes
User Access	Unlimited number of users with individual passwords and tiered user privileges
Sensor/Relay	Built in 4 sensors and 3 relays; Expandable up to 132 sensors and 131 relays via an E-I/O box
WatchDog	Yes - built-in system auto restart after system lock up
User Interface:	res - built-in system auto restart after system fock up
Туре	Graphical User Interface
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■ IVIOGES	Compact and Advanced modes
Modes  Display Formats	Compact and Advanced modes  Auto scan with 1, 4 or 8 split screen views for monitoring and playback
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Display Formats E-Map Specifications	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions
Display Formats E-Map Specifications Night View Ability	Auto scan with 1, 4 or 8 split screen views for monitoring and playback
Display Formats E-Map Specifications Night View Ability Digital Zoom	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Devices	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Devices Dual Monitor Support	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes  Optional
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Device: Dual Monitor Support	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings  External Device: Dual Monitor Support Spot Monitor Support POS Integration	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes  Optional
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Devices Dual Monitor Support Spot Monitor Support POS Integration Recording Features:	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes  Optional  Yes  Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings  External Device: Dual Monitor Support Spot Monitor Support POS Integration	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Device: Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes Yes Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Device: Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes HDD Size Estimation Tool	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Devices Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes HDD Size Estimation Tool Video Encryption	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes Yes Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording Yes - Will estimate HDD size along with recording hours remaining Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Device: Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes HDD Size Estimation Tool Video Encryption Video Shield	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes  Optional  Yes  Yes  Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording  Yes - Will estimate HDD size along with recording hours remaining  Yes  Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Devices Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes HDD Size Estimation Tool Video Encryption Video Shield Video Mask	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes  Optional  Yes  Yes  Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording  Yes - Will estimate HDD size along with recording hours remaining  Yes  Yes  Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Device: Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes HDD Size Estimation Tool Video Encryption Video Shield Video Mask Recycle Recording	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes Yes Yes  Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording Yes - Will estimate HDD size along with recording hours remaining Yes Yes Yes Yes Yes Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings External Device: Dual Monitor Support Spot Monitor Support POS Integration Recording Features: Recording Modes HDD Size Estimation Tool Video Encryption Video Shield Video Mask Recycle Recording Video Loss Detection	Auto scan with 1, 4 or 8 split screen views for monitoring and playback Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions Yes Yes Control for both IP and Analog cameras Yes Yes Optional Yes Yes Yes  Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording Yes - Will estimate HDD size along with recording hours remaining Yes Yes Yes Yes Yes Yes Yes Yes
Display Formats E-Map Specifications Night View Ability Digital Zoom Pan-Tilt-Zoom Control Multiple Languages Video Quality Settings  External Device: Dual Monitor Support Spot Monitor Support POS Integration  Recording Features: Recording Modes HDD Size Estimation Tool Video Encryption Video Shield Video Mask Recycle Recording Video Loss Detection Event Log	Auto scan with 1, 4 or 8 split screen views for monitoring and playback  Store up to 8 maps with up to 8 angles for camera (including name), sensor and relay positions  Yes  Yes  Control for both IP and Analog cameras  Yes  Yes  Optional  Yes  Yes  Continuous, Scheduled, Motion Detection, Sensor trigger, Alarm trigger and Smart recording  Yes - Will estimate HDD size along with recording hours remaining  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye

Playback Features (cont):	
Watermark Verification	Yes
Playback Software on PC	Yes
Playback Availability	Playback while recording or setup. With Dual Monitors - watch playback and live video simultaneously
Playback Control	Play, rewind or fast-forward footage including frame-by-frame control with real time access
Video Optimization	Digitally zoom in to specific areas on the video footage
Export Functions	Export single frames to BMP files or export video clips to AVI files with time and date stamp
Search Features:	
Visual Search	Yes
Search Criteria's	Search by date, time, camera, event and event logs
Bookmark Function	Yes - Bookmark important footage for fast access
Watermark Verification	Yes
Export Functions	Export single frames to BMP files or export video clips to AVI files
Back-up:	
Back-up features	Manual or schedule backup
Over Heat Detection	Yes
Backup Functions	Built-in DVD-RW or flash memory, RAID, NAS, External HDD and internal SATA (up to 3HDD)
Alarms/Sensors/Relays:	
	E-map - E-map is launched with active camera highlighted and monitoring footage displayed
	FTP - Still images of event footage are automatically saved to specified FTP sites
	Phone - Installed Voice-Fax modem calls specified phone number and plays pre-recorded message
Alarm Trigger Notifications	Relay - System will turn on lights, lock gates, sound an external alarm, etc.
	Record - System will start capturing video footage from different angles on multiple cameras
	Spot Monitor - Will automatically display E-map and event footage on spot monitor
	Text Message - If DVR is SMS modem enabled, then a text will be sent to specified phone number
	CM3000 - Event information will be automatically generated in the CM3000 for follow-up
Video Intelligence	Yes
I/O Box Support	Built in 4 sensors and 3 relays; Expandable up to 132 sensors and 131 relays via an E-I/O box
Remote Accessibility:	WebVierren 1.4 au Conlik annan vierren ikk DT7 ankual fan beheid annan
	WebViewer - 1, 4, or 8 split screen views with PTZ control for hybrid cameras
Domata Assassibility	PDAViewer - View video footage on a PDA in 1 or 4 split screens
Remote Accessibility	HandyViewer/SmartViewer - View video footage on compatible cell phones  CM3000 - Control and manipulate up to 1000 DVRs remotely; Includes hybrid PTZ and E-Maps
	Remote Console - Remotely monitor, record or playback video footage
Audio	
Pan-Tilt-Zoom	2-way audio communication through WebViewer, Remote Console or CM3000  Yes - Both IP or Analog cameras through WebViewer or CM3000
	Yes
Backup Dynamic DNS	Yes
Connection Types	Dial-up, Internet or LAN speeds
Video Quality:	Dial ap, internet of Entrapeeds
De-Interlacing	Yes for Static or Dynamic footage
Noise Reduction	Yes
Image Balance	Yes - Auto Gain Control (AGC) balance image quality
iEnhance Software	Yes - optimizes recorded video footage
iStable Software	Yes - smoothes video footage
Scheduling Abilities:	
Schedulable Functions	Record, network enable, backup, reboot, alarm and relay controls
	Functions can be scheduled in 15 minute, 30 minute, 45 minute or 1 hour increments
Allocations	Set for a one-time event or on a weekly repeating schedule
Other:	
Attention Please	Yes
Virtual Keyboard	Yes
UPS support	Yes
b t <sub>e</sub>	

# **Security Product Hardware Recommendation List**

## **Recommendation List:**

**Note:** Based on Intel's suggestion, for all of Microsoft Windows XP Operating Systems, Hyper-Threading must be disabled in the system BIOS Setup program ( see FAQ for procedure ) for our DVR products.

For the most stable security DVR system, we strongly recommend NOT using VIA/SiS/ALi chipsets and SiS VGA chips with our products due to their severe limitation of the chipset design.

**Note:** Please make sure you are using the standalone VGA card with 128 MB memory above instead of built-in onboard VGA card in order to ensure the working stability and performance of the NV/NX series software.

**Note:** We highly recommend not applying the Samsung Hard disk drive to the SA/XR/EXR DVR products for recording or backing up video files usage.

SA5108
PTZ Camera Please click here for the full IP camera support list

Brand	Product Number
DynaColor	All products
Pelco	Pelco-D
Peico	Pelco-P
Lilin	PIH 717X / 7000 / 7600
Sony	15-CZ45-1
DMP23-H2	DMP23-H2
MD101	all products
CD55	all products
NiceCam	all products
Yoko	all products
DiGiDome	DRX -502A (DOH-240)
SamSung	SCC-641
Canon	VC-C4R
Panasonic	WV-CS850 / WV-CW860
Eastel	all products
MicroJack-P	all products
JVC	TK-C676
Philps	TC8560, TC700
ELMO	PTC -200C
American Dynamics_UltraS	all products

# USB to Serial Hubs, could be compatible with POS Series, PTZ Camera, and UPS Series

Brand	Product Number
MOXA	Uport 1410

## **Raid System**

Brand	Product Number
Stardom	SR3610-2S-SB2

## **PDA Basic requirement**

Notice: This feature is only available on version 5.1 or above AP. For customers who are using 5.0 version of AP, please visit the Support/Download page to download and upgrade to the latest version of AP

- 1. CPU: Arm architecture, for example, Intel Xscale.
- 2. OS: Microsoft Window Pocket PC 2002/2003 or Mobile 5 above.
- 3. GPRS or WLAN module is recommended.

# Windows Mobile Smartphone Basic Requirement

Notice: This feature is only available on version 5.7 or above AP. For customers who are using v.5.5, v5.1 or v5.0 version of AP please visit the Support/Download page to download and upgrade to the latest version of AP

- 1. CPU: Arm architecture, for example, Intel Xscale.
- 2. OS: Windows-base, Windows Mobile 2002/2003 for Smart Phone Edition or Windows Mobile version.
- 3. Network module such as WAP,GPRS,WLAN....etc is required .

## **Symbian Smartphone Basic Requirement**

Notice: This feature is only available on version 7.1 or above AP. For customers who are using v5.7, v.5.5, v5.1 or v5.0 version of AP please visit the Support/Download page to download and upgrade to the latest version of AP

- 1. OS:Symbian Smartphone
- 2. The OS need to support JAVA MIDP 2.0(JAVA2 ME)
- 3. Network module such as WAP, GPRS, WLAN ...etc is required.