

## Product Specifications

### 8-Ch Network Video Recorder with HDMI

# NVR-820

Version 2.0

This document contains confidential proprietary information and is property of PLANET. The contents of this document should not be disclosed to unauthorized persons without the written consent of PLANET.

#### Change History:

Revision	Date	Author	Change List
Version 2.0	2015/07/16	Simon Yeh	Initial release

Author	Simon Yeh	Editor:	Simon Yeh
Reviewed by:	Jonas Yang	Approved by:	Tom Shih

## 1. PRODUCT DESCRIPTION



### Efficient SMB Surveillance Solution

PLANET NVR-820, a high-definition IP surveillance solution, is suitable for upgrading your CCTV system to IP system without re-cabling. It is the 8-channel Linux-embedded NVR with HDMI local display, bringing a stable and efficient system operation under a wide range of recording, network management and system settings. The NVR-820 can be used as a control center to control and monitor up to 8 connected network cameras (ONVIF supported) locally or remotely, perfectly designed for intelligent IP surveillance system. Users can just turn on the cameras and the NVR-820 starts to operate by protecting their lives and properties on the IP network. It also supports image storage for evidentiary recording and data backup of up to 2 SATA hard disks. The recorded video files can be saved in the NVR without the need for an additional PC for file storage, thus bringing users a secure surveillance system at a lower total cost. It is fully compatible with iOS, Android and Internet Explorer on Windows operating system for multi-platform remote access.

### High Resolution Local Display

The NVR-820 provides an HDMI and VGA video output interface for dual local display, which can be connected to HDMI monitor or TV for monitoring in the full HD (1920 x 1080) resolution, and check NVR system status on VGA monitor at the same time, eliminating the need for a separate PC to view video from the unit. It also can be operated with the USB keyboard and mouse to configure and monitor all the systems easily.

### Performing Real-time Remote Monitoring

Up to 8 IP cameras can be connected to the NVR-820 via a connected IP network. With the NVR-820, it delivers high-performance video recording and smooth playback of multiple megapixel cameras. Users can view remote surveillance in real time and play back recorded videos via the web browser or the bundled CMS software.

### Easy Configuration and Management

Not just for small scale applications such as retail stores and SMBs, the NVR system is expandable for multi-site management with the bundled CMS software. For instance, the CMS software in the NVR-820 can manage up to 16 units of the NVR at the same time, meaning 128 channels of IP cameras can be viewed simultaneously. With multi-monitor and e-map functions, the NVR can help the administrators to monitor the surveillance system more efficiently and effectively.

\* The full version of CMS software can be purchased additionally to manage up to 1,024 channels by working with the NVR-820.

## 2. PRODUCT FEATURES

### ➤ **Hardware**

- Linux-embedded, highly-reliable standalone NVR
- Supports Gigabit Ethernet port
- Supports VGA/HDMI dual local display
- Supports 3.5" SATA x 2 HDDs

### ➤ **Video/Audio**

- Supports M-JPEG/MPEG-4/H.264 compression
- Auto configuration for PLANET IP camera
- Video resolution up to 5 mega-pixel (2560 x 1920)
- Supports up to 120fps @1080P (H.264)
- 2-way audio support with enhanced audio quality

### ➤ **Video Recording/Backup**

- Simultaneous recording and live video streams
- Manual or scheduled recording of 8 IP cameras simultaneously
- Video recycling function records suspicious events 24/7
- Exports recorded video files in AVI format to USB device or local storage
- Instant Event Notification supported

### ➤ **Network Service**

- Easy access with PLANET Dynamic DNS and built-in NTP server
- Supports DHCP server/client (auto detection)

### ➤ **Easy Installation and Management**

- ONVIF compliant for interoperability
- Supports multiple languages
- Automatically discovered by management software
- E-map interface in web and utility configuration
- Web-based and management utility for easy configuration
- Up to 16 NVRs with max. 128 channels and the central management software
- Supports USB keyboard and mouse
- Supports mobile phone remote view

### 3. PRODUCT SPECIFICATIONS

#### 3.1 Main Components

<b>CPU</b>	TI DM8168
<b>RAM</b>	2GB

#### 3.2 Functional Specifications

Product	NVR-820
<b>Hardware</b>	
Ethernet	1 x RJ45, 10/100/1000BASE-T
USB Interface	2 x USB 2.0 for backup device and firmware upgrade
Video Interface	VGA/HDMI video interface
Audio Interface	Mic-in, line-in and line-out
Storage Device	2 x 3.5" SATA II hard disk connectors
LED	Power, Status
Button	Power, Reset
<b>Camera</b>	
Max. Channels	8-channel IP cameras
Additional Camera	Manual/Smart Camera Search/Auto setup
<b>Video</b>	
Compression	H.264/MPEG-4/M-JPEG
Resolution	5MP/3MP/1080p/720p/FD1/CIF/QCIF
Max. Live Video Frame Rate (Local Display)	240fps@720p (8-ch) 120fps@1080p (4-ch) 80fps@3MP (2-ch)  *Supports 5MP and Full HD 1080p@60fps
Max. Recording Frame Rate (Local Display)	240fps@1080p (8-ch), 4Mbps per channel, total of 8 channels 120fps@3MP, 6Mbps per channel, total of 8 channels  *Real performance may vary in different environments.
<b>Audio</b>	
Audio Type	2-way
Audio Format	G.711, G.726 (Camera dependent)
<b>Live View</b>	
Display Mode	Live View, Playback, Full Screen, Sequence View, Saved Views
Split Screen	1/4/9
Full Screen	1/4/9
Sequence Mode	Sequence all/manually selected cameras in 1/4 split view with configurable timer
Snapshot	Video snapshot in JPEG format
PTZ Support	Digital PTZ, Auto Pan, Preset Point, Sequence View

Playback	
Split Screen	1/4
Play Method	Play, Pause, Stop, Forward, Reverse, Speed Adjust, Frame by Frame Search by time or event only
Bookmark	Intuitive timeline interface with bookmark function for easy file export
Monitor	
Dual Monitor	Main UI + full screen live view/sequence view
Monitor Resolutions	1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768
Network and Configuration	
Network Service	TCP/HTTP/SMTP/DHCP/DNS/ARP/P2P/NTP/UPnP/FTP
Streaming Protocols	Depending on the supported cameras
Triggers and Event	
Event Type	<b>System Events –</b> <ul style="list-style-type: none"> <li>● System Start/Shutdown</li> <li>● System Settings modified</li> <li>● Camera Settings modified</li> <li>● Start Recycle</li> <li>● Disk Full</li> </ul> <b>Camera Events –</b> <ul style="list-style-type: none"> <li>● Motion/Sensor Detection</li> </ul>
Event Action	<ul style="list-style-type: none"> <li>● Display red window on video of event channel</li> <li>● Buzzer alarm</li> <li>● Disable/enable event action</li> <li>● Duration of event action</li> <li>● Recording</li> <li>● Mail/FTP notification</li> <li>● E-map notification</li> </ul>
Management	
Number of Groups	7 (Administrator/Guest/User Define * 5)
Privileges	Live View, Playback, System Configurations, Camera Configurations, Recording Configuration, Event Configuration, Maintenance
User Interface	<ul style="list-style-type: none"> <li>● Graphic local user interface (Operated by mouse, keyboard)</li> <li>● Web browser (Internet Explorer 7 or above)</li> <li>● CMS utility</li> </ul>
Log Type	Alert/Event/User Access
Software Utility	Search utility/media player for exporting recorded files

### Front Panel



LED	Status	Definitions
Power	Green	Solid green - Normal operation Slow blinking in green after pressing and holding the reset button for 5 seconds indicates the device will enter the restore default process. Other LEDs remain unchanged during this state.
	Red	System off (power cord remains plugged in)
	Amber	Fast blinking in amber during system initializing/starting. Continuous blinking indicates system is unable to start properly (All other LEDs should be off when this LED is blinking in amber). Slow blinking indicates the system is shutting down.
Buttons		Status
Power	On	Press and hold for 2 seconds
	Off	Press and hold for 2 seconds
Reset	Restore Default	Press and hold for 5 seconds
	Restart	Press and hold for 2 seconds
Buzzer		Status
Beep	Complete start	Beep once (indicating the system is starting)
	Initiating restart	Beep once (indicating the restart process has begun)
	Initiating shutdown	Beep once (indicating users to release the power button as the shutdown process has begun)

### Rear Panel



Connector	Description
-----------	-------------

Ethernet	10/100/1000Mbps network.
USB	Connect your USB flash disk for firmware upgrade and backup.
Video	VGA/HDMI
Audio	Line in/Line out/Mic
Power Supply	DC 19V, 4.74A

### 3.3 Physical Specifications

<b>Dimensions (W x D x H)</b>	315 x 225 x 75 mm
<b>Weight</b>	2.4 kg

### 3.4 Environmental Specifications

#### Temperature

<b>Operating</b>	5 ~ 40 degrees C
<b>Storage</b>	-40 ~ 70 degrees C

#### Operating Humidity

<b>Operating</b>	10 ~ 90% (non-condensing)
<b>Storage</b>	10 ~ 90% (non-condensing)

### 3.5 Electrical Specifications

<b>Device Input Voltage</b>	19V DC, 4.74A	
<b>Power Adapter</b>	Power Input	100-240V AC, 1.5A 50/60Hz
	Power Output	19V DC, 4.74A
<b>Power Consumption</b>	60 watts	

### 3.6 Regulatory Compliance

FCC, CE, RoHS, WEEE

### 3.7 Reliability

MTBF > 50,000 hrs @ 25 degrees C

### 3.8 Basic Packaging

NVR Unit	x 1	HDD Bracket	x 2
User's Manual CD	x 1	Bracket Screw Packet	x 1
Quick Installation Guide	x 1	SATA Cable	x 2
Power Cord	x 1	Power Adapter	x 1
HDD Screw Packet	x 1	Feet Pad Set	x 1

### 3.9 Packaging Information

<b>Dimensions (W x D x H)</b>	360 x 327 x 120 mm
<b>Weight</b>	2.9 kg
<b>Carton Dimensions (W x D x H)</b>	375 x 610 x 510 mm
<b>Carton Weight</b>	17.4 kg
<b>Carton Unit</b>	6 pcs in one carton

#### **APPENDIX A: DEFAULT SETTING**

<b>Default IP Address</b>	192.168.0.20
<b>Default Login User Name</b>	admin
<b>Default Login Password</b>	admin
<b>Search Tools</b>	NVR Device Search

#### **APPENDIX B: APPLICATION DOWNLOAD LINK**

iNVR:

<https://itunes.apple.com/us/app/invr-viewer/id494455479?mt=8>

aNVR:

<https://play.google.com/store/apps/details?id=mobile.android.anrvviewer>