8-channel Network Recorder Kit
Eight Network IR Dome Cameras and One 4K NVR

System Overview
The Dahua Recorder kits provide all the components to quickly install, configure, and employ a complete video surveillance solution. The network cameras offer the clarity of 3 MP video, and the NVR offers built-in motion detection algorithms, alarm triggers, and customized recording modes. The NVR also features Plug and Play technology to connect quickly to cameras on the same network. Each component accepts a PoE power supply to facilitate installation.

Functions

Network Camera
- 3 MP at 20 fps Maximum Resolution
- 2.8 mm Fixed Lens
- Maximum IR Length 30 m (98 ft) with Smart IR
- IP67 Environmental Protection and IK10 Vandal Resistance

Network Video Recorder
- Quad-core Embedded Processor
- H.265 and H.264 Dual Video Compressions
- Up to 4K (8 MP) Resolution for Preview and Playback
- Simultaneous HDMI and VGA Video Output
- 200 Mbps Incoming Bandwidth

Flexible Recording
The NVR offers a variety of configurable recording options and schedules that saves HDD space and active monitoring time. The NVR monitors incoming video and can be programmed to record if motion is detected or if an alarm is triggered. The NVR can also be programmed to record on a schedule or at different intervals. The recording options and schedules can be set for each individual camera or copied to all cameras.

4K NVR Resolution
4K resolution is a revolutionary breakthrough in image processing technology. 4K delivers four times the resolution of standard HD 1080p resolution and offers superior picture quality and image details. 4K resolution improves the clarity of a magnified scene to view or record crisp forensic video from large areas.

Automatic Network Replenishment (ANR) Technology
Network Video Recorders with the ANR function automatically store video data on an IP camera SD card when the network is disconnected. After recovery of the network, the NVR automatically retrieves the video data stored on the camera.

Environmental
The network cameras operate in extreme temperature environments, rated for use in temperatures from -30° C to +60° C (-40° F to +140° F), allowing the camera to operate in the harshest environments. The NVR features an operating temperature of -10° C to +55° C (+14 °F to +131 °F).
## Technical Specification - Network Cameras

### Camera
- **Image Sensor**: 1/3-in. 3 MP CMOS
- **Effective Pixels**: 2304(H) x 1536(V), 3 MP
- **Scanning System**: Progressive
- **Minimum Illumination**: Color: 0.1 Lux at F2.0 0 Lux (with IR on)
- **S/N Ratio**: More than 50 dB
- **IR Distance**: Up to 30 m (98 ft)
- **IR On/Off Control**: Auto, Manual
- **IR LEDs**: 24

### Lens
- **Lens Type**: Fixed
- **Mount Type**: Board-in
- **Focal Length**: 2.8 mm
- **Max Aperture**: F2.0
- **Angle of View**: Horizontal: 98°  Vertical: 77°

### Video
- **Compression**: Smart H.264+, H.264, MJPEG
- **Streaming Capability**: Two (2) Streams
- **Resolution**: 3 MP (2304 x 1296), 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), CIF (352 x 240)
- **Frame Rate**: Main Stream: 3 MP at 20 fps or 2 MP at 30 fps
  - Sub Stream: D1 or CIF at 30 fps
- **Bit Rate Control**: CBR, VBR
- **Bit Rate**: H.264: 24 K to 8192 Kbps
- **Day/Night**: Auto (ICR), Color, B/W
- **BLC Mode**: BLC, HLC, DWDR
- **White Balance**: Auto, Natural, Street Lamp, Outdoor, Manual
- **Gain Control**: Auto, Manual
- **Noise Reduction**: 3D DNR
- **Motion Detection**: Off, On (4 Zone, rectangular)
- **Region of Interest**: Off, On (4 Zone)
- **Advanced Features**: Electronic Image Stabilization, Smart IR
- **Digital Zoom**: 16x
- **Flip**: 0°, 90°, 180°, 270°
- **Mirror**: Off, On
- **Privacy Masking**: Off, On (4 Area, rectangular)

### Network
- **Ethernet**: RJ-45 (10/100 Base-T)
- **Protocol**: HTTP, HTTPS, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, SNMP, PPPoE, IPv4/IPv6, DoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP
- **Interoperability**: ONVIF, PSIA, CGI
- **Streaming Method**: Unicast, Multicast
- **Max. User Access**: 10 Users, 20 Users
- **Edge Storage**: NAS (Network Attached Storage) Local PC for instant recording Micro SD Card, max. 128 GB
- **Web Viewer**: IE, Firefox, Safari
- **Management Software**: Smart PSS, DSS
- **Mobile Operating System**: IOS, Android

### Certifications
- **Safety**: UL 60950-1
- **Electromagnetic Compatibility (EMC)**: FCC Part 15 Subpart B

### Electrical
- **Power Supply**: DC12V, PoE (802.3af, Class 0)
- **Power Consumption**: < 5.0 W

### Environmental
- **Operating Conditions**: -30° C to +60° C (-22° F to +140° F), Less than 95% RH
- **Storage Conditions**: -30° C to +60° C (-22° F to +140° F), Less than 95% RH
- **Ingress Protection**: IP67
- **Vandal Resistance**: IK10

### Construction
- **Casing**: Metal
- **Dimensions**: Φ109.90 mm × 81.0 mm (Φ4.33 in. x 3.19 in.)
- **Net Weight**: 0.34 kg (0.75 lb)
- **Gross Weight**: 0.47 kg (1.04 lb)
## Technical Specification - NVR

### System
- **Main Processor**: Quad-core Embedded Processor
- **Operating System**: Embedded LINUX

### Audio and Video
- **IP Camera Inputs**: Eight (8) Channels
- **Audio Connections**:
  - Input: One (1) Channel, RCA
  - Output: One (1) Channel, RCA

### Display
- **Interface**: One (1) HDMI, One (1) VGA
- **Resolution**: 3840 x 2160, 1920 x 1080, 1280 x 1024, 1024 x 768
- **Multi-screen Display**: 1/4/8/9
- **On-screen Display Options**: Camera Title, Time, Video Loss, Camera Lock, Motion Detection, and Recording

### Video Detection and Alarm
- **Trigger Events**: Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer, and Screen Tips
- **Video Detection**: Motion Detection, MD Zones: 396 (22 x 18), Video Loss, and Tampering
- **Alarm Input**: Four (4) Channels, Low-level Effective, Green Terminal Interface
- **Relay Output**: Two (2) Channels, NO/NC Programmable, Green Terminal Interface

### Playback and Backup
- **Synchronous Playback**: 1/4/9
- **Search Mode**: Time / Date, Alarm, Motion Detection, Exact Search (accurate to 1 second), and Smart Search
- **Playback Function**: Play, Pause, Stop, Rewind, Fast Play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, and Digital Zoom
- **Backup Mode**: USB Device, Network

### Storage
- **Internal HDD**: Two (2) SATA III Ports, Unit ships with a pre-installed 2 TB HDD
- **HDD Mode**: Single

### Auxiliary Interface
- **USB**: One (1) USB 2.0 Port, One (1) USB 3.0 Port

### Third-party Support
- **Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and others**

### Recording
- **Compression**: H.265, H.264, MJPEG
- **Resolution**: 8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 1080p, 1.3 MP, 720p, D1, CIF
- **Record Rate**: 200 Mbps
- **Bit Rate**: 16 Kbps to 20 Mbps per channel
- **Record Mode**: Manual, Schedule (Regular, Continuous), Motion Detection (Video Detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
- **Record Interval**: 1 to 120 minutes (default: 60 minutes), Pre-record: 1 s to 30 s, Post-record: 10 s to 300 s

### Network
- **Interface**: One (1) RJ-45 Port (10/100/1000 Mbps)
- **Ethernet Port**: One (1) Independent 1000 Mbps Ethernet Port
- **PoE**: Eight (8) Ports (IEEE 802.3af/at)
- **Network Function**: HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DCCP, FTP, Alarm Server, P2P, IP Search (Supports Dahua IP cameras, DVRs, NVS)
- **Max. User Access**: 128 users
- **Mobile Operating System**: iOS and Android
- **Interoperability**: ONVIF 2.4.1, CGI Conformant

### Electrical
- **Power Supply**: 100 VAC to 240 VAC, 50/60 Hz
- **Power Consumption**: NVR: < 9.6 W, without HDD, PoE: Maximum 25.5 W single port, 80 W Total

### Environmental
- **Operating Conditions**: -10°C to +55°C (+14 °F to +131 °F), 86 to 106 kpa
- **Storage Conditions**: -20°C to +70°C (-4 °F to +158 °F), 0 to 90% RH

### Construction
- **Dimensions**: 375.0 mm × 327.50 mm × 53.0 mm (14.80 in. x 12.90 in. x 2.10 in.)
- **Net Weight**: 2.60 kg (5.73 lbs), without HDD
- **Gross Weight**: 4.0 kg (8.82 lbs), without HDD

### Certifications
- **Safety**: UL 60950-1, CAN/CSA C22.2 No.60960-1
- **Electromagnetic Compatibility (EMC)**: FCC Part 15 Subpart B, ANSI C63.4 – 2014
Ordering Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>8-channel Network Recorder Kit</td>
<td>BN481E82</td>
<td>• 8 x 3 MP Network IR Dome Cameras</td>
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<tr>
<td></td>
<td></td>
<td>• 1 x 4K NVR with PoE, 2 TB</td>
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<tr>
<td>Camera Accessories, Optional</td>
<td>PFA136</td>
<td>Junction box (For use alone)</td>
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<tr>
<td></td>
<td>PFB203W</td>
<td>Wall mount (For use alone or with PFA152 pole mount)</td>
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<tr>
<td></td>
<td>PFA152</td>
<td>Pole mount (For use with PFB203W wall mount)</td>
</tr>
</tbody>
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Accessories

Optional:

- PFA136 Junction box
- PFB203W Wall mount
- PFA152 Pole mount

Dimensions (mm/in.) - Network Camera

- 109.90 mm (4.33 in.)
- Ø109.90 mm (Ø4.33 in.)
- Ø98.20 mm (Ø3.87 in.)
- 3 x Ø4.70 mm (Ø0.19 in.)
- 81.0 mm (3.19 in.)

Dimensions (mm/in.) - NVR

- 375.0 mm (14.80 in.)
- 53.0 mm (2.10 in.)
- 327.50 mm (12.90 in.)

Junction Mount

- PFA136

Pole Mount

- PFB203W + PFA152

Wall Mount

- PFB203W