WatchNET
Security Since 2000

Penta Brid

HDCVI* / XVI* · AHD* · TVI* · IP* · Analog(CVBS)*

4K

AI WatchNET

PNT-1680AILR3

16CH Penta-brid Mini 1U 1HDD DVR

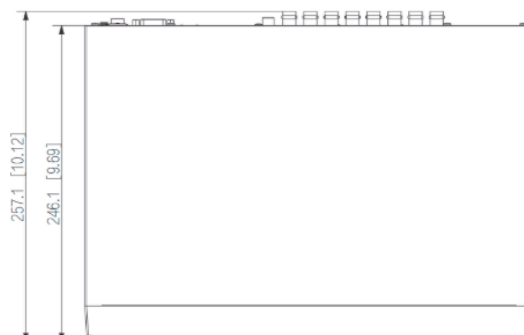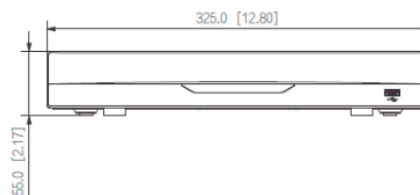| 4k HDMI | Perimeter protection | Face Recognition | SMD Plus | Scheduled AI | One click Arming/disarming | Customizable Alarm Audio | AI Coding | Audio Over Coax |

Key Features:

- H.265+/H.265 dual-stream video compression.
- Supports Full-channel AI-Coding.
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs.
- Max 32 channels IP camera inputs, each channel up to 8MP; Max 128 Mbps incoming bandwidth.
- Up to 8 channels video stream (analog channel) Perimeter Protection.
- Up to 16 channels video stream (analog channel) SMD Plus.
- Up to 2 channels video stream (analog channel) human face recognition.
- IoT & POS functionalities.

FREE Multisite VMS software
Download from www.watchnetinc.com

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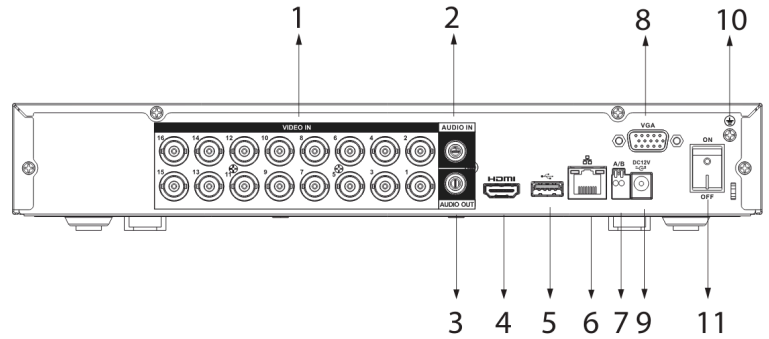
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CE FC ONVIF

System		PNT-1680AILR3
System	Main Processor	Industrial-grade processor
	Operating System	Embedded Linux
	Operating Interface	Web; Local GUI
Perimeter Protection	Perimeter Performance AI by Recorder (Number of Channels)	Advanced Model: 2 channels, 10 IVS for each channel General Model: 8 channels, 10 IVS for each channel
Face Detection	Face Attributes	Gender; age group; glasses; expressions; face mask; beard
	Face Detection Performance of AI by Recorder (Number of Channels)	2 channels (up to 12 face images/s each channel))
Face Recognition	Face Database Capacity	Up to 10 face databases with 20,000 face images in total. Name, gender, birthday, address, certificate type, cerificate No., countries & regions and state can be added to each face image
	Face Recognition Performance of AI by Recorder (Number of Channels)	2 channels
SMD Plus	SMD Plus by Recorder	16 channels: Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change
Audio and Video	Analog Camera Input	16 BNC ports, supports HDCVI/AHD/TVI/CVBS autodetect
	Camera Input	1. CVI: 4K@25/30 fps; 6 MP@20 fps; 5 MP@20 fps; 5 MP@25 fps; 4 MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps; 720p@50/60 fps.2. TVI: 4K@15 fps; 5 MP@20 fps; 4 MP@25/30 fps; 3 MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps.3. AHD: 4K@15 fps; 5 MP@20 fps; 4 MP@25/30 fps; 3 MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps
	IP Camera Input	Up to 32 channels of IPC access 16 IP channels by default + 16 channels (analog channels are converted to IP channels) incoming bandwidth: 128 Mbps, recording bandwidth: 128 Mbps and outgoing bandwidth: 128 Mbps *After IP channels are added beyond the existing channels, the AI Function (IVS, SMD, FACE) will be disabled.
	Encoding Capacity	Main stream: 4K@(1fps-7fps); 6 MP@(1fps-10fps); 5 MP@(1fps-12fps); 4K-N, 4 MP, 3 MP@(1fps-15fps); 4M-N, 1080p, 720p, 960H, D1,CIF@(1fps–25/30fps); Sub stream: 960H@(1fps–15fps); D1/CIF@(1 fps– 25/30fps)

Audio and Video		
Audio and Video	Dual-stream	Yes
	Video Bit Rate	32 kbps–6144 kbps
	Audio Sampling	8 kHz, 16 bit
	Audio Bit Rate	64 kbps
	Video Output	1 HDMI, 1 VGA HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 *Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.
	Multi-screen Display	When IP extension mode not enabled: 1/4/8/9/16 When IP extension mode enabled: 1/4/8/9/16/25/36
	Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Samsung
Compression Standard	Video Compression	AI Coding; Smart H.265+; H.265; Smart H.264+; H.264
	Audio Compression	G.711a; G.711u; PCM
Network	Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; P2P
	Mobile Phone Access	IOS; Android
	Interoperability	ONVIF 22.12(Profile T; Profile S; Profile G); CGI; SDK
	Browser	Chrome, IE9 or later, Firefox
	Network Mode	Single-address mode
Recording Playback	Record Mode	General, motion detection; intelligent; alarm; POS
	Recording Playback	1/4/9/16
	Backup Method	USB device and network
	Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)
Alarm	General Alarm	Motion detection; video loss; tampering
	Anomaly Alarm	No disk; storage error; disk full; camera offline; IP conflict; MAC conflict
	Intelligent Alarm	Face detection; face recognition; perimeter protection
	Alarm Linkage	Record; snapshot (panoramic); IPC external alarm output; access controller; voice prompt; buzzer; log; preset; email
Ports	Audio Input	1-channel RCA 16-channel BNC (Coaxial Audio)
	Audio Output	1-channel RCA
	Two-way Talk	Yes (share the same audio input with the first channel)
	HDD Interface	1 SATA port, up to 16TB capacity for each disk. The maximum HDD capacity varies with environment temperature
	RS-485	1 port, for PTZ control
	USB	2 (1 front USB 2.0 port, 1 rear USB 3.0 port)

Ports	HDMI	1
	VGA	1
	Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)
General	Power Supply	DC 12V, 3A
	Power Consumption	<15 W (without HDD)
	Net Weight	1.30 kg (2.87 lb)
	Gross Weight	2.10 kg (4.63 lb)
	Product Dimensions	325.0 mm × 257.1 mm × 55.0 mm (12.80" × 10.12" × 2.17") (W × D × H)
	Packaging Dimensions	372.0 mm × 117.0 mm × 308.0 mm (14.65" × 4.61" × 12.13") (W × D × H)
	Operating Temperature	–10 °C to +55 °C (14 °F to +131 °F)
	Operating Humidity	10%–90% (RH)
	Installation	Rack or desktop
	Certifications	CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024 FCC: Part 15 Subpart B

Panels:

1) VIDEO IN
2) AUDIO IN, RCA Connector
3) AUDIO OUT, RCA Connector
4) HDMI Port
5) USB Port
6) Network Port
7) RS–485 Port
8) VGA Port
9) Power Input
10) Ground
11) Power Switch