MT-NVR5016AI-4K
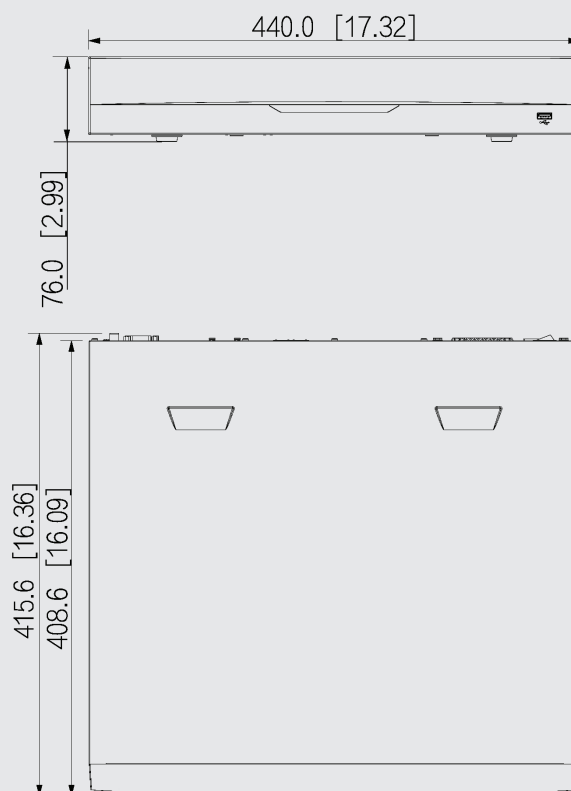16 Channels 1.5U 4HDDs AI Network Video Recorder

FEATURES

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format.
- Max. decoding capability: 32 × 1080p@30 fps or 16 × 4MP@30 fps.
- Max. 384 Mbps incoming/recording/outgoing bandwidth.
- Support AcuPick with Max. 16-Channel.
- Support N+M cluster.
- AI by recorder: 2-channel face detection and recognition, 4-channel perimeter protection, and 8-channel SMD Plus.
- AI by camera: Face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, stereo analysis, heat map, and people counting.
- Security baseline 2.3.

440.0 [17.32]

76.0 [2.99]

415.6 [16.36]

408.6 [16.09]

www.mtechnology.biz

TECHNICAL SPECIFICATIONS

System	Main Processor	Industrial-grade processor
	Operating System	Embedded Linux
	Operating Interface	Web, Local GUI

AI	AI by Recorder	Face detection; face recognition; perimeter protection; SMD Plus
	AI by Camera	Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map
	AcuPick AI by Camera + Recorder	Max. 16-channel, 1 combined event per channel/s

Perimeter Protection	Perimeter Performance AI by Recorder (Number of Channels)	4 channels, 10 IVS rules for each channel
	Perimeter Performance of AI by Camera (Number of Channels)	16 channels

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 Detection Performance of AI by Camera (Number of Channels)	16 channels

Face Recognition	Face Database Capacity	Up to 20 face databases with 20,000 images, with a total capacity of 2.5 G. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image
	Face Recognition Performance of AI by Recorder (Number of Channels)	1. 16-channel FD (by camera) + FR (by recorder), image stream: 16 face images/s 2. 2-channe FD (by recorder) + FR (by recorder), video stream: 12 face images/s
	Face Recognition Performance of AI by Camera (Number of Channels)	16 channels

SMD Plus	SMD Plus by Recorder	8 channels: Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change
	SMD Plus by Camera	16 channels

Video Metadata	Metadata Performance of AI by Camera (Number of Channels)	8 channels
	Human Attributes	Top color, top type, bottom color, bottom type, hat, bag, age, gender and umbrella
	Motor Vehicle Attributes	License plate, plate color, vehicle body, vehicle model, vehicle logo, calling, seatbelt, vehicle interior, vehicle registration location.
	Non-motor Vehicle Attributes	Vehicle model, vehicle color, number of persons, helmet.

Vehicle License Plate Comparison	ANPR by Camera (Number of Channels)	8 channels
	License Plate Database Capacity	1. Create up to 20,000 plate numbers. 2. Blocklist and allowlist

Audio and Video	Access Channel	16
	Network Bandwidth	AI disabled: 384 Mbps incoming, 384 Mbps recording and 384 Mbps outgoing AI enabled: 200 Mbps incoming, 200 Mbps recording and 200 Mbps outgoing
	Resolution	32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 5 MP; 4 MP; 1080p; 720p; D1; CIF; QCIF
	Decoding Capability	AI disabled: 2-channel 32 MP@20 fps; 2-channel 24 MP@20 fps; 4-channel 16 MP@30 fps; 5-channel 12 MP@30 fps; 8-channel 8 MP@30 fps; 12-channel 5 MP@30 fps; 16-channel 4 MP@30 fps AI enabled: 1-channel 32 MP@20 fps; 1-channel 24 MP@20 fps; 2-channel 16 MP@30 fps; 4-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 8-channel 5 MP@30 fps; 12-channel 4 MP@30 fps
	Video Output	2 VGA, 2 HDMI VGA:1920 × 1080, 1280 × 1024, 1280 × 720 HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 Heterogeneous video source output for HDMI1 and HDMI2 Simultaneous video source output for VGA1 and HDMI1 Simultaneous video source output for VGA2 and HDMI2
	Multi-screen Display	Main screen: 1/4/8/9/16 Sub screen: 1/4/8/9/16
	Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Samsung

Compression Standard	Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
	Audio Compression	G.711a; G.711u; PCM; G726

Network	Network Protocol	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UDP; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search (Supports Mtechnology IP camera, DVR, NVS, etc.); Multicast; P2P; Auto Registration; iSCSI
	Mobile Phone Access	iOS; Android
	Interoperability	ONVIF 22.06 (Profile T; Profile S; Profile G); CGI; SDK
	Browser	Chrome;IE;Safari;Edge;Firefox
	Network Mode	Multi-address mode, load balance, fault tolerance and other network port binding modes

www.mtechnology.biz

TECHNICAL SPECIFICATIONS

Recording Playback	Multi-channel Playback	Up to 16 channels
	Record Mode	General, motion detection; intelligent; alarm; POS
	Backup Method	USB device and network
	Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)
Storage	Disk Group	Yes
Alarm	General Alarm	Motion detection; privacy masking; local alarm
	Anomaly Alarm	Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; abnormal behavior of fan; cybersecurity exception
	Intelligent Alarm	Face detection; perimeter protection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map
	Alarm Linkage	Record; snapshot (panoramic); local alarm output; IPC external alarm output; access controller; audio; buzzer; log, preset; email
Port	Audio Input	1-channel RCA
	Audio Output	2-channel RCA
	Alarm Input	16 channels
	Alarm Output	6 channels (1-channel 12 V 1 A output)
	HDD Interface	4 SATA ports, each disk can contain up to 16 TB. This limit varies depending on the environment temperature.
	eSATA	1
	RS-232	1
	RS-485	1 (half-duplex serial communication)
	USB	3(1 front USB 2.0 port, 2 rear USB 3.0 ports)
	HDMI	2
	VGA	2
	Network Port	2 (10/100/1000 Mbps Ethernet port, RJ-45)

General	Power Supply	100–240 VAC, 50-60 Hz
	Power Consumption	Total output of NVR is ≤ 13 W (without HDD)
	Net Weight	4.74 kg (10.45 lb)
	Gross Weight	6.11 kg (13.47 lb)
	Product Dimensions	440.0 mm × 415.1 mm x 70.0 mm (17.32" × 16.34" × 2.76") (W ×D × H)
	Packaging Dimensions	530.0 mm × 500.0 mm × 210.0 mm (20.87" × 19.69" × 8.27") (W × D × H)
	Operating Temerature	−10 °C to +55 °C (14 °F to +131 °F)
	Storage Temperature	−20 °C to +60 °C (−4 °F to +140 °F)
	Operating Humidity	10%–93% (RH)
	Installation	Rack or desktop
Certifications		FCC: 47 CFR FCC Part15, SubpartB, Class A CE-EMC: EN 55032: 2015+A1: 2020; EN IEC 61000-3-2: 2019+A1: 2021; EN 61000-3-3: 2013+A1: 2019+A2: 2021; EN 55035: 2017+A11: 2020; EN 50130-4: 2011+A1: 2014 CE-LVD: EN 62368-1: 2014

Datasheet rev.A23.10

www.mtechnology.biz