

Model Reference ID	PNRT33P8-8	PNRT33P6-16	PNRT33P6-32	PNRT53P6-32
<b>Technical Specifications</b>				
<b>Descriptions</b>	8-CH Embedded 2bay 8-PoE NVR	16-CH Embedded 2bay 16-PoE NVR	32-CH Embedded 2bay 16-PoE NVR	32-CH Embedded 4bay 16-PoE NVR
<b>Device</b>				
<b>SoC</b>	Novatek NT98336-E	Novatek NT98336-E	Novatek NT98336-E	Novatek NT98336-E
<b>Flash</b>	eMMC 8GB	eMMC 8GB	eMMC 8GB	eMMC 8GB
<b>RAM</b>	2GB	2GB	4GB	4GB
<b>OS</b>	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux
<b>Linux kernel</b>	4.19.148	4.19.148	4.19.148	4.19.148
<b>Watchdog</b>	Hardware + Software	Hardware + Software	Hardware + Software	Hardware + Software
<b>Power Restoration</b>	System Restart Automatically after Power Recovery	System Restart Automatically after Power Recovery	System Restart Automatically after Power Recovery	System Restart Automatically after Power Recovery
<b>Reset button</b>	On board	On board	On board	On board
<b>TPM</b>	N/A (Adding as options)	N/A (Adding as options)	N/A (Adding as options)	N/A (Adding as options)
<b>LED indicator (front panel)</b>	Power x1, Net x1, Status x1	Power x1, Net x1, Status x1	Power x1, Net x1, Status x1	Power x1, Net1 x1, Net2 x1, Status x1
<b>System fan</b>	Yes *Non-detectable FAN x1*	Yes *Non-detectable FAN x1*	Yes *Non-detectable FAN x1*	Yes *Detectable FAN x1*
<b>Display</b>				
<b>LiveView Display</b>	8 Channels Multi-Lay out Display : 1x1, 2x2, 3x3, 4x4 1P+3, 1P+6, 2P+3, 3V, 1M+5, 1M+12	16 Channels Multi-Lay out Display : 1x1, 2x2, 3x3, 4x4 1P+3, 1P+6, 2P+3, 3V, 1M+5, 1M+12	32 Channels Multi-Lay out Display : 1x1, 2x2, 3x3, 4x4 1P+3, 1P+6, 2P+3, 3V, 1M+5, 1M+12, 1M+31	32 Channels Multi-Lay out Display : 1x1, 2x2, 3x3, 4x4 1P+3, 1P+6, 2P+3, 3V, 1M+5, 1M+12, 1M+31
<b>Video Output</b>	HDMI 1.4a x1, VGA x1	HDMI 1.4a x1, VGA x1	HDMI 1.4a x1, VGA x1	HDMI 1.4a x1, VGA x1
<b>Display Resolution</b>	3840x2160, 1920x1080, 1280x720 *HDMI up to 3840x2160, VGA up to 1920x1080p*	3840x2160, 1920x1080, 1280x720 *HDMI up to 3840x2160, VGA up to 1920x1080p*	3840x2160, 1920x1080, 1280x720 *HDMI up to 3840x2160, VGA up to 1920x1080p*	3840x2160, 1920x1080, 1280x720 *HDMI up to 3840x2160, VGA up to 1920x1080p*
<b>Fisheye Dewarp</b>	Local: 10, 1P, 1R, 1O3R, 1O8R, 1P3R Web: 10, 1R, 1P	Local: 10, 1P, 1R, 1O3R, 1O8R, 1P3R Web: 10, 1R, 1P	Local: 10, 1P, 1R, 1O3R, 1O8R, 1P3R Web: 10, 1R, 1P	Local: 10, 1P, 1R, 1O3R, 1O8R, 1P3R Web: 10, 1R, 1P
<b>PTZ Operation</b>	Direction Control, Home, Iris, Preset, Patrol (Group), PIP Control	Direction Control, Home, Iris, Preset, Patrol (Group), PIP Control	Direction Control, Home, Iris, Preset, Patrol (Group), PIP Control	Direction Control, Home, Iris, Preset, Patrol (Group), PIP Control
<b>Video</b>				
<b>Video Format</b>	MJPEG, H.264, H.265	MJPEG, H.264, H.265	MJPEG, H.264, H.265	MJPEG, H.264, H.265
<b>Graphic Decoder</b>	Hardware decoding	Hardware decoding	Hardware decoding	Hardware decoding
<b>Decoding Resolution</b>	Up to 7680x2560	Up to 7680x2560	Up to 7680x2560	Up to 7680x2560
<b>Decoding Capability</b>	H.265/H.264: 3840x2160@120fps(4-CH) 1920x1080@480fps(8-CH)	H.265/H.264: 3840x2160@120fps(4-CH) 1920x1080@480fps(16-CH)	H.265/H.264: 3840x2160@120fps(4-CH) 1920x1080@480fps(16-CH)	H.265/H.264: 3840x2160@120fps(4-CH) 1920x1080@480fps(16-CH)
<b>Audio</b>				
<b>Audio Format</b>	G.711, G.726	G.711, G.726	G.711, G.726	G.711, G.726
<b>Audio In/Out</b>	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1
<b>Record</b>				
<b>Recording Time (sec.)</b>	Pre-Record: 5 (Max. 10) Post-Record: 20 (Max. 300)	Pre-Record: 5 (Max. 10) Post-Record: 20 (Max. 300)	Pre-Record: 5 (Max. 10) Post-Record: 20 (Max. 300)	Pre-Record: 5 (Max. 10) Post-Record: 20 (Max. 300)
<b>Recording Throughput</b>	128Mbps (TBD)	128Mbps (TBD)	192Mbps	192Mbps
<b>Recording Mode</b>	Continuous, Schedule, Manual, Event	Continuous, Schedule, Manual, Event	Continuous, Schedule, Manual, Event	Continuous, Schedule, Manual, Event
<b>Recording Setting</b>	Recycle (unit: Day)	Recycle (unit: Day)	Recycle (unit: Day)	Recycle (unit: Day)
<b>Storage &amp; Backup</b>				
<b>HDD Devices</b>	Internal x2 (3.5") *HDD purchased separately.	Internal x2 (3.5") *HDD purchased separately.	Internal x2 (3.5") *HDD purchased separately.	Internal x4 (3.5") *HDD purchased separately.
<b>RAID</b>	RAID 0,1	RAID 0,1	RAID 0,1	RAID 0,1,5
<b>Disk Management</b>	Create, Format and Remove Disk HDD S.M.A.R.T	Create, Format and Remove Disk HDD S.M.A.R.T	Create, Format and Remove Disk HDD S.M.A.R.T	Create, Format and Remove Disk HDD S.M.A.R.T
<b>External Storage</b>	USB Storage (USB 3.0)	USB Storage (USB 3.0)	USB Storage (USB 3.0)	USB Storage (USB 3.0)
<b>USB Clip Export</b>	USB Dongle (FAT Format)	USB Dongle (FAT Format)	USB Dongle (FAT Format)	USB Dongle (FAT Format)
<b>Schedule Backup</b>	FTP	FTP	FTP	FTP
<b>Playback</b>				
<b>Playback Display</b>	4 Channels Multi Layout Display	4 Channels Multi Layout Display	4 Channels Multi Layout Display	4 Channels Multi Layout Display
<b>Playback Control</b>	Regular (Play, Pause, Stop), Rewind, Next / Previous Frame, Speed Control, Calendar, Event, Timeline, Timeline Scale, Thumbnail (Storyboard)	Regular (Play, Pause, Stop), Rewind, Next / Previous Frame, Speed Control, Calendar, Event, Timeline, Timeline Scale, Thumbnail (Storyboard)	Regular (Play, Pause, Stop), Rewind, Next / Previous Frame, Speed Control, Calendar, Event, Timeline, Timeline Scale, Thumbnail (Storyboard)	Regular (Play, Pause, Stop), Rewind, Next / Previous Frame, Speed Control, Calendar, Event, Timeline, Timeline Scale, Thumbnail (Storyboard)
<b>Video Search</b>	By calendar, date/time, and alarm	By calendar, date/time, and alarm	By calendar, date/time, and alarm	By calendar, date/time, and alarm
<b>Thumbnail Explorer (Storyboard)</b>	Listing the thumbnail of recorded video (Max. 2 CH)	Listing the thumbnail of recorded video (Max. 2 CH)	Listing the thumbnail of recorded video (Max. 2 CH)	Listing the thumbnail of recorded video (Max. 2 CH)
<b>Snapshot</b>	JPEG	JPEG	JPEG	JPEG
<b>Video Clip Export</b>	Yes	Yes	Yes	Yes
<b>Network</b>				
<b>Ethernet</b>	10/100/1000Mbps Ethernet (RJ-45) x2	10/100/1000Mbps Ethernet (RJ-45) x2	10/100/1000Mbps Ethernet (RJ-45) x2	10/100/1000Mbps Ethernet (RJ-45) x2
<b>Network Throughput in total</b>	224Mbps (TBD)	224Mbps (TBD)	224Mbps	224Mbps
<b>PoE</b>	802.3at/af compliant PoE ports x 8 (total Max. 120W)	802.3at/af compliant PoE ports x 16 (total Max. 200W)	802.3at/af compliant PoE ports x 16 (total Max. 200W)	802.3at/af compliant PoE ports x 16 (total Max. 200W)
<b>PoE Management</b>	Supported	Supported	Supported	Supported
<b>Protocols</b>	IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTPSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS	IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTPSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS	IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTPSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS	IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTPSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS
<b>External Interface</b>				
<b>USB</b>	Front x1 (USB 3.0) Back x2 (USB 2.0)	Front x1 (USB 3.0) Back x2 (USB 2.0)	Front x1 (USB 3.0) Back x2 (USB 2.0)	Front x2 (USB 2.0) Back x1 (USB 3.0)
<b>Alarm In</b>	4	4	4	8
<b>Alarm Out</b>	1	1	1	8
<b>Audio</b>	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input x1
<b>RS485</b>	N/A	N/A	N/A	RS485 *1
<b>System</b>				
<b>Camera Integration</b>	ONVIF Profile S	ONVIF Profile S	ONVIF Profile S	ONVIF Profile S
<b>Event</b>	Motion Detection, Smart VCA Event, PIR Detection, Tampering Detection, Camera DI/DO, Camera Disconnected, Disk Failure, Disk Full, NVR DI/DO, PoE error	Motion Detection, Smart VCA Event, PIR Detection, Tampering Detection, Camera DI/DO, Camera Disconnected, Disk Failure, Disk Full, NVR DI/DO, PoE error	Motion Detection, Smart VCA Event, PIR Detection, Tampering Detection, Camera DI/DO, Camera Disconnected, Disk Failure, Disk Full, NVR DI/DO, PoE error	Motion Detection, Smart VCA Event, PIR Detection, Tampering Detection, Camera DI/DO, Camera Disconnected, Disk Failure, Disk Full, NVR DI/DO, PoE error, Fan error
<b>Event Action</b>	Video recording, email with snapshot, buzzer, PTZ, FTP, DO (camera, system), full screen, send to CMS. (Cloud APP Notification as option)	Video recording, email with snapshot, buzzer, PTZ, FTP, DO (camera, system), full screen, send to CMS. (Cloud APP Notification as option)	Video recording, email with snapshot, buzzer, PTZ, FTP, DO (camera, system), full screen, send to CMS. (Cloud APP Notification as option)	Video recording, email with snapshot, buzzer, PTZ, FTP, DO (camera, system), full screen, send to CMS. (Cloud APP Notification as option)
<b>User Management</b>	User level: administrator, regular user System, Recording, User, Error	User level: administrator, regular user System, Recording, User, Error	User level: administrator, regular user System, Recording, User, Error	User level: administrator, regular user System, Recording, User, Error
<b>Log</b>	Time Zone, Manual, Automatic Sync NTP, Daylight Saving Time	Time Zone, Manual, Automatic Sync NTP, Daylight Saving Time	Time Zone, Manual, Automatic Sync NTP, Daylight Saving Time	Time Zone, Manual, Automatic Sync NTP, Daylight Saving Time
<b>Date&amp;Time</b>				
<b>Language</b>	Czech, English, French, German, Italian, Japanese, Korean, Portuguese, Polish, Russian, Spanish, Simplified Chinese, Traditional Chinese, Arabic	Czech, English, French, German, Italian, Japanese, Korean, Portuguese, Polish, Russian, Spanish, Simplified Chinese, Traditional Chinese, Arabic	Czech, English, French, German, Italian, Japanese, Korean, Portuguese, Polish, Russian, Spanish, Simplified Chinese, Traditional Chinese, Arabic	Czech, English, French, German, Italian, Japanese, Korean, Portuguese, Polish, Russian, Spanish, Simplified Chinese, Traditional Chinese, Arabic
<b>Remote Client</b>				
<b>Mobile/Tablet App</b>	Vigilance Cloud App (Android & iOS), Vigilance Viewer (iOS)	Vigilance Cloud App (Android & iOS), Vigilance Viewer (iOS)	Vigilance Cloud App (Android & iOS), Vigilance Viewer (iOS)	Vigilance Cloud App (Android & iOS), Vigilance Viewer (iOS)
<b>Web Browser</b>	Chrome v68.0.3 or later / Windows for new web	Chrome v68.0.3 or later / Windows for new web	Chrome v68.0.3 or later / Windows for new web	Chrome v68.0.3 or later / Windows for new web
<b>General</b>				
<b>Power Input</b>	100-240V AC, 50/60Hz	100-240V AC, 50/60Hz	100-240V AC, 50/60Hz	100-240V AC, 50/60Hz
<b>Power Consumption</b>	Max. 300W	Max. 300W	Max. 300W	Max. 300W
<b>Dimensions</b>	366 (W) x 320.3 (D) x 46 (H)mm	366 (W) x 320.3 (D) x 46 (H)mm	366 (W) x 320.3 (D) x 46 (H)mm	432 (W) x 421 (D) x 66 (H) mm
<b>Weight</b>	1.8kg	1.8kg	1.8kg	4.6kg (without HDD)
<b>Operating Temperature</b>	-10°C ~ 55°C	-10°C ~ 55°C	-10°C ~ 55°C	-10°C ~ 55°C (14°F ~ 131°F)
<b>Humidity</b>	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%
<b>Safety Certifications</b>	CE, FCC, IC, UL, CB	CE, FCC, IC, UL, CB	CE, FCC, IC, UL, CB	CE, FCC, IC, UL, CB

Product specification and availability are subject to change without notice.