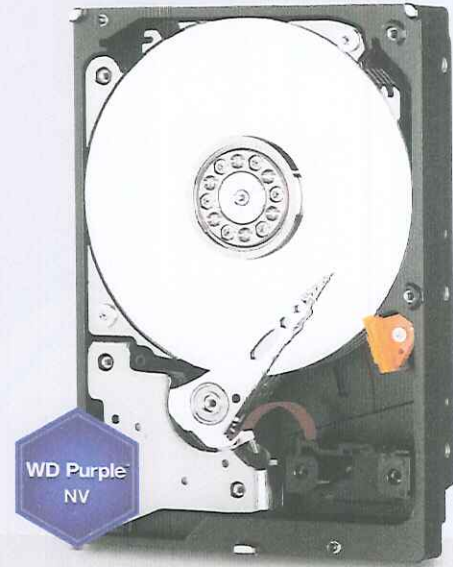![WD logo]

WD Purple™ NV

Surveillance Storage

WD offers the Power of Choice when it comes to equipping a surveillance system for home or business with the addition of the WD Purple™ NV hard drive. Designed specifically for NVR digital surveillance systems, the WD Purple NV hard drive adds support for systems with higher drive bay configurations and up to 64 HD cameras. The increased number of video streams and workload capability offered with the WD Purple NV hard drive allows scalability beyond the limitations of DVR systems where only the WD Purple drive is applicable.

WD Purple NV

INTERFACE	FORM FACTOR	ROTATIONAL SPEED	CAPACITIES
SATA 6 Gb/s	3.5-inch	IntelliPower™	4 TB and 6 TB

MODEL NUMBERS
WD6NPURX
WD4NPURX

Product Features

NVR vs. DVR

WD offers the Power of Choice when it comes to equipping a surveillance system for your home or business with the addition of WD Purple™ NV. Designed specifically for scalable network video recorder (NVR) surveillance systems, WD Purple NV adds support for systems with higher drive bay configurations and up to 64 high-definition cameras. The expanded workload capability of WD Purple NV hard drives enables the ability to handle increased video streams, allows scalability beyond the limitations of DVR systems where only WD Purple is applicable.

Increased Capabilities

Designed for higher temperatures and always-on surveillance environments, WD Purple NV hard drives expand support for higher hard drive bay configurations, systems utilizing up to 64 high-definition cameras, hardware vibration sensors and greater workloads per year when compared to WD Purple hard drives. Included with the increased support, WD Purple NV is also backwards compatible with DVR systems.

Optimized performance with AllFrame™

Inherited from WD Purple, WD's exclusive AllFrame technology boosts write performance for WD Purple NV hard drives by working with ATA streaming commands to reduce frame loss and improve streaming playback. AllFrame also reduces video interruptions that commonly occur when desktop hard drives are incorrectly used as storage in security systems, especially in higher video stream count environments where additional data is being captured at an exponential rate. WD Purple NV with AllFrame provides the confidence you should expect when it's time to play back and review critical surveillance footage in larger surveillance configurations.

Premium Protection

Designed with tarnish resistant components, WD Purple NV hard drives offer premium protection in harsh environments where surveillance systems are commonly installed including outdoor cabinets where moisture and other natural elements may be present. This increased protection adds reliability to the hard drive over time, especially compared to desktop drives.

Support for High Camera count Systems

WD Purple NV hard drives are optimized to support systems utilizing high-definition surveillance cameras, giving you the flexibility to upgrade and expand your security system in the future. Higher storage capacities also allow you to store the surveillance footage for a longer period of time, especially in situations when every second counts. The specific number of cameras that can be supported will be dependent on a number of criteria including but not limited to; types and capability of cameras installed (resolution, frames per second, additional features) and the system's hardware and software capability.

Lower power consumption

Low power consumption is crucial in high-temperature always-on surveillance environments. With exclusive IntelliSeek™ technology, WD Purple NV hard drives calculate the optimum seek speeds which lowers power consumption, noise and vibration that can damage and cause drives to wear out more quickly, increasing reliability.

3-year limited warranty

WD Purple NV hard drives are backed by an impressive 3-year limited warranty (worldwide) giving you peace of mind that your precious surveillance footage is secure no matter where you are in the world.

The WD Advantage

WD puts our products through extensive Functional Integrity Testing (F.I.T.) prior to any product launch. This testing ensures our products consistently meet the highest quality and reliability standards of the WD brand. WD also has a detailed Knowledge Base with more than 1,000 helpful articles as well as helpful software and utilities. Our customer support lines have longer operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help or you can access our WD Support site for additional details.

WD Purple™ NV

Specifications	6 TB	4 TB
Model number[1]	WD6NPURX	WD4NPURX
Formatted capacity[2]	6 TB	4 TB
Form factor	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes
RoHS compliant[3]	Yes	Yes
Performance		
Data transfer rate (max)		
Buffer to host	6 Gb/s	6 Gb/s
Host to/from drive (sustained)	171 MB/s	150 MB/s
Cache (MB)	64	64
Rotational speed (RPM)	IntelliPower	IntelliPower
Reliability/Data Integrity		
Load/unload cycles[4]	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}
Limited warranty (years)[5]	3	3
Power Management		
Average power requirements (W)		
Read/Write	5.90	4.80
Idle	4.90	4.33
Standby and Sleep	0.40	0.52
Environmental Specifications[6]		
Temperature (°C, on the base casting)		
Operating	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70
Shock (Gs)		
Operating (2 ms, read/write)	30	30
Operating (2 ms, read)	65	65
Non-operating (2 ms)	250	250
Acoustics (dBA)[7]		
Idle	25	25
Seek (average)	26	26
Physical Dimensions		
Height (in./mm, max)	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.58/0.72	1.50/0.68

[1] Not all products may be available in all regions of the world.

[2] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[3] WD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

[4] Controlled unload at ambient condition.

[5] See http://support.wd.com/warranty for regional specific warranty details.

[6] No non-recoverable errors during operating tests or after non-operating tests.

[7] Sound power level.
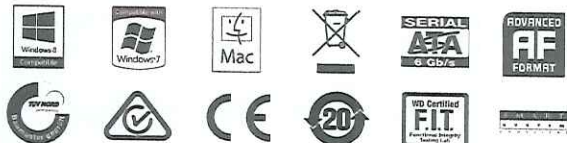
CAN ICES-3 (B) / NMB-3 (B)

2879-800050-A04   April 2015

HIKVISION

DS-2CD2120F-I(W)(S)

Key Features

- Up to 2 megapixel (1920 × 1080) resolution
- Standard video compression with high compression ratio, ROI (region of interest) encoding
- Progressive scan CMOS, capture motion video without incised margin
- Support dual stream, and the sub-stream for mobile surveillance
- High-performance and long service life Infrared LED, Approx. 10 to 30 meters IR range
- Two-way audio(-S)
- Audio I/O(-S)
- Support Wi-Fi(-W)
- IR cut filter with auto switch
- PoE (Power over Ethernet)
- Built-in Micro SD/SDHC/SDXC card slot, up to 128 GB
- Ingress Protection level: IP67
- Impact Protection: IEC60068-2-75 test, Eh, 20J; EN50102, up to IK10
- Other functions: rotate mode, alarm, mirror, reset button, etc
- Support smart function: Intrusion detection and line crossing detection
- Support VCA, which is compatible with NVR for the second time of video searching and analysing

Specification

Model / Parameter	DS-2CD2120F-I(W)(S)
	2 Megapixel CMOS Vandal-proof Network Dome Camera
Camera	
Image Sensor	1/2.8" Progressive Scan CMOS
Min. Illumination	0.01Lux @ (F1.2, AGC ON) ,0 Lux with IR

1

HIKVISION

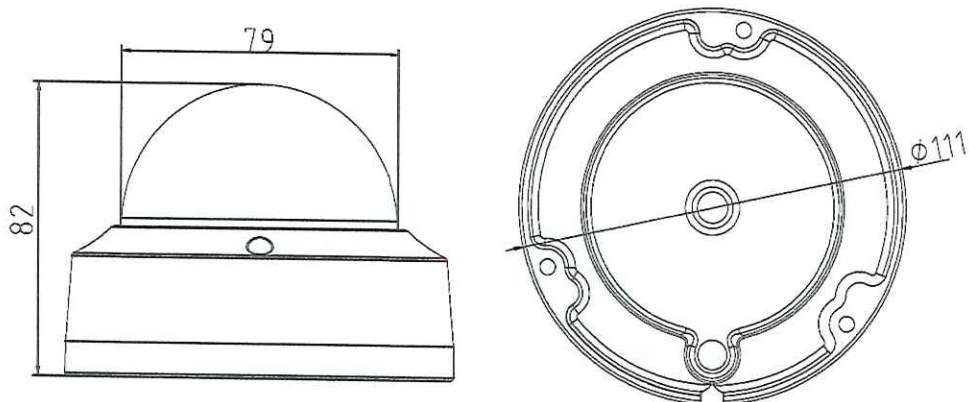|	
	0.028 Lux @ (F2.0, AGC ON) ,0 Lux with IR
Shutter Speed	1/3 s to 1/100,000 s
Lens	4mm@ F2.0 (2.8mm, 6mm optional)
	Angle of view: 106°(2.8mm), 85°(4mm) , 52°(6mm)
Lens Mount	M12
Day &Night	IR cut filter with auto switch
Digital Noise Reduction	3D DNR
Wide Dynamic Range	Digital WDR
Angle Adjustment	Pan:0° - 355°, Tilt: 0° - 75°, Rotation: 0-355°
Compression Standard	
Video Compression	H.264/ MJPEG
H.264 Type	Main Profile
Video Bit Rate	32 Kbps – 8 Mbps
Dual Stream	Yes
Audio Compression(-S)	G.711/G.722.1/G.726/MP2L2
Audio Bit Rate(-S)	64Kbps(G.711) /16Kbps(G.722.1)/16Kbps(G.726) /32-128Kbps(MP2L2)
Image	
Max. Resolution	1920 x 1080
Frame Rate	50Hz: 25fps(1920 × 1080), 25fps (1280 × 960), 25fps (1280 × 720) 60Hz: 30fps(1920 × 1080), 30fps (1280 × 960), 30fps (1280 × 720)
Image Settings	Rotate mode, Saturation, Brightness, Contrast adjustable by client software or web browser
Backlight compensation	Yes, zone optional
ROI	Support
Network	
Network Storage	Local storage: Built-in Micro SD/SDHC/SDXC card slot, up to 128 GB. NAS (Support NFS,SMB/CIFS)
Alarm Trigger	Intrusion detection, Line crossing detection, Motion detection, Dynamic Analysis, Tampering alarm, Network disconnect, IP address conflict, Storage full, Storage error
Protocols	TCP/IP,ICMP,HTTP,HTTPS,FTP,DHCP,DNS,DDNS,RTP,RTSP,RTCP, NTP,UPnP,SMTP,IGMP,802.1X,QoS,IPv6,Bonjour
Security	User Authentication, Watermark
Standard	ONVIF, PSIA, CGI, ISAPI
Interface	
Communication Interface	1 RJ45 10M/100M Ethernet interface

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Alarm interface	-S: 1 alarm I/O
Audio interface	-S: 1 audio I/O
Wi-Fi Specification(Only for the products with Wi-Fi module built-in)	
Wireless Standards	IEEE802.11b, 802.11g, 802.11n
Frequency Range	2.4 GHz ~ 2.4835 GHz
Channel Bandwidth	20/40MHz Support
Protocols	802.11b: CCK, QPSK, BPSK 802.11g/n: OFDM
Security	64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK, WPS
Transfer Rates	11b: 11Mbps 11g: 54Mbps 11n: up to 150Mbps
Wireless Range	50m(depend on environment)
Wireless Standards	IEEE802.11b, 802.11g, 802.11n
General	
Operating Conditions	-30 °C – 60 °C (-22 °F – 140 °F) Humidity 95% or less (non-condensing)
Power Supply	12 V DC ± 10% PoE (802.3af)
Power Consumption	Max. 5.3W
Ingress Protection level	IP67
IR Range	30 meters
Impact Protection	IEC60068-2-75Eh, 20J; EN50102, up to IK10
Dimensions	Φ111 × 82 (4.4" × 3.2")
Weight	500g (1.1 lb)

* "-W" series support Wi-Fi (802.11b/g/n) and the modules with Wi-Fi function don't support the 802.1X protocol.

Order Models

DS-2CD2120F-I, DS-2CD2120F-IW, DS-2CD2120F-IS, DS-2CD2120F-IWS

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Dimensions

79

82

Ø111

Accessories

Inclined ceiling mount
DS-1259ZJ

Wall mount
DS-1272ZJ-110

HIKVISION

DS-7600NI-E Series
Plug and Play Network Video Recorder

Key Features

- Up to 6 Megapixel Resolution Recording
- 40 Mbps/80Mbps/160 Mbps Incoming Bandwidth
- Supports H.264+ and H.264
- Synchronous HDMI and VGA Output 1920 × 1080p Resolution
- 4/8/16-ch Network Cameras Can Be Connected
- Up to 2 SATA Interfaces
- Plug & Play w/Up to 16 Independent PoE Network Connections
- Supports Network Detection, Including Network Delay, Packet Loss
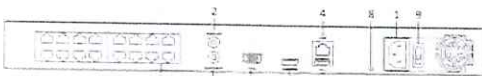- Alarm and Audio I/O

Rear Panel

Part No. DS-7604NI-E1/4P

Part No. DS-7608NI-E2/8P

Part No. DS-7616NI-E2/16P

1. Power Supply
2. Audio In
3. HDMI Interface
4. LAN Network Interface
5. Audio Out
6. VGA Interface
7. USB Interface
8. Ground
9. Power Switch
10. Network Interfaces with PoE Function
11. Alarm I/O

	DS-7604NI-E1/4P	DS-7608NI-E2/8P	DS-7616NI-E2/16P
Video/Audio Input			
IP Video Input	4-ch	8-ch	16-ch
Two-Way Audio Input	1-ch, RCA (2.0 Vp-p, 1k Ω)		
Network			
Video Compression	H.264+, H.264		
Incoming Bandwidth	40 Mbps	80 Mbps	160 Mbps
Outgoing Bandwidth	80 Mbps		
Remote Connection	128		
Video/Audio Output			
Recording Resolution	6 MP/5 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF		
Frame Rate	Main stream: 60 fps		
	Sub-stream: 60 fps		
HDMI/VGA Output	1-ch, resolution: 1920 × 1080p/1600 × 1200/1280 × 1024/1280 × 720/1024 × 768		
Audio Output	1-ch, RCA (linear, 1k Ω)		
Decoding			
Live View/Playback Resolution	6 MP/5 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF		
Capability	4-ch @ 1080p	8-ch @ 720p, 6-ch @ 1080p	16-ch @ 4CIF, 12-ch @ 720p, 6-ch @ 1080p
Hard Disk			
SATA	1 SATA interface for 1 HDD	2 SATA interface for 2 HDDs	
Capacity	Up to 6 TB for each disk		
External Interface			
Network Interface	1 RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface		
USB Interface	1 × USB 2.0 and 1 × USB 3.0		
Alarm In/Out	4 /1		
PoE			
Interface	4 independent 100 Mbps PoE network interfaces	8 independent 100 Mbps PoE network interfaces	16 independent 100 Mbps PoE network interfaces
Maximum Power	50 W	120 W	200 W
Supported Standards	802.3af and 802.3at		
Others			
Power Supply	48 VDC, PoE+ (802.3at)	100 to 240 VAC, PoE+ (802.3at)	
Consumption (without hard disk)	≤ 10 W	≤ 15 W	
Working Temperature	-10° C to +55° C (+14° F to +131° F)		
Working Humidity	10% to 90%		
Chassis	1U chassis		
Dimensions (W × D × H)	315 mm × 230 mm × 45 mm (12.4" × 9.1" × 1.8")	445 mm × 290 mm × 45 mm (17.5" × 11.4" × 1.8")	
Weight (without hard disk)	≤ 1 kg (2.2 lb)		

Order Models

DS-7604NI-E1/4P
DS-7608NI-E2/8P
DS-7616NI-E2/16P

100115US