

VS-4016U-RP VioStor NVR

Network Surveillance System for SMB and Enterprise
 QNAP Network Video Recorder for IP Cameras

Live Monitoring, Recording, and Video Playback over the Internet Anytime, Anywhere

Secure Life, Secure Property



Powerful All-in-one Recording Functions

- Continuous/ manual/ schedule recording
- Alarm recording (by motion detection or sensor triggered)
- Multiple alarm recording schedules
- High performance megapixel recording
- High quality H.264, MxPEG, MPEG-4, and M-JPEG recording
- Audio recording (vary by camera models)

Powerful Surveillance Features

- Diversified modes for live monitoring
- Smart control of PTZ cameras and auto cruising
- Event notification on monitoring
- Real-time SMS and email alert
- Multi-channel playback at different speed
- Easy data search by date & time, timeline, event, and intelligent video analytics (motion detection, foreign object, missing object, out of focus, and camera occlusion)
- Enhanced file security by digital watermark

Easy to Use

- Trouble-free 6-step installation
- Intuitive web-based user interface
- Smart search of IP cameras for quick settings
- Drag and drop function on monitoring

High Reliability and Smart Features

- Intel® Atom™ CPU and 1GB DDR3 memory
- Advanced RAID (RAID 0/ 1/ 5/ 5 + hot spare/ 6/ JBOD) with hot-swap design
- Large storage capacity (up to 8TB) for long-term recording
- Intelligent auto power on when power resumes after power outage
- Supports UPS for 24x7 service
- Convenient video backup to external USB storage by one touch auto video backup button
- Two Gigabit LAN ports for failover, load-balancing, or multi-IP setting



**Real-time monitoring
 over the Internet anytime, anywhere !**

VS-4016U-RP

Secure Life, Secure Property



High Performance Network Surveillance System for SMB and Enterprise

QNAP VS-4016U-RP VioStor NVR is the high performance 1U chassis network surveillance system featuring Linux-embedded OS, Intel® Atom™ CPU, 1GB DDRII memory, and powerful surveillance features. It supports unique multi-server monitoring for up to 120-channel monitoring from multiple QNAP NVR servers simultaneously. The VioStor NVR houses 4 SATA hard drives to provide up to 8TB storage capacity. Moreover, the NVR is compatible with over 500 network camera models from many popular brands, e.g. **AXIS, ACTi, Arecont Vision, AVTECH, Canon, Cisco, D-Link, EDIMAX, ELMO, EtroVision, GANZ, Hikvision, iPUX, IQeye, LevelOne, Linksys, Messo, MOBOTIX, Panasonic BB/ BL/ i-Pro, SANYO, SONY, TOA, TOSHIBA, TRENDnet, VIVOTEK, and Y-CAM.**

The VioStor NVR is a complete network surveillance solution for recording, real-time monitoring, and remote data access. It supports up to 16-channel recording in H.264, MxPEG, MPEG-4, and M-JPEG video compression.

Besides, **the NVR offers diversified recording features and video search by intelligent video analytics (IVA), including motion detection, foreign object, missing object, out of focus, and camera occlusion.** In real-time monitoring, you can select to view the channels (IP cameras) with different display modes or drag and drop to change the display order of the channels flexibly. The NVR also features smart control of PTZ cameras, instant SMS and email alert, digital zoom, data search by date and time, timeline, and event, ect. All the functions can be configured by the IE web browser.

The VioStor NVR supports RAID 0/ 1/ 5/ 6 + hot spare/ JBOD, Online RAID Capacity Expansion, and Online RAID Level Migration. You can expand the storage capacity or upgrade the RAID level of a RAID configuration without turning off the server and all the disk data are retained. Also, the system can be easily set up by 6 steps via the web interface. It is an easy-to-maintain and highly reliable network surveillance system.

Powerful Surveillance Features



• Diversified Monitoring Modes

- 1/ 4/ 6/ 8/ 9/ 10/ 12/ 16/ 20/ 25/ 36/ 42-channel display mode
- Sequential display mode
- Exclusive Picture-in-Picture mode
- Dual display mode



• Easy Drag and Drop Function on Monitoring

The VioStor NVR supports drag and drop function to change the display order of the monitoring channels.

• Smart Control of PTZ & Speed Dome Cameras

You can adjust the PTZ cameras directly by the web user interface.

• Preset Position Control and Auto Cruising

You can view different preset positions of the IP cameras by clicking the number buttons on the monitoring page. You can also configure auto cruising settings on the VioStor NVR for periodic monitoring of the preset positions of the PTZ cameras.

• Digital Zoom for Monitoring and Playback

The VioStor NVR supports digital zoom for more flexible monitoring and playback.

• Event Notification

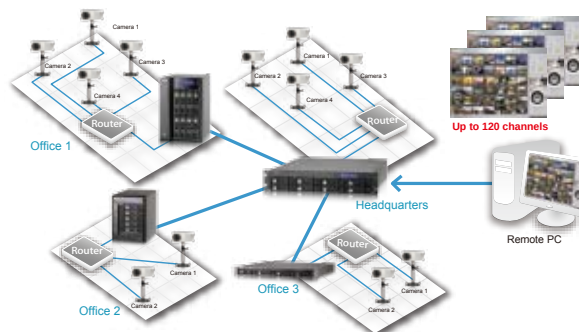
When alarm recording is enabled and an event occurs, you can click the alarm icon on monitoring page to view the alert details.

• Video Snapshot

The snapshot function is supported on monitoring and playback page.

• Multi-server Monitoring

You can connect to the VioStor NVR and add other QNAP NVR servers to monitor up to 120 channels over LAN or WAN.



• All-in-one Recording Functions

- Continuous/ schedule*/ manual recording
 - Alarm recording/ multiple alarm recording schedules*
 - High quality H.264, MxPEG, MPEG-4, and M-JPEG recording
 - Up to 30 fps at D1 or VGA for each camera
 - High performance megapixel recording
 - Audio recording (vary by camera models)
- * Up to 15 schedules are supported for each camera

• Generic IP Cameras Support

QNAP NVR provides an interface for the users to enter the JPEG CGI command of IP cameras in order to monitor, record, and playback the video of the IP cameras on the NVR.

• Real-time SMS and Email Alert

The NVR sends SMS and e-mail alert to the administrator immediately in case of system error or emergent events.



• Authority Management

You can configure the monitoring and playback authority of specified cameras for up to 32 users.

• On-line User List and Host Access Control

You can specify the connections to be allowed and denied to access the VioStor NVR. You can also view the record of users currently logged on and previously logged on to the VioStor NVR.

• Schedule Remote Replication

The VioStor NVR supports schedule remote replication for secure data backup to a remote NAS in the local network.

• Advanced Event Logs

The VioStor NVR provides detailed event logs of system warning, hard disk error, network disconnection, UPS status, users' networking services, and recordings access record.



• Multi-channel Playback at Different Speed

The VioStor NVR provides Express Quad View Playback that you can either divide the selected time equally into four playback views or play the video of four cameras at the same time.

• Enhanced File Security by Digital Watermark

The digital watermark technology allows you to check if the exported videos and snapshots of VioStor NVR are modified to enhance the file security.



• Data Search by Date & Time, Timeline, Event and Intelligent Video Analytics (IVA)

The VioStor NVR supports quick search of recording data by date and time, timeline, and events, and intelligent video analytics, including **motion detection**, **foreign object**, **missing object**, **out of focus**, and **camera occlusion**.

Motion Detection:

The moving objects of the searching area are highlighted in red brackets.



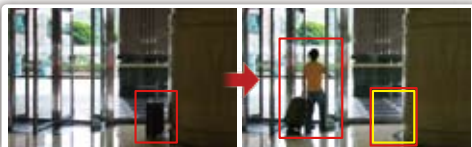
Foreign Object:

The foreign objects of the searching area are highlighted in yellow brackets.



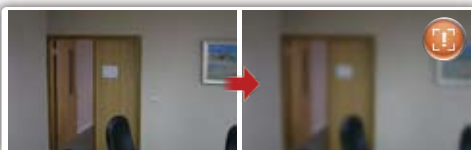
Missing Object:

The missing objects of the searching area are highlighted in yellow brackets.



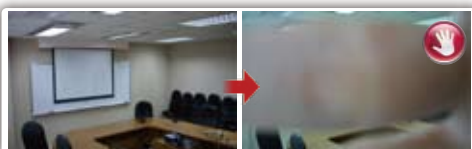
Out of Focus:

Detects if the IP camera is out of focus.



Camera Occlusion:

Detects if the IP camera is obstructed.



High Reliability and Smart Features

• Advanced RAID (0/ 1/ 5/ 6/ JBOD) with Hot-swap Design

• Online RAID Capacity Expansion and Online RAID Level Migration

• Online RAID Capacity Expansion

The storage capacity of a RAID configuration can be expanded by replacing the hard drives with larger ones.

• Online RAID Level Migration

You can upgrade the disk configuration to higher RAID level with the data retained. There is no need to turn off the server during the process.

• Auto Logoff

The administrator can set the timeout period to log off the users when the idling time has reached in order to enhance secure management of the NVR.

• S.M.A.R.T. & Advanced HDD Health Scanning (HHS)

• Intelligent Automatic System Startup when Power Resumes after Power Outage

• Support UPS for 24x7 Service

• Convenient Video Backup to External USB Storage by One Touch Auto Video Backup Button

• DOM Architecture with Embedded Fail-safe Dual OS for Enhanced Reliability

Excellent Hardware Design

• Intel® Atom™ CPU and 1GB DDRII Memory

• Green NVR Solution: Linux-embedded System with Low Power Consumption

The Linux-based VioStor NVR is more power-saving and less vulnerable to virus attack compared to PC-based surveillance solution.

Power Consumption

QNAP VS-4016U-RP VioStor NVR Write/Read 49-55W

PC-based NVR solution Write/Read 400W

• Up to 8TB Storage Capacity for Long-term Recording

• Redundant Power Supply

• Two Gigabit LAN Ports for Failover, Load-balancing, or Multi-IP Setting

• Failover

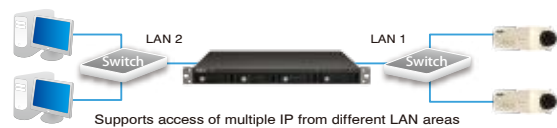
Failover allows the VioStor NVR to sustain the failure of one network port to provide continuous services.

• Load-balancing

Bandwidth aggregation is supported to boost the file transfer speed (works with managed Ethernet switch with 802.3ad configured).

• Multi-IP Setting

The VioStor NVR can be deployed with two different IP settings for sharing among different workgroups in two different subnets.



Powerful Network Services

• DDNS Support & Built-in NTP Server

• Convenient Data Access by Network Neighborhood (SMB/ CIFS) / Web File Management (HTTP) / FTP server

Application: Live Monitoring, Recording, and Video Playback over the Internet Anytime, Anywhere

• Business Service

- Live production line monitoring for quality and security control
- Department store/ mall monitoring
- Shipping process recording

- Crime prevention, e.g. shoplifting
- Parking lot monitoring
- Construction site monitoring
- Convenience store security
- Campus security

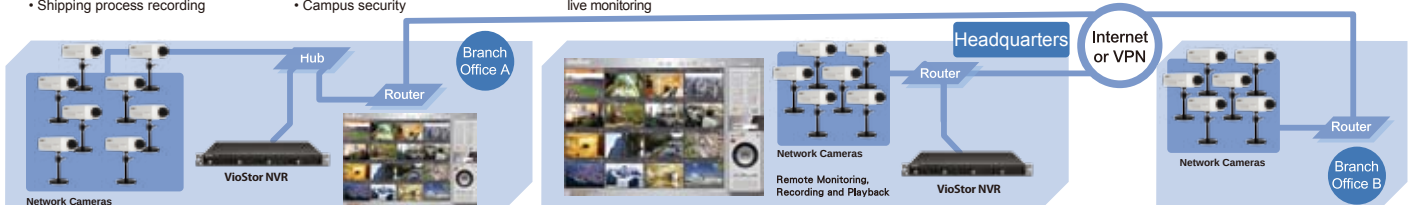
- Server room security
- Gas station security
- Hotel security
- Multiple remote offices/ factory sites live monitoring

• Office Management

- Real-time office monitoring from remote locations
- In-house office monitoring
- Office security fortification
- False alarm identification

• Home Care

- Home surveillance to secure life and property
- Enhanced protection for kids, elders, and pets
- Crime prevention
- Evidence or aid to police investigations



Hardware Specifications

Processor

- Intel® Atom™

Memory

- 1GB DDRII RAM, 128MB flash (DOM)

HDD Capacity

- 4 x 3.5" SATA I/II HDD or 4 x 2.5" SATA HDD (the standard system is shipped without HDD)

HDD Tray

- 4 x hot-swappable and lockable tray

LAN Port

- 2 x Gigabit RJ-45 Ethernet port

LED Indicators

- USB, Status, HDD 1, HDD 2, HDD 3, HDD 4, LAN

USB

- 3 x USB 2.0 (front: 1; back: 2)
Front: for USB storage device
(One Touch Auto Video Backup)
Back: for UPS device

Buttons

- Power button, reset button, one touch auto video backup button, mute power alarm button

Alarm Buzzer

- System warning

Form Factor

- Rackmount

Hardware Dimensions

- 44(H) x 439(W) x 499(D) mm
• 1.73(H) x 16.97(W) x 19.65(D) inch

Weight

- Net weight: 7.6 kg/ 16.76 lb
• Gross weight: 12.08 kg/ 26.63 lb

Operation Environment

- Temperature 0~40°C/ 32~104°F
• Humidity 0~95% R.H.

Power Supply

- Output: ATX 150W x 2, input: 100-240 Vac~, 50-60Hz, 2A

VGA

- Reserved

Fan

- 4 x cooling fan (4 cm, 12V DC; internal:3; external:1)

Certification

- CE, FCC, VCCI, BSMI

Software Specifications

Video

Display Mode: 1/4/6/8/9/10/12/16/20/25/36/42-channel display, Picture-in-Picture mode, sequential mode, dual display mode

Recording Connection: Up to 16 channels

Multi-server Monitoring:

- ◆ Up to 120 channels monitoring from multiple QNAP NVRs

Compression Format:

- ◆ H.264, MxPEG, MPEG-4, and M-JPEG (vary by camera models)

Video Setting: Resolution, quality, frame rate

E-map: Upload E-map (JPEG)

Recording

Recording Mode:

- ◆ Continuous/ manual/ schedule* recording
- ◆ Alarm recording/ multiple alarm recording schedules*
* Up to 15 schedules are supported for each camera

Buffer Storage for Alarm Images (before & after events):

- ◆ Pre-recording: up to 300 sec; post-recording: up to 300 sec (total 600 sec/ 10 min)

Recording Performance:

- ◆ Up to 30 fps at D1 or VGA for each camera
* Real performance may vary in different environment

Megapixel Recording: High performance megapixel recording

File format: AVI (QNAP codec is needed for playback)

Network

Support: HTTP, TCP/IP, SMTP, DHCP, Static IP, DNS, DDNS, FTP, NTP, UPnP, failover, load-balancing, multi-IP setting

Dual Gigabit LAN: Failover/ load-balancing/ multi-IP setting

Playback

Playback Channel: Max 4-channel playback at the same time

Playback Mode: Play, pause, stop, reverse play, next/ previous frame, next/ previous video file, different speed control

Search Mode: By date & time, timeline, event, and intelligent video analytics (IVA)

Playback Enhancement: Full screen display, video snapshot, digital zoom, digital watermark

Download: Download recordings via the web

Security

Operation System: Linux-embedded system

On-line Users List: Record of the users currently logged on and previously logged on to the NVR

Host Access Control: Specify the connections to be allowed and denied to access NVR

Authority management: The right to monitor and playback each camera can be separately defined for each user (max 32)

Alert Notification: Buzzer, event notification, SMS, e-mail alert

Auto Logout: The administrator can set the timeout period to log off the users when the idling time has reached

Digital Watermark: Enhanced file security by digital watermark

UPS: APC/ MGE (USB type UPS)

Event Logs: Detailed record of event logs

Storage

Disk Management:

- ◆ Single disk, RAID 0, RAID 1, RAID 5, RAID 5+ hot spare, RAID 6, and JBOD/ Linear

- ◆ Online RAID Capacity Expansion, Online RAID Level Migration

- ◆ HDD S.M.A.R.T., Bad blocks scan

Services: Web File Manager, FTP, SMB/ CIFS

Language Support

Danish/ Dutch/ English/ French/ Finnish/ German/ Hungarian/ Italian/ Japanese/ Korean/ Norwegian/ Polish/ Portuguese/ Russian/ Spanish/ Swedish/ Simplified Chinese/ Traditional Chinese

Client PC Requirements

(Suggested system requirements for better video performance)

CPU: ◆ M-JPEG format (up to 16 channels):

Intel® Pentium® 4 CPU 2.6 GHz or above

- ◆ H.264/ MxPEG/ MPEG-4 format (up to 16 channels): Dual core CPU 2.6 GHz or above

* For higher surveillance performance, please select more advanced PC models

Memory: 1GB or above

Operation System: Microsoft Windows XP/ Vista

Web Browser: Internet Explorer 6.0 or later

Network Interface: 10/100/1000 Mbps

Display Resolution: Suggested 1024 x 768 pixels or above

Utility Software

QNAP Finder: Discovery and quick setup for NVR

VioStor Player: Play the recording files on your Windows computer easily

* Designs and specifications are subject to change without notice.

Package Contents



QNAP Systems, Inc.

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For more detailed information, please visit QNAP website: <http://www.qnapsecurity.com/>

E-mail: nvr@qnap.com

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2009/10

Brand	Models	VS-4016U-RP
		16 channels
AXIS	206M/ 207/ 207W/ 207M/ 207MW/ 209FD/ R/ 209MFD/ R/ 210/ 210A/ 211A/ 211/ 211W/ 211M/ 212/ 213/ 214/ 215/ 216FD/ 216MFD/ 221/ 223M/ 225FD/ 231/ 232/ 233D/ 1311/ P3011/ P3301/ P3343/ P3344/ Q1755/ Q7401/ Q7404/ M1011/ M1011-W/ M1031-W/ M3011/ M3014/ M7001/ 241Q/ 241QA/ 241S/ 241SA/ 243SA/ 247S	●
ACTi	ACM-1231/ ACM-1232/ ACM-1311/ ACM-1431/ ACM-1432/ ACM-1501/ ACM-3001/ ACM-3011/ ACM-3211/ ACM-3311/ ACM-3401/ ACM-3411/ ACM-4000/ ACM-4001/ ACM-4100/ ACM-4200/ ACM-5001/ ACM-5601/ ACM-5611/ ACM-5711/ ACM-7411/ ACM-8211/ ACM-8511/ CAM-5201/ CAM-5221/ CAM-5301/ CAM-5321/ CAM-6500/ CAM-6600/ CAM-6610/ CAM-6620/ CAM-6630/ CAM-7300/ CAM-7321/ CAM-7322/ ACD-2100/ ACD-2200/ ACD-2300/ ACD-2400/ ACD-2000Q/ SED-2140/ SED-2120/ TCM-4301/ TCM-5311	●
Arecont Vision	AV1300/ AV1305/ AV1355/ AV2100/ AV2105/ AV2155/ AV3130/ AV3100/ AV3105/ AV3155/ AV5100/ AV5105/ AV5155/ AV1801/ AV1815/ AV8360/ AV8365	●
AVTECH	AV1201/ AV1202/ AV1203/ AV1204/ AV1322	●
Canon	VB-C300/ VB-C300B/ VB-C500R/ VB-C500/ VB-C50FS/ VB-C50FI/ VB-C500D/ VB-C60	●
Cisco	CIVS-IPC-2500/ CIVS-IPC-2500W	●
D-Link	DCS-900(A) DCS-900(B) DCS-900(B2) DCS-910 DCS-920 DCS-2102/ DCS-2120/ DCS-2121/ DCS-3220(G) DCS-3420/ DCS-5220/ DCS-5300(G) DCS-6620(G)	●
EDIMAX	IC-1510/ IC-1510WG/ IC-3010/ IC-3010WG/ IC-7000PT/ IC-7000PTN	●
ELMO	PTC-401C-IP/ PTC-402C-IP/ SN2230-IP2/ SN2230-IPW/ SN2232-IP/ TD4112-IP/ TD4114-IP2	●
EtoVision	EV3130/ EV3131/ EV3131A/ EV3830/ EV6130/ EV6332/ EV6530/ EV6531A/ EV6552A	●
GANZ	ZN-D202A/ ZN-PT304U/ ZN-PT304W/ ZN-V305/ ZV-5306	●
Hikvision	DS-2CD792PF-E/ DS-2CD852MF-E/ DS-2CD892PF-E	●
iPUX	ICS 1001/ ICS 1011/ ICS 1003/ ICS 1013/ ICS 1300/ ICS 1310/ ICS 130A/ ICS 131A	●
IQeye	IQ0405/ IQ0405i/ IQ0415/ IQ0415i/ IQ0425i/ IQ0425i/ IQ511/ IQ511/ IQ701/ IQ702/ IQ703/ IQ705/ IQ710/ IQ711/ IQ712/ IQ715/ IQ752/ IQ753/ IQ755/ IQ802/ IQ803/ IQ805/ IQ811/ IQ851/ IQ852/ IQ853/ IQ855/ IQA105/ IQA105i/ IQA110/ IQA115/ IQA111/ IQA125/ IQA126/ IQA135/ IQA131/ IQA155/ IQA155i/ IQA205/ IQA205i/ IQA215/ IQA215i/ IQA225/ IQA225i/ IQA235/ IQA235i/ IQA255/ IQA255i	●
LevelOne	FCS-0010/ WCS-0010/ FCS-0020/ WCS-0020i/ FCS-1010/ WCS-2010/ FCS-1030/ WCS-2030/ FCS-1040/ WCS-2040/ FCS-1060/ WCS-2060/ FCS-1070/ WCS-2070/ FCS-109X/ WCS-109X/ FCS-3000/ FCS-3021/ FCS-5030	●
Linksys	PVC-2300/ WVC-200/ WVC54GCA	●
MESSOA	NDZ860 H2/ NIC835 HN5/ NIC836	●
MOBOTIX	D12D-IT/ D12D-Sec/ D22M-Basic/ D22M-IT/ D22M-Sec/ M10D-Night/ M12D-IT/ M12D-Sec/ M12M-IT/ M12M-Sec/ M12M-Web/ M22M-IT/ M22M-Night/ M22M-Sec/ Q22M-Basic/ Q22M-Sec/ Q24M-Sec	●
NAKAYO	IPCAMDH	●
Panasonic	BB-HCM100/ BB-HCM110/ BB-HCM311/ BB-HCM331/ BB-HCM371/ BB-HCM381/ BB-HCM403/ BBHCM481/ BB-HCM511/ BB-HCM531/ BB-HCM515/ BB-HCM527/ BB-HCM547/ BB-HCM580/ BBHCM581/ BB-HCM715/ BB-HCM735/ KX-HCM280/ KX-HCM180/ BL-C1/ BL-C10/ BL-C11/ BL-C111/ BL-C131/ BL-C20/ BL-C30(K1)/ BL-C31	●
Panasonic i-Pro	NF282/ NF284/ NF302/ NM100/ NP1000/ NP1004/ NP240/ NP244/ NP304(V)/ NP472/ NP502/ NS202(A)/ NS324/ NS950/ NS954/ NW484(S)/ NW960/ NW964	●
SANYO	VCC-400N/ VCC-P450/ VCC-P470/ VCC-PT490/ VCC-PT500/ VCC-9600/ VCC-9800/ N695/VCC-HD4000	●
SONY	SNC-CS10/ SNC-CS11/ SNC-CS20/ SNC-CS50/ SNC-CM120/ SNC-DF40/ SNC-DF50/ SNC-DF70/ SNC-DF80/ SNC-DF85/ SNC-DS10/ SNC-DS60/ SNC-DM110/ SNC-DM160/ SNC-PL/ SNC-PS/ SNCRX530/ SNC-RX550/ SNC-RX570/ SNC-RZ25/ SNC-RZ30/ SNC-RZ50/ SNC-Z20/ SNT V704	●
TOA	N-CC2561/ N-VT-2010/ N-CC-2360	●
TOSHIBA	CI8110-D/ CI8210-D/ IK-WB12/ IK-WB21	●
TRENDnet	TV-IP212/ TV-IP212W/ TV-IP312/ TV-IP312W/ TV-IP410/ TV-IP410W/ TV-IP422/ TV-IP422W	●
VIVOTEK	IP3111/ IP3121/ IP3122/ IP3132/ IP3135/ IP3137/ IP3171/ IP3172/ IP3173/ IP3174/ IP3175/ IP3176/ IP3177/ IP3178/ IP3179/ IP318/ IP3181/ IP3182/ IP3183/ IP3184/ IP3185/ IP3186/ IP3187/ IP3188/ IP3189/ IP319/ IP3191/ IP3192/ IP3193/ IP3194/ IP3195/ IP3196/ IP3197/ IP3198/ IP3199/ IP320/ IP3201/ IP3202/ IP3203/ IP3204/ IP3205/ IP3206/ IP3207/ IP3208/ IP3209/ IP321/ IP3211/ IP3212/ IP3213/ IP3214/ IP3215/ IP3216/ IP3217/ IP3218/ IP3219/ IP322/ IP3221/ IP3222/ IP3223/ IP3224/ IP3225/ IP3226/ IP3227/ IP3228/ IP3229/ IP323/ IP3231/ IP3232/ IP3233/ IP3234/ IP3235/ IP3236/ IP3237/ IP3238/ IP3239/ IP324/ IP3241/ IP3242/ IP3243/ IP3244/ IP3245/ IP3246/ IP3247/ IP3248/ IP3249/ IP325/ IP3251/ IP3252/ IP3253/ IP3254/ IP3255/ IP3256/ IP3257/ IP3258/ IP3259/ IP326/ IP3261/ IP3262/ IP3263/ IP3264/ IP3265/ IP3266/ IP3267/ IP3268/ IP3269/ IP327/ IP3271/ IP3272/ IP3273/ IP3274/ IP3275/ IP3276/ IP3277/ IP3278/ IP3279/ IP328/ IP3281/ IP3282/ IP3283/ IP3284/ IP3285/ IP3286/ IP3287/ IP3288/ IP3289/ 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IP3794/ IP3795/ IP3796/ IP3797/ IP3798/ IP3799/ IP380/ IP3801/ IP3802/ IP3803/ IP3804/ IP3805/ IP3806/ IP3807/ IP3808/ IP3809/ IP381/ IP3811/ IP3812/ IP3813/ IP3814/ IP3815/ IP3816/ IP3817/ IP3818/ IP3819/ IP382/ IP3821/ IP3822/ IP3823/ IP3824/ IP3825/ IP3826/ IP3827/ IP3828/ IP3829/ IP383/ IP3831/ IP3832/ IP3833/ IP3834/ IP3835/ IP3836/ IP3837/ IP3838/ IP3839/ IP384/ IP3841/ IP3842/ IP3843/ IP3844/ IP3845/ IP3846/ IP3847/ IP3848/ IP3849/ IP385/ IP3851/ IP3852/ IP3853/ IP3854/ IP3855/ IP3856/ IP3857/ IP3858/ IP3859/ IP386/ IP3861/ IP3862/ IP3863/ IP3864/ IP3865/ IP3866/ IP3867/ IP3868/ IP3869/ IP387/ IP3871/ IP3872/ IP3873/ IP3874/ IP3875/ IP3876/ IP3877/ IP3878/ IP3879/ IP388/ IP3881/ IP3882/ IP3883/ IP3884/ IP3885/ IP3886/ IP3887/ IP3888/ IP3889/ IP389/ IP3891/ IP3892/ IP3893/ IP3894/ IP3895/ IP3896/ IP3897/ IP3898/ IP3899/ IP390/ IP3901/ IP3902/ IP3903/ IP3904/ IP3905/ IP3906/ IP3907/ IP3908/ IP3909/ IP391/ IP3911/ IP3912/ IP3913/ IP3914/ IP3915/ IP3916/ IP3917/ IP3918/ IP3919/ 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