IP Camera API Parameter Specification

Revision: 6.0.0

Date: 2017-Feb-09

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DOCUMENT HISTORY

Version	Date	Comment
2.01	2009-Aug-27	Initial version.
2.02	2009-Dec-18	**HD WDR Camera:** Add motion group parameter Add time parameter **HD IP Camera:** Add resolution Add motion group parameter Add time parameter Add sensor parameter **V Series:** Add motion group parameter Add time parameter Add sensor parameter **IP PTZ:** Add resolution Add sensor parameter
2.03	2010-Apr-12	Add 2.1.9 UPnP Add 2.1.10 UPnP NATTraversal Update 2.2.2 Image.I0.Appearance Update 2.2.5 Image.I0.RateControl Update 2.12.2 AudioSource.A0 Add 2.1.3 Network.PPPoE Add 2.2.6 Image.I0.Text Add 2.6.3 Time.DST Add 2.13 Recording
2.04	2010-Dec-3	Add model names: V2 (NA222, NV222), V3 (NA322, NV322), V5 (NA052, NV052) Add 2.1.11 Network.Filter Add 2.1.12 Network.IPv6 Add 2.1.13 Network.Interface.I0.dot1x Add 2.1.14 Network.QoS Add 2.1.18 SNMP Add 2.1.19 HTTPS Add 2.4.9 Event HTTP notification function

		Add 2.17 Tampering Add 2.19 RS-485 Control
2.05	2011-June-1	Update camera firmware version Add model: Full HD Multiple Streams Series IP Camera Update 2.2.2 Image.I0.Appearance Update 2.2.3 Image.I0.Overlay.MaskWindows Update 2.2.4 Image.I0.Overlay.MaskWindows.M# Update 2.2.7 ImageSource.I0.Sensor Update 2.15.1 Frame skip Add 2.15.2 Frame rate Add 2.20 Storage Management
2.06	2011-Sep-28	Add model: Full HD IP PTZ Update 2.2.2 Image.I0.Appearance Update 2.2.3 Image.I0.Overlay.Maskwindows Update 2.2.4 Image.I0.Overlay.MaskWindows.M# Update 2.2.5 Image.I0.RateControl Update 2.2.7 ImageSource.I0.Sensor Update 2.3 I/O Update 2.4.7 Event activated function(PTZ Camera exclusive) Update 2.6.3 Time.DST Update 2.9 Autopan(PTZ Camera exclusive) Update 2.10 Cruise (PTZ Camera exclusive) Update 2.11 Guard Tour (PTZ Camera exclusive) Update 2.15.2 Frame rate (Full HD Multiple Streams Series/Full HD IP PTZ exclusive) Update 2.16 Motion Add Section 2.18 Network Failure Detection Update 2.19 IR
2.07	2012-Apr-23	**Add 2.1.4** Network.eth0.IPv6.IPAddresses= **Add 2.1.7** Network.RTP.R0.H264VideoPort3=0, 1024…65535 Network.RTP.R0.H264VideoPort4=0, 1024…65535 **Update 2.1.10** Network.UPnP.NATTraversal default value to 'no' **Add 2.1.16**

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		Image.I0.Appearance.H264_4Compression=0…1
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		Image.I0.Appearance.H264_4Bitrate=64…2048
		Image.I0.Appearance.H264_3VideoKeyFrameInterval=2…64
		Image.I0.Appearance.H264_4VideoKeyFrameInterval=2…64
		Image.I0.Appearance.H264Profile=main, high, baseline
		Image.I0.Appearance.H264_2Profile=main, high, baseline
		Image.I0.Appearance.H264_3Profile=main, high, baseline
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		ImageSource.I0.Sensor.Exposure.MinShutterSpeed valid values
		ImageSource.I0.Sensor.Backlight for Full HD Multiple Streams series
		ImageSource.I0.Sensor.Brightness=0…250
		ImageSource.I0.Sensor.Contrast=0…250
		ImageSource.I0.Sensor.ColorLevel=0…250
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3.0	2013-July-18	**Remove information regarding N3&A2 devices**
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4.0	2015-Jun-11	**Add the support of UHD IP Camera and UHD IP PTZ**
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		Add UHD IP Camera & UHD IP PTZ information
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		Add Image.I0.Text.SubtitlePosition
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		Update 2.2.7 ImageSource.I0.Sensor
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		Add IR.Threshold.DayMode
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		Update 2.24 Periodical event
		Add UHD IP Camera & UHD IP PTZ information
		Remove Appendix A & Appendix B

4.0.1	2015-Jun-30	**Update 1 OVERVIEW** Update 2.21 Storage Management **Update 2.22 Fisheye Setting**
5.0.0	2016-Mar-23	**Update OVERVIEW** Add Superior HDR IP Camera (P Series) and Prime HDR IP Camera (Q Series) Update Ultra HD IP PTZ **Update Network.eth0** Add IPv6.IPAddresses **Update 2.2.2 Image.I0.Appearance** **Update 2.2.3 Image.I0.Overlay.MaskWindows** **Update 2.2.4 Image.I0.Overlay.MaskWindows.M#** **Update 2.2.5 Image.I0.RateControl** **Update 2.2.6 Image.I0.Text** **Update 2.2.7 ImageSource.I0.Sensor** **Update 2.2.8 ImageSource.I0.Video** **Update 2.2.9 Image.I0.ROI.InputWindows** **Update 2.3.2 Input.I#** **Update 2.3.4 Output.O#** **Update 2.6.3 Time.DST** Add day, night for StartTime **Update 2.15.1 Frame rate** **Update 2.16.1 Motion.M#** **Update 2.16.3 Motion1.M#** **Update 2.16.4 Motion2.M#** **Update 2.16.5 Motion3.M#** **Update 2.19.1 IR Mode** **Update 2.20.1 RS-485 Control** **Add 2.21.3 Network share setting** **Add 2.21.4 Recording source** **Update 2.23.1 Schedule.S#**
6.0.0	2017-Feb-09	**Update OVERVIEW** Add Superior/Prime H.265 IP Camera (R Series) **Update 2.1.6 Network.RTSP** Add Superior/Prime H.265 IP Camera information **Update 2.1.7 Network.RTP.R0** Add Superior/Prime H.265 IP Camera information

		Update 2.2.2 Image.I0.Appearance
		Add Superior/Prime H.265 IP Camera information
		Update 2.2.9 Image.I0.ROI.InputWindows
		Add Superior/Prime H.265 IP Camera information
		Update 2.21.4 Recording source
		Add Superior/Prime H.265 IP Camera information

1 OVERVIEW

This document specifies the parameters and configuration files for the H.264 IP cameras/device mentioned below:

Classification	Model name
Full HD Multiple Streams IP Camera (W Series)	W1(Wxxx-1)
	W2(Wxxx-2)
	W3(Wxxx-3)
	W5(Wxxx-5)
	W6(Wxxx-6)
	W7(Wxxx-7)
	W8(Wxxx-8)
	WA(Wxxx-A)
	WB(Wxxx-B)
	WC(Wxxx-C)
	WH(Wxxx-H)
	WJ(Wxxx-J)
	WM(Wxxx-M)
	WN(Wxxx-N)
	WL(Wxxx-L)
Superior HDR IP Camera (P Series)	P2xx-1L
	P2xx-5
	P2xx-6
	P2xx-7
	P2xx-E
	P2xx-F
	P2xx-L
	P2xx-M
	P2xx-N
Prime HDR IP Camera (Q Series)	Q2xx-1L
	Q2xx-5
	Q2xx-6
	Q2xx-7
	Q2xx-F
	Q2xx-H
	Q2xx-J
	Q2xx-L
	Q2xx-M

	Q2xx-N
Full HD IP PTZ (W Series)	720Wx-N1
	820Wx-N1
	720Wx-N2
	820Wx-N2
	720Wx-N4
	820Wx-N4
	720Wx-N5
	820Wx-N5
	720Wx-N6
	820Wx-N6
	720Wx-N7
	820Wx-N7
	720Wx-N8
	820Wx-N8
	720Wx-N9
	820Wx-N9
	720Wx-F1
	820Wx-F1
	720Wx-F2
	820Wx-F2
	720Wx-F3
	820Wx-F3
Full HD WDR IP Camera (X Series)	X1(X0Sx-1)
	X5(X0Sx-5)
	X6(X0Sx-6)
	X7(X0Sx-7)
	XA(X0Sx-A)
	XB(X0Sx-B)
	XC(X0Sx-C)
	XF(X0Sx-F)
	XJ(X0Sx-J)
	XM(X0Sx-M)
	XN(X0Sx-N)
	XL(X0Sx-L)
Ultra HD IP Camera (Z Series)	Z5(Zxxx-5)
	Z6(Zxxx-6)
	Z7(Zxxx-7)

	Z8(Zxxx-8)
	ZA(Zxxx-A)
	ZD(Zxxx-D)
	ZF(Zxxx-F)
	ZM(Zxxx-M)
	ZN(Zxxx-N)
Ultra HD IP PTZ (Z Series)	720Zx-E2
	820Zx-E2
	720Zx-E4
	820Zx-E4
	720Zx-F1
	820Zx-F1
	720Zx-F2
	820Zx-F2
	720Zx-F3
	820Zx-F3
	720Zx-G4
	820Zx-G4
	720Zx-G5
	820Zx-G5
	720Zx-M2
	820Zx-M2
	720Zx-M4
	820Zx-M4
	720Zx-N4
	820Zx-N4
	720Zx-N5
	820Zx-N5
	720Zx-N6
	820Zx-N6
Superior H.265 IP Camera (R2 Series)	R6(R2Sx-6)
	RB(R2Sx-B)
	RF(R2Sx-F)
	RK(R2Sx-K)
Prime H.265 IP Camera (R3 Series)	R6(R3V6-6)
	RB(R3V6-B)
	RC(R3V6-C)
	RF(R3V6-F)

	RI(R3V6-I)
	RJ(R3V6-J)
	RK(R3V6-K)
	RL(R3V6-1L)
	RM(R3V6-M)
	RN(R3V6-N)

x: 0~9, A~Z

Model List of PTZ Camera Modules

Model name
N1: 18x
N2: 20x
N4: 18x
N5: 20x
N6: 30x
N7: 18x
N8: 20x
N9: 30x
F1: 18x
F2: 20x
F3: 30x
E2: 20x
E4: 30x
M2: 20x
M4: 30x
G2:20x
G4:30x
G5:33x

1.1 Product and firmware versions

The support for the parameters specified in this document is highly product and release dependent. Please refer to the parameter list for the actual product. This API version is compatible with the following firmware and after.

Classification	Firmware Version
Full HD Multiple Streams IP Camera	z120150601NSA
Full HD IP PTZ	z120150601NSA
Full HD WDR IP Camera	z120150415NSX
Ultra HD IP Camera	z120150601NSZ
Ultra HD IP PTZ	z120150601NSZ
Superior H.265 IP Camera/ Prime H.265 IP Camera	z120170209RS / z120170209RP

1.2 Valid values

The following valid values are used in this document:

Valid values	Description
An integer	Any number between -2147483647 ($-2^{31}-1$) and 2147483647 ($2^{31}-1$).
An unsigned integer	Any number between 0 and 4294967295 ($2^{32}-1$).
\<m\>	Any number starting from number m.
\<m\> ... \<n\>	Any number between number m and number n.
A string	Any string (valid characters: ISO 8859-1).
A domain name	A string limited to contain a domain name.
A host name	A string limited to contain a host name.
An IP address	A string limited to contain an IP address of the format xxx.xxx.xxx.xxx, where xxx is a number between 0 and 255. Example: 192.168.0.250

A MAC Address		A string limited to contain a MAC address of the format xx:xx:xx:xx:xx:xx, where xx is a hexadecimal value. Example: 00:D0:89:00:AC:01
An e-mail address		A string limited to contain an e-mail address.
A URL/URI		A sting limited to contain a URL/URI.
A path		A string limited to contain a path.
A time		A string limited to contain a time of the format hh:mm:ss. Example: 23:01:14
A date		A string limited to contain a date of the format yyyy-mm-dd. Example: 2007-01-01
<value 1> <value 2> <value 3> ...		Enumeration, only the given values are valid. Example: yes no
<m><value> ... <n><value>	<value><m> ... <value><n>	Any number between m and n together with value. Example: 1Mbit ... 100Mbit
Read only		Only the default value is valid as value.
Auto generated		Automatically generated value should not be changed manually.
Hardware dependent		The hardware decides the default value/the valid values.
Everything inside brackets		Description.

2 PARAMETER GROUPS

2.1 General

2.1.1 Brand

Description: Contains information about the brand, name and type of the product.

Configuration file: /etc/sysconfig/brand.conf

[Brand]

Parameter name	Default value	Valid values	Description
Brand	non brand	A string (Auto generated)	The brand of the product.
ProdFullName	IP Camera	A string (Auto generated)	The full name of the product.
ProdNbr	Product dependent	A string (Auto generated)	The product number.
ProdShortName	Product dependent	A string (Auto generated)	The short name of the product.
ProdType	network camera	video server, network camera, network video recorder (Auto generated)	The product type.
WebURL		A string (Auto generated)	The URL to visit for support and information about the product.

2.1.2 Network

Description: Network interface settings. The parameters in this group (as opposed to the subgroups of this group) are static network settings. If the Network.BootProto parameter is "dhcp" these parameters may not be in use so always use the read-only parameters in the subgroups to retrieve actual network settings in use by the operating system.

Configuration file: /etc/sysconfig/network.conf

[Network]

Parameter name	Default value	Valid values	Description
BootProto	none	dhcp, pppoe none	Enable/disable dynamic IP address assignment to the device.
IPAddress	192.168.0.250	An IP address	IP Address. The physical address of the device on the network.
SubnetMask	255.255.255.0	An IP address	Subnet mask. Divides the network.
Broadcast	192.168.0.255	An IP address	Broadcast address. Used to disseminate information to several recipients simultaneously.
DefaultRouter	192.168.0.254	An IP address	Default router/gateway used for connecting devices attached to different networks and network segments.
HostName	MegaPixelCamera	A host name	The name of the device on the network, usually the same as the DNS name.
DNSServer1	0.0.0.0	An IP address	Primary Domain Name System server.
DNSServer2	0.0.0.0	An IP address	Secondary Domain Name System server.
Port	80	80 1024 ... 65535	The port of web server.

2.1.3 Network.PPPoE

Description: PPPoE setting for authorized connecting to internet.

Configuration file: /etc/sysconfig/network.conf

[Network.PPPoE]

Parameter name	Default value	Valid values	Description
UserName		A string	User name for PPPoE authorization.
Password		A string	Password for PPPoE authorization.
IPAddress	0.0.0.0	0.0.0.0	A dummy IP address This parameter is read only.
SubnetMask	255.255.255.255	255.255.255.255	A dummy Subnet Mask This parameter is read only.

2.1.4 Network.eth0

Description: Network settings of the first Ethernet interface. Use these parameters to retrieve the network settings actually in use by the operating system.

Configuration file: /etc/sysconfig/network.conf

[Network.eth0]

Parameter name	Default value	Valid values	Description
MACAddress	00:D0:89:xx:xx:xx *	A MAC address (Auto generated)	MAC address. The unique identity of the device. This parameter is read only.
IPv6.IPAddresses			
IPAddresses	192.168.0.250	An IP address (Auto generated)	IP Address. The physical address of the device on the network.

			This parameter is read only.
SubnetMask	255.255.255.0	An IP address (Auto generated)	Subnet mask. Divides the network. This parameter is read only.
Broadcast	192.168.0.255	An IP address (Auto generated)	Broadcast address. Used to disseminate information to several recipients simultaneously. This parameter is read only.

* The MAC address of the device is unique for every single product. The first part of the address is however always the same; 00:D0:89. The MAC address is the same as the serial number, which can be found on the product's label.

2.1.5 Network.Routing

Description: Routing table actually in use by the operating system.

Configuration file: /etc/sysconfig/network.conf

[Network.Routing]

Parameter name	Default value	Valid values	Description
DefaultRouter	192.168.0.254	Auto generated	This parameter is read only.

2.1.6 Network.RTSP

Description: Parameters needed by the RTSP daemon.

Configuration file: /etc/sysconfig/network.conf

2.1.6.1 [Network.RTSP] – for Z/P/Q/X/W Series

Parameter name	Default value	Valid values	Description
Enabled	yes	yes	RTSP support. This parameter is read only.

Port	554	554, 1024 ... 65535	The port number for the RTSP daemon.

2.1.6.2 [Network.RTSP.Stream#] – for R Series

Parameter name	Default value	Valid values	Description
Accessname	stream#	A stream name	The name for the stream.

* **Note:** The # is replaced with a group number starting from 1 to 4,

      e.g. Network.RTSP.Stream1.

2.1.7 Network.RTP.R0

Description: Parameters related to multicast RTP.

Configuration file: /etc/sysconfig/network.conf

2.1.7.1 [Network.RTP.R0] – for Z/P/Q/X/W Series

Parameter name	Default value	Valid values	Description
VideoAddress	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.
H264VideoAddress	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.
H264VideoPort	0	0, 1024 ... 65535	The port number for the RTP H.264 video stream. 0 means no distribution.
H264VideoAddress2	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value

			0.0.0.0 indicates that the multicast is disabled.
H264VideoPort2	0	0, 1024 ... 65535	The port number for the RTP H.264-2 video stream. 0 means no distribution.
H264VideoAddress3	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.
H264VideoPort3	0	0, 1024 ... 65535	The port number for the RTP H.264-3 video stream. 0 means no distribution.
H264VideoAddress4	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.
H264VideoPort4	0	0, 1024 ... 65535	The port number for the RTP H.264-4 video stream. 0 means no distribution.
MjpegVideoAddress	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.
MjpegVideoPort	0	0, 1024 ... 65535	The port number for the RTP mjpeg video stream. 0 means no distribution.
AudioAddress	0.0.0.0	An IP address	The IP address to which the multicast RTP audio stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.

AudioPort	0	0, 1024 … 65535	The port number for the RTP audio stream. 0 means no distribution.
TTL	1	1 … 255	The Time To Live for each UDP packet. This indicates the number of routers/switches that the packet may traverse before being discarded.

* **Note:** IP address range is from 224.0.0.0 to 239.255.255.255

2.1.7.2 [Network.RTP.R0] – for R Series

2.1.7.2.1 [Network.RTP.R0.Stream#] – for video

Parameter name	Default value	Valid values	Description
VideoAddress	0.0.0.0	An IP address	The IP address to which the multicast RTP video stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled. IP address range is from 224.0.0.0 to 239.255.255.255
VideoPort	0	0, 1024 … 65535	The multicast destination port number for the RTP stream#. 0 means no distribution.
VideoTTL	1	1 … 255	The Time To Live for each UDP packet. This indicates the number of routers/switches that the packet may traverse before being discarded.

* **Note:** The # is replaced with a group number starting from 1 to 4,

        e.g. Network.RTP.R0.Stream1.

2.1.7.2.2 [Network.RTP.R0.Stream] – for audio

AudioAddress	0.0.0.0	An IP address	The IP address to which the multicast RTP audio stream is transmitted. The default value 0.0.0.0 indicates that the multicast is disabled.
AudioPort	0	0, 1024 ... 65535	The port number for the RTP audio stream. 0 means no distribution.
AudioTTL	1	1 ... 255	The Time To Live for each UDP packet. This indicates the number of routers/switches that the packet may traverse before being discarded.

* **Note:** IP address range is from 224.0.0.0 to 239.255.255.255

2.1.8 Network.HTTP

Description: Parameters needed by the HTTP daemon.

Configuration file: /etc/sysconfig/network.conf

[Network.HTTP]

Parameter name	Default value	Valid values	Description
MjpegPort	8008	1024 ... 65535	The port number for the MJPEG stream over HTTP. This parameter is read only.

2.1.9 Network.UPnP

Description: Enable/disable Universal Plug and Play and set the name to be displayed in UPnP-clients.

Configuration file: /etc/conf/libupnp.conf

[Network.UPnP]

Parameter name	Default value	Valid values	Description
Enabled	yes	yes, no	Enable/disable Universal Plug and Play.
FriendlyName	<product name> - <serial number>	A string	The name of the UPnP device.

2.1.10 Network.UPnP.NATTraversal

Description: The parameters control NAT traversal functionality. NAT traversal is a technique that can be used to open up routers and firewalls to make devices on a LAN accessible from the Internet.

Configuration file: /etc/sysconfig/nat_traversal.conf

[Network.UPnP.NATTraversal]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable NAT traversal.

2.1.11 Network.Filter

Description: Allowing/denying the listed IP addresses to access the IP Camera.

Configuration file: /etc/sysconfig/network.conf

[Network.Filter]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable IP filtering function.
Input.Policy	deny	allow deny	Allow or deny access for the IP addresses in the list
Input.AcceptAddresses		An IP address	

2.1.12 Network.IPv6

Description: Enables/disables IPv6 protocol with 128-bit addressing.

Configuration file: /etc/sysconfig/network.conf

[Network.IPv6]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable IPv6 support

2.1.13 Network.Interface.I0.dot1x

Description: Parameters configurations for network system with EAP-TLS authentication support.

Configuration file: /etc/sysconfig/network.conf

[Network.Interface.I0.dot1x]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable EAP-TLS support.
EAPTLS.Identity	admin	A string	Identity for EAP-TLS authentication
EAPTLS.PrivateKeyPassword	12345	A string	Private Key password for EAP-TLS authentication

2.1.14 Network.QoS

Description: Classification and Differentiated Services Code Point (DSCP) values for Quality of Service (QoS) configurations.

Configuration file: /etc/sysconfig/network.conf

[Network.QoS]

Parameter name	Default value	Valid values	Description
Class1.Desc	LiveVideo	LiveVideo	Class1 represents video service which consists of applications that stream MJPEG video streams over HTTP, RTP/RTSP and RTSP/HTTP.
Class1.DSCP	0	0 … 63	DSCP value for video service. DSCP=0 indicates that DSCP is disabled for video service. Applications belong to Class 1 receive the same forwarding treatment from routers
Class2.Desc	LiveAudio	LiveAudio	Class2 represents audio service, which is only available in the products that support audio.
Class2.DSCP	0	0 … 63	DSCP value for audio service. DSCP=0 indicates that DSCP is disabled for audio service.
Class4.Desc	Management	Management	Class4 consists of HTTP traffic.
Class4.DSCP	0	0 … 63	DSCP value for management traffic. DSCP=0 indicates that DSCP is disabled for management traffic.

2.1.15 Network.Authentication

Description: Parameter for enable the RTSP authentication

Configuration file: /etc/sysconfig/network.conf

[Network.Authentication]

Parameter name	Default value	Valid values	Description
Authentication.Streaming	disable	disable, basic,	When the client send a RTSP command to server, the

		digest	authorization information is required. Currently, we support two different mechanisms: basic and digest.
Authentication.HTTP	basic	basic, digest	

2.1.16 SMTP

Description: Parameters for the Simple Mail Transfer Protocol, for sending e-mail messages between mail servers.

Configuration file: /etc/sysconfig/smtp.conf

[SMTP]

Parameter name	Default value	Valid values	Description
FromEmail		An email address	Sender e-mail address
MailServer1		An IP address or a host name	Primary mail server.
MailServer1port	25	1 … 65535	Mail Server-1's SMTP port
MailServer2		An IP address or a host name	Secondary mail server.
MailServer2port	25	25, 1024 … 65535	Mail Server-2's SMTP port

2.1.17 SMTP.MailServer#

Description: Parameters for the Simple Mail Transfer Protocol, for sending e-mail messages between mail servers.

Configuration file: /etc/sysconfig/smtp.conf

[SMTP.MailServer#]*

Parameter name	Default value	Valid values	Description
EmailTo		An email address	Receiver e-mail address
SSLEnabled	no	yes, no	

* **Note:** The # is replaced with a group number 1 and 2, e.g. SMTP.MailServer1.

2.1.18 SMTP.Authentication.A#

Description: Parameters for SMTP authentication.

Configuration file: /etc/sysconfig/smtp_auth.conf

[SMTP.Authentication.A#]*

Parameter name	Default value	Valid values	Description
UserName		A string	The user name for the mail server or the POP server.
Password		A string	The password for the mail server or the POP server.

* **Note:** The # is replaced with a group number 1 and 2, e.g. SMTP.Authentication.A1.

2.1.19 SNMP

Description: Configure the SNMP agent that resides on the managed device in SNMP-managed network.

Configuration file: /etc/sysconfig/snmp.conf

[SNMP]

Parameter name	Default value	Valid values	Description
V1	no	no, yes	Enables/disables SNMPv1
V2c	no	no,	Enables/disables SNMPv2

		yes	
V3	no	no, yes	Enables/disables SNMPv3
V1ReadCommunity	public	A string	SNMPv1 read-only community name used by the SNMP agent
V1WriteCommunity	private	A string	SNMPv1 read-write community name used by the SNMP agent
V3User.U0.SecurityName		A string	
V3User.U0.AuthType	MD5	A string	
V3User.U0.AuthPassword		A string	
V3User.U0.PrivType	DES	A string	
V3User.U0.PrivPassword		A string	
Trap.Enabled	no	no, yes	Enable/disable the device to send the trap message back to the management station.
Trap.T0.Address		An IP address	The IP address of the management station.
Trap.T0.Community	public	A striing	Trap Community name
Trap.T0.WarmStart.Enabled	no	no, yes	A Warm Start SNMP trap signifies that the SNMP device, i.e. IP Camera, performs software reload.

2.1.20 HTTPS

Description: Parameters for Hypertext Transfer Protocol Secure (HTTPS)

Configuration file: /etc/sysconfig/https.conf

[HTTPS]

Parameter name	Default value	Valid values	Description
Port	443	1024 … 65535	HTTPS port The HTTPS mode ensures camera settings and Username/Password info from snooping

2.2 H.264/MJPEG

2.2.1 Image

Description: Common image parameters used for all image configurations.

Configuration file: /etc/sysconfig/image_global.conf

[Image]

Parameter name	Default value	Valid values	Description
MaxViewers	20	20	Max number of simultaneous viewers (does not affect multicast delivery). This parameter is read only.
TimeFormat	24	24	Time format used in text overlay. This parameter is read only.
DateFormat	YYYY-MM-DD	YYYY-MM-DD DD- MM -YYYY	Date format used in text overlay.

2.2.2 Image.I0.Appearance

Description: Image appearance parameters (resolution, compression, rotation) for each image configuration.

Configuration file: /etc/sysconfig/image_appearance.conf

2.2.2.1 [Image.I0.Appearance] – for Z/P/Q/X/W Series

Parameter name	Default value	Valid values	Description
Compression	1	0 … 2	The level of MJPEG image compression. High compression reduces the file size. Low compression produces optimum picture

			quality, but larger file size.
MjpegCompression	1	0 … 2	The level of MJPEG image compression. High compression reduces the file size. Low compression produces optimum picture quality, but larger file size.
MjpegQfactor	35	1 … 70	The value of MJPEG image compression. Higher value means lower compression and higher quality and larger file size.
H264Compression	2	**Full HD Multiple Streams series/Full HD IP PTZ/ Full HD WDR IP Camera:** 0 … 4 **Ultra HD IP Camera/ Ultra HD IP PTZ:** 0 … 10 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 100 … 10	The level of H.264 image compression. High compression reduces the file size. Low compression produces optimum picture quality, but larger file sizes
H264_2Compression	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):**	**Full HD Multiple Streams series/Full HD IP PTZ:** 0 … 1 **Full HD WDR IP Camera:** 0 … 4 **Ultra HD IP Camera/ Ultra HD IP PTZ/**	The level of H.264-2 image compression. High compression reduces the file size. Low compression produces optimum picture quality, but larger file size.

	0 **Ultra HD IP Camera/Ultra HD IP PTZ:** 1	**Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0 … 10	
H264_3Compression	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** 0 **Ultra HD IP Camera/Ultra HD IP PTZ:** 1	**Full HD Multiple Streams series/Full HD IP PTZ:** 0 … 1 **Full HD WDR IP Camera:** 0 … 4 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0 … 10	The level of H.264-3 image compression. High compression reduces the file size. Low compression produces optimum picture quality, but larger file size.
H264_4Compression	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** 0 **Ultra HD IP Camera/Ultra HD IP PTZ:** 1	**Full HD Multiple Streams series/Full HD IP PTZ:** 0 … 1 **Full HD WDR IP Camera:** 0 … 4 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0 … 10	The level of H.264-4 image compression. High compression reduces the file size. Low compression produces optimum picture quality, but larger file size.

H264	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera/Ultra HD IP Camera/Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** 4096	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera:** 64 … 8192 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 64 … 20480	The value of H.264 image compression. Higher value means lower compression and higher quality and larger file size.
H264_2Bitrate	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** 1024 **Ultra HD IP Camera/ Ultra HD IP PTZ:** 2048	**Full HD Multiple Streams series/ Full HD IP PTZ:** 64 … 2048 **Full HD WDR IP Camera:** 64 … 8192 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 64 … 20480	The value of H.264-2 image compression. Higher value means lower compression and higher quality and larger file size. NOTE: Under the condition Resolution H.264_2 QVGA (30fps Baseline), the maximum value is 1024 kbit/s
H264_3Bitrate	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** 1024	**Full HD Multiple Streams series/ Full HD IP PTZ:** 64 … 2048 **Full HD WDR IP Camera:** 64 … 8192 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP**	The value of H.264-3 image compression. Higher value means lower compression and higher quality and larger file size.

	Ultra HD IP Camera/ Ultra HD IP PTZ: 2048	Camera (P series)/ Prime HDR IP Camera (Q series): 64 … 20480	
H264_4Bitrate	**Full HD Multiple Streams series/ Full HD IP PTZ/ Full HD WDR IP Camera Ultra HD IP Camera/Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** 1024	**Full HD Multiple Streams series/ Full HD IP PTZ:** 64 … 2048 **Full HD WDR IP Camera:** 64 … 8192 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 64 … 20480	The value of H.264-4 image compression. Higher value means lower compression and higher quality and larger file size.
DisplayCompression	yes	yes, no	The compression information shows in the homepage or not.
Resolution	**Full HD Multiple Streams series:** 2M: disable,1080p,720p, disable, disable 2M real-time/ 3M/ 5M (exclude fisheye): disable, 1080p, d1, disable, disable 4M: disable, 1080p, d1, disable, disable Fisheye: disable,	**Full HD Multiple Streams series:** 2M model: Combination of 1080p, sxga, 720p, xga, svga, d1, vga, cif and disable The format is <resolution_MJPEG>, <resolution_H.264>, <resolution_H.264_2>, <resolution_H.264_3>, <resolution_H.264_4> 3M model: 3m	The image resolution. **Full HD Multiple Streams series/Full HD IP PTZ:** The first parameter shows the resolution in MJPEG stream, follow by the second parameter in H.264 stream-1, the third one in H.264 stream-2, the fourth one in H.264 stream-3 and the last one H.264 stream-4. 3m= 2048x1536 5m= 2592x1944

	5m, d1, disable, disable	<resolution_H.264>;	1080p= 1920x1080
	Full HD IP PTZ:	Combination of 1080p,	quadvga=1280x960
	disable, 1080p, d1	sxga, 720p, xga, svga,	sxga=1280x1024
		d1, vga , cif and disable	720p=1280x720
		The format is	xga=1024x768
	disable, disable	<resolution_MJPEG>,	svga=800x600
	Full HD WDR IP	<resolution_H.264>,	d1=720x480(NTSC)
	Camera:	<resolution_H.264_2>,	d1=720x576(PAL)
	<u>60fps</u>:	<resolution_H.264_3>,	vga=640x480
	disable,1080p60,d1,	<resolution_H.264_4>	qvga=320x240
	disable, disable	<u>4M</u>:	cif=352x240(NTSC)
	<u>50fps</u>:	2560x1440<resolution_	cif=352x288(PAL)
	disable, 1080p50,	H.264>	qcif=176x144
	d150, disable,	Combination of	disable= not supported
	disable	2560x1440, 1080p,	**Full HD WDR IP Camera:**
	<u>30fps,25fps</u>:	sxga, 720p, xga, svga,	1080p= 1920x1080
	disable,1080p,d1,	d1, vga , cif and disable	1080p60= 1920x1080@60fps
	disable, disable	The format is	1080p50= 1920x1080@50fps
	Ultra HD IP	<resolution_MJPEG>,	1080p15= 1920x1080@15fps
	Camera:	<resolution_H.264>,	1080p13=1920x1080@13fps
	<u>SD</u>	<resolution_H.264_2>,	quadvga= 1280x960
	disable,3m,d1,disab	<resolution_H.264_3>,	quadvga60
	le,disable	<resolution_H.264_4>	=1280x960@60fps
	<u>SD(HDR)</u>	<u>5M model:</u>	quadvga50
	pal:	3m, 5m	=1280x960@50fps
	disable,3m,d1,disab	<resolution_H.264>;	sxga=1280x1024
	le,disable	Combination of 1080p,	sxga60=1280x1024@60fps
	ntsc:	sxga, 720p, xga, svga,	sxga50=1280x1024@50fps
	disable,3m,d115,dis	d1, vga, cif and disable	sxga15=1280x1024@15fps
	able,disable	The format is	sxga13=1280x1024@13fps
	<u>V6</u>	<resolution_MJPEG>,	720p=1280x720
	disable,2688x1512,	<resolution_H.264>,	720p60=1280x720@60fps
	d1,disable,disable	<resolution_H.264_2>,	720p50=1280x720@50fps
	<u>V6(HDR)</u>:	<resolution_H.264_3>,	720p15=1280x720@15fps
	pal:	<resolution_H.264_4>	720p13=1280x720@13fps
	disable,2560x14401	**Full HD IP PTZ:**	xga=1024x768
	5,d115,disable,	Combination of 1080p,	xga60=1024x768@60fps
	disable	sxga, 720p, xga, svga,	xga50=1024x768@50fps

ntsc: disable,2560x14401 5,720p15,disable, disable <u>SA</u> disable,3072x2048, d1,disable,disable <u>SF</u> disable,3840x21602 0,d120,disable, disable <u>other</u> disable,1080p60,d1 60,disable,disable <u>Fisheye:</u> disable,2048x20482 0,1080p20,disable, disable **Ultra HD IP PTZ:** <u>ITN2</u> disable,3m,d1, disable,disable <u>Xarina</u> disable,1080p,d1, disable **Superior HDR IP** **Camera (P** **series):** <u>P2SD</u> disable,3m,d1, disable <u>P2V6</u> disable,2688x1512, d1,disable,disable <u>P2SA</u> disable,5m,d1,	d1, vga, cif, and disable The format is <resolution_MJPEG>, <resolution_H.264>, <resolution_H.264_2>, <resolution_H.264_3>, <resolution_H.264_4> **Full HD WDR IP** **Camera:** NTSC: Combination of 1080p , 1080p60, 1080p15, sxga, sxga60, sxga15, 720p, 720p60, 720p15, xga, xga60, svga, svga60, d1, d160, vga, vga60, cif, cif60, qcif, qcif60, and disable PAL: Combination of 1080p, 1080p50, 1080p13, sxga, sxga50, sxga13, 720p, 720p50, 720p13, xga, xga50, svga, svga50, d1, d150, vga, vga50, cif, cif50, qcif, qcif50, and disable The format is <resolution_MJPEG>< max fps_ MJPEG>, <resolution_H.264><m ax fps_ H.264>, <resolution_H.264_2> <max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_	svga=800x600 svga60=800x600@60fps svga50=800x600@50fps d1=720x480(NTSC) d160=720x480(NTSC)@60fps d1=720x576(PAL) d150=720x576(PAL)@50fps vga=640x480 vga60=640x480@60fps vga50=640x480@50fps qvga=320x240 qvga60=320x240@60fps qvga50=320x240@50fps cif=352x240(NTSC) cif60=352x240(NTSC)@60fps cif=352x288(PAL) cif50=352x288(PAL)@50fps qcif=176x144 qcif60=176x144@60fps qcif50=176x144@50fps disable= not supported Note: sxga is not available for Full HD Multiple Streams 10x/18x Zoom AF IP Camera.

	disable	H.264_4>	
	Prime HDR IP Camera (Q series):	**Ultra HD IP Camera:**	
	Q2SD	SD	
	disable,3m,d1, disable	Combination of qvga,cif,vga,d1,svga,xga,720p,sxga,1080p,3m and disable	
	Q2V6	The format is	
	disable,2304x1296, d1,disable	<resolution_MJPEG><max fps_ MJPEG>,	
		<resolution_H.264><max fps_ H.264>,	
		<resolution_H.264_2><max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4>	
		SD(HDR)	
		Combination of cif,vga,d1,svga,xga,720p,sxga,1080p,3m and disable	
		The format is	
		<resolution_MJPEG><max fps_ MJPEG>,	
		<resolution_H.264><max fps_ H.264>,	
		<resolution_H.264_2><max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4>	
		V6	
		Combination of	

		cif,vga,d1,svga,xga,720p,sxga,1080p,2560x1440,2688x1512 and disable The format is <resolution_MJPEG><max fps_ MJPEG>, <resolution_H.264><max fps_ H.264>, <resolution_H.264_2><max fps_ H.264_2>,<resolution_H.264_3><max fps_ H.264_3>,<resolution_H.264_4><max fps_ H.264_4> V6(HDR): Combination of cif,vga,d1,svga,xga,720p,sxga,1080p,2304x1296, 2560x1440 and disable The format is <resolution_MJPEG><max fps_ MJPEG>, <resolution_H.264><max fps_ H.264>, <resolution_H.264_2><max fps_ H.264_2>,<resolution_H.264_3><max fps_ H.264_3>,<resolution_H.264_4><max fps_ H.264_4> SA Combination of qvga,cif,vga,d1,svga,xga,720p,sxga,1080p,307	

		2x2048 and disable The format is <resolution_MJPEG>< max fps_ MJPEG>, <resolution_H.264><m ax fps_ H.264>, <resolution_H.264_2> <max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4> SF Combination of qvga,cif,vga,d1,svga,xg a,720p,sxga,1080p,384 0x2160 and disable The format is <resolution_MJPEG>< max fps_ MJPEG>, <resolution_H.264><m ax fps_ H.264>, <resolution_H.264_2> <max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4> other Combination of qvga,cif,vga,d1,svga,xg a,720p,sxga,1080p and disable The format is <resolution_MJPEG>< max fps_ MJPEG>,	

		<resolution_H.264><max fps_ H.264>, <resolution_H.264_2><max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4>	
		Fisheye: Combination of 960x544,960x720,960x960,uxga,1080p,3m,1408x1408,2688x1520, 2048x2048 and disable The format is <resolution_MJPEG><max fps_ MJPEG>, <resolution_H.264><max fps_ H.264>, <resolution_H.264_2><max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4>	
		Ultra HD IP PTZ: ITN2 Combination of 3m,1080p, sxga, 720p, xga, svga, d1, vga, cif, and disable The format is <resolution_MJPEG><max fps_ MJPEG>, <resolution_H.264><max fps_ H.264>,	

		<resolution_H.264_2><max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4> Xarina Combination of 1080p, sxga, 720p, xga, svga, d1, vga, cif, and disable The format is <resolution_MJPEG>< max fps_ MJPEG>, <resolution_H.264><m ax fps_ H.264>, <resolution_H.264_2> <max fps_ H.264_2>,<resolution_ H.264_3><max fps_ H.264_3>,<resolution_ H.264_4><max fps_ H.264_4> **Superior HDR IP Camera (P series):** P2SA Combination of 3072x204820, 5m20, 5m, 3m, 1080p, 1080p60, 1080p20, 1080p15, sxga, sxga60, sxga20, xga20, 720p, 720p60, 720p20, 720p15, svga, svga60, svga20, svga15, d1, d160, d120, d115, vga, vga60, vga20, vga15, cif, cif60, cif20, cif15	

		P2V6 Combination of 2688x1512,2560x1440, 1080p, 1080p60, sxga, sxga60, 720p, 720p60, xga, xga60, svga, svga60, d1, d160, vga,vga60 cif, cif60 P2V6 (Shutter WDR mode) Combination of 2560x1440, 1080p, 1080p15, sxga, sxga15, 720p, 720p15, xga, svga, svga15, d1, d115, vga,vga15 cif, cif15 P2SD Combination of 3m, 1080p, 1080p60, sxga, sxga60, 720p, 720p60, xga, xga60, svga, svga60, d1, d160, vga, vga60 cif, cif60 P2SD (Shutter WDR mode) Combination of 3m, 3m15, 1080p, 1080p15, sxga, sxga15, 720p, 720p15, xga, xga15, svga, svga15, d1, d115, vga, vga15, cif, cif15 **Prime HDR IP Camera (Q series):** <u>Q2V6</u>	

		Combination of 2688x151215,2560x144015, 2304x1296, 1080p, sxga, 720p, 720p60, xga, xga60, svga, svga60, d1, d160, vga,vga60 cif, cif60 Q2V6 (Shutter WDR mode) Combination of 1080p, 1080p15, sxga, sxga15, 720p, 720p15, xga, xga15, svga, svga15, d1, d115, vga,vga15 cif, cif15 Q2SD Combination of 3m, 1080p, sxga, sxga60, 720p, 720p60, xga, xga60, svga, svga60, d1, d160, vga, vga60 cif, cif60 Q2SD (Shutter WDR mode) Combination of 1080p, 1080p15, sxga, sxga15, 720p, 720p15, xga, xga15, svga, svga15, d1, d115, vga, vga15, cif, cif15	
Rotation	**0**	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD**	Rotates the image. 0 = Normal. flip = up/down inversion.

		IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series): 0, flip, mirror, rotate, clockwise, counterclockwise **Full HD WDR IP Camera:** 0, flip, mirror, rotate, counterclockwise	mirror = left/right inversion rotate = both up/down and left/right inversion clockwise/counterclockwise = 90 degree rotation Note : For **Full HD Multiple Streams series** and **Full HD IP PTZ**, 1) Clockwise and counterclockwise are not available under Video format : H.264+MJPEG, H.264+H.264+MJPEG, H.264+H.264+ H.264+MJPEG, MJPEG only 2) Clockwise and counterclockwise are not available under stream using cif resolution. For Full HD WDR IP Camera, 1) Counterclockwise are not available under Video format : H.264+MJPEG, H.264+H.264+MJPEG, H.264+H.264+ H.264+MJPEG, MJPEG only 2) counterclockwise are not available under stream using qcif resolution (NTSC)
Portrait	**Full HD WDR IP Camera:** **0**	**Full HD WDR IP Camera:** 0	Note: 0:Not support of rotate 90 degrees

		1	1: Support of rotate 90 degrees
H264VideoKeyFrameInterval	60 (NTSC) 50 (PAL)	**Full HD Multiple Streams series/Full HD IP PTZ:** 2 ... 64 **Full HD WDR IP Camera/Ultra HD IP Camera/Ultra HD IP PTZ:** 1 ... 255 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 1-225	This is the H.264 streaming GOV Length, the frame interval between 2 intra-coded picture, which is the start of decoding. The default value depends on the TV system user choose.
H264_2VideoKeyFrameInterval	60 (NTSC) 50 (PAL)	**Full HD Multiple Streams series/Full HD IP PTZ:** 2 ... 64 **Full HD WDR IP Camera/Ultra HD IP Camera/Ultra HD IP PTZ:** 1 ... 255 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 1-225	This is the 2nd H.264 streaming GOV Length, the frame interval between 2 intra-coded picture, which is the start of decoding. The default value depends on the TV system user choose.
H264_3VideoKeyFrameInterval	30 (NTSC) 25 (PAL)	**Full HD Multiple Streams series/ Full HD IP PTZ:** 2 ... 64 **Full HD WDR IP Camera/ Ultra HD IP**	This is the 3rd H.264 streaming GOV Length, the frame interval between 2 intra-coded picture, which is the start of decoding. The default value depends on

		Camera/ Ultra HD IP PTZ: 1 … 255 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 1-225	the TV system user choose.
H264_4VideoKeyFra meInterval	30 (NTSC) 25 (PAL)	**Full HD Multiple Streams series/ Full HD IP PTZ:** 2 … 64 **Full HD WDR IP Camera/ Ultra HD IP Camera/ Ultra HD IP PTZ:** 1 … 255 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 1-225	This is the 4th H.264 streaming GOV Length, the frame interval between 2 intra-coded picture, which is the start of decoding. The default value depends on the TV system user choose.
H264Profile	main	main, high, baseline	
H264_2Profile	main	main, high, baseline	
H264_3Profile	main	main, high, baseline	
H264_4Profile	main	main, high, baseline	
MaxFPSbyResolution			To list the combination of resolution with the corresponding maximum frame rate. **Note:** Only for **Full HD Multiple Streams series & Full HD IP PT**Z and just implemented on

			"http://<servername>/cgi-bin/admin/param.cgi?action=options".

2.2.2.2 [Image.I0.Appearance.Stream.S#] – for R Series

Parameter name	Default value	Valid values		Description
Enabled	yes	yes, no		Enable or disable Stream#. Stream1 is always open.
EncodeType	h264	h264, mjpeg, h265		The Video Codec type.
Resolution	**Superior H.265 IP Camera:** SI: 1920x1080(50/60 fps)+1920x1080(25/30 fps) SI(HDR): 1920x1080(25/30 fps)+1920x1080(25/30 fps) SK: 3072x2048(25/30 fps)+800x600(25/30 fps) **Prime H.265 IP Camera:** V6: 2688x1512(25/30 fps)+800x600(25/30 fps)	S0	**Superior H.265 IP Camera:** SI: 3840x2160 1920x1080 1280x1024 1280x720 1024x768 SK: 3072x2048 1920x1080 1280x1024 1280x720 1024x768 800x600 **Prime H.265 IP Camera:** V6: 2688x1512 1920x1080 1280x1024 1280x720 1024x768 720x480 (NTSC) 768x576 (PAL)	

			S1 ~ S3	**Superior H.265 IP Camera:** SI: NTSC: (up to 60 fps) 3840x2160 1920x1080 1280x1024 1280x720 1024x768 800x600 720x480 640x480 352x240 320x240 PAL: (up to 50 fps) 3840x2160 1920x1080 1280x1024 1280x720 1024x768 800x600 768x576 640x480 352x288 320x240 SK: NTSC: (up to 60 fps) 3072x2048 1920x1080 1280x1024 1280x720 1024x768 800x600 720x480 640x480	

		352x240	
		320x240	
		PAL:	
		(up to 50 fps)	
		3072x2048	
		1920x1080	
		1280x1024	
		1280x720	
		1024x768	
		800x600	
		768x576	
		640x480	
		352x288	
		320x240	
		Prime H.265 IP Camera:	
		V6:	
		NTSC:	
		(up to 60 fps)	
		2688x1512	
		1920x1080	
		1280x1024	
		1280x720	
		1024x768	
		800x600	
		720x480	
		640x480	
		352x240	
		320x240	
		PAL:	
		(up to 50 fps)	
		2688x1512	
		1920x1080	
		1280x1024	
		1280x720	
		1024x768	
		800x600	
		768x576	

		640x480	
		352x288	
		320x240	
Framerate	30 (NTSC) 25 (PAL)	1 … 30 (NTSC) 1 … 25 (PAL)	When 1. HDR Mode 2. Linear Mode One of the four streaming is set to: **Superior H.265 IP camera:** <u>SI:</u> 3840x2160 <u>SK:</u> 3072x2048 **Prime H.265 IP camera:** <u>V6:</u> 2688x1512 1920x1080 1280x1024
		1 … 60 (NTSC) 1 … 50 (PAL)	Others
VideoKeyFrameInterval	60 (NTSC) 50 (PAL)	1 … 225	
Profile	main	main, high	
RateControl.Mode	vbr	vbr, cbr, lbr	
Bitrate	4096	512 … 10240	The value of image compression. Higher value means lower compression and higher quality and larger file size.
RateControl.LBR.Motion	high	high, mid, low	
RateControl.LBR.Noise	High	high, mid, low	

Parameter name	Default value	Valid values	Description
Qfactor	35	1 … 70	The value of MJPEG image compression. Higher value means lower compression and higher quality and larger file size.

* **Note:** The # is replaced with a group number starting from 0 to 3, S0 refers to Stream1.

      e.g. Image.I0.Appearance.Stream.S0.

2.2.3 Image.I0.Overlay.MaskWindows

Description: The group is for the setting of mask color and mask type.

Configuration file: /etc/sysconfig/image_overlay.conf

[Image.I0.Overlay.MaskWindows]

Parameter name	Default value	Valid values	Description
Switch	**Full HD IP PTZ/ Ultra HD IP PTZ:** off	**Full HD IP PTZ/ Ultra HD IP PTZ:** on, off	
Color	black	**Full HD Multiple Streams IP Camera/ Full HD IP PTZ/Full HD WDR IP Camera/Ultra HD IP Camera/Ultra HD IP PTZ/Superior H.265 IP Camera/Prime H.265 IP Camera:** black, white, yellow, red, green, blue, cyan, magenta **Superior HDR IP Camera (P series)/**	The color of mask.

		Prime HDR IP Camera (Q series): black	
Type	Full HD IP PTZ/Full HD WDR IP Camera/ Ultra HD IP PTZ: solid	Full HD IP PTZ/ Full HD WDR IP Camera/ Ultra HD IP PTZ: solid, transparency	The type of mask.

2.2.4 Image.I0.Overlay.MaskWindows.M#

Description: The group is for enabling mask.

Configuration file: /etc/sysconfig/image_overlay.conf

[Image.I0.Overlay.MaskWindows.M#] *

Parameter name	Default value	Valid values	Description
Enabled	no	no, yes	Enable/ disable the mask.
XPos	**Full HD Multiple Streams series:** 10, when#=0; 25, when#=1; 40, when#=2; 55, when#=3; 70, when#=4 5m 40, when#=0; 55, when#=1; 70, when#=2; 85, when#=3; 100, when#=4 **Full HD WDR IP Camera:** 40, when#=0; 60, when#=1	**Full HD Multiple Streams series:** 2M: 0 … 119 3M: 0 … 127 5M: 0 … 161 **Full HD WDR IP Camera:** S6, C6: 0 … 159 S7: 0 … 239 **Ultra HD IP Camera /Ultra HD IP PTZ:** 2M: 0 … 119 3M: 0 … 127 2560x1440: 0 … 159 5M: 0 … 161 2688x1512: 0 … 167 3072x2048: 0 … 191	The X position of mask

	80, when#=2	4000x3000: 0 … 249	
	100, when#=3	**Superior HDR IP**	
	120, when#=4	**Camera (P series):**	
	Ultra HD IP	0-191(3072x2048),	
	Camera:	0-167(2688x1512),	
	other	0-159(2560x1440),	
	40, when#=0;	0-127(2048x1536),	
	55, when#=1	0-119(1920x1080)	
	70, when#=2	**Prime HDR IP**	
	85, when#=3	**Camera (Q series):**	
	100, when#=4	0-167(2688x1512),	
	2M	0-159(2560x1440),	
	10, when#=0;	0-127(2048x1536),	
	25, when#=1	0-119(1920x1080)	
	40, when#=2	**Superior H.265 IP**	
	55, when#=3	**Camera / Prime**	
	70, when#=4	**H.265 IP Camera:**	
	Ultra HD IP PTZ:	3840x2160: 0 … 959	
	40, when#=0;	3072x2048: 0 … 767	
	55, when#=1	2688x1512: 0 … 671	
	70, when#=2	2048x1536: 0 … 511	
	85, when#=3	1920x1080: 0 … 479	
	100, when#=4		
	Superior HDR IP		
	Camera (P series)/		
	Prime HDR IP		
	Camera (Q series):		
	40, when#=0;		
	55, when#=1;		
	70, when#=2;		
	85, when#=3;		
	100, when#=4		
YPos	**Full HD Multiple**	**Full HD Multiple**	The Y position of mask.
	Streams series:	**Streams series:**	
	10, when#=0 … 4;	2M: 0 … 66	
	5m	3M: 0 …95	
	40, when#=0 … 4;	5M: 0 … 120	

	Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series): 40, when#=0-4 **Full HD WDR IP Camera:** 30, when #=0 … 4; **Ultra HD IP Camera:** Other: 40, when#=0 … 4; 2M: 10, when#=0 … 4; **Ultra HD IP PTZ:** 40, when#=0 … 4;	**Full HD WDR IP Camera:** S6: 0 … 127 S7: 0 … 134 C6:89 **Ultra HD IP Camera /Ultra HD IP PTZ:** 2M: 0 … 66 3M: 0 … 95 2560x1440: 0 … 89 2688x1512: 0 … 93 5M: 0 … 120 3072x2048:127 4000x3000:186 **Superior HDR IP Camera (P series):** 0-127(3072x2048), 0-93(2688x1512), 0-89(2560x1440), 0-95(2048x1536), 0-66(1920x1080) **Prime HDR IP Camera (Q series):** 0-93(2688x1512), 0-89(2560x1440), 0-95(2048x1536), 0-66(1920x1080) **Superior H.265 IP Camera / Prime H.265 IP Camera:** 3840x2160: 0 … 539 3072x2048: 0 … 511 2688x1512: 0 … 377 2048x1536: 0 … 383 1920x1080: 0 … 269	
Width	**Full HD Multiple Streams series/**	**Full HD Multiple Streams series:**	The width of mask.

	Full HD IP PTZ/ **Ultra HD IP Camera** **/Ultra HD IP PTZ/** **Superior HDR IP** **Camera (P series)/** **Prime HDR IP** **Camera (Q series):** 8, when#=0-4 **Full HD WDR IP** **Camera:** 16	2M: 0 … 120 3M: 0 … 128 5M: 0 … 162 **Full HD IP PTZ:** 1… 80 **Superior HDR IP** **Camera (P series):** 0-192(3072x2048), 0-168(2688x1512), 0-160(2560x1440), 0-128(2048x1536), 0-120(1920x1080) **Prime HDR IP** **Camera (Q series):** 0-168(2688x1512), 0-160(2560x1440), 0-128(2048x1536), 0-120(1920x1080) **Full HD WDR IP** **Camera:** S6, C6: 0 … 160 S7: 0 … 240 **Ultra HD IP Camera** **/Ultra HD IP PTZ:** 2M: 0 … 120 3M: 0 … 128 2560x1440: 0 … 160 2688x1512: 0 … 168 5M: 0 … 162 3072x2048:192 4000x3000:250 **Superior H.265 IP** **Camera / Prime** **H.265 IP Camera:** 3840x2160: 0 … 960 3072x2048: 0 … 768 2688x1512: 0 … 672 2048x1536: 0 … 512	

		1920x1080: 0 … 480	
Height	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera /Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 5, when#=0-4 **Full HD WDR IP Camera:** 10	**Full HD Multiple Streams series:** 2M: 0 … 67 3M: 0 … 96 5M: 0 … 121 **Full HD IP PTZ:** 1…60 **Full HD WDR IP Camera:** S6: 0 … 128 S7: 0 … 140 C6: 0 … 90 **Ultra HD IP Camera /Ultra HD IP PTZ:** 2M: 0 … 67 3M: 0 … 96 2560x1440: 0 … 90 2688x1512: 0 … 94 5M: 0 … 121 3072x2048:128 4000x3000:187 **Superior HDR IP Camera (P series):** 0-128(3072x2048), 0-94(2688x1512), 0-90(2560x1440), 0-96(2048x1536), 0-67(1920x1080) **Prime HDR IP Camera (Q series):** 0-94(2688x1512), 0-90(2560x1440), 0-96(2048x1536), 0-67(1920x1080) **Superior H.265 IP Camera / Prime**	The height of mask.

		H.265 IP Camera: 3840x2160: 0 … 540 3072x2048: 0 … 512 2688x1512: 0 … 378 2048x1536: 0 … 384 1920x1080: 0 … 270	

* Note: the # is replaced with a group number starting from 0 to 4 for Full HD Multiple Streams series and Ultra HD IP Camera. 5 to 15 for Full HD IP PTZ and Ultra HD IP PTZ.

2.2.5 Image.I0.RateControl — for Z/P/Q/X/W Series

Description: Parameters to control the bit rate (bandwidth) from the server.

Configuration file: /etc/sysconfig/image_ratecontrol.conf

[Image.I0.RateControl]

Parameter name	Default value	Valid values	Description
H264Mode	vbr	vbr, cbr	Specifies whether the 1st H.264 streaming rate controller operates in Variable Bit Rate (VBR) or constant bit rate (CBR) mode.
H264_2Mode	vbr	vbr, cbr	Specifies whether the 2nd H.264 streaming rate controller operates in Variable Bit Rate (VBR) or constant bit rate (CBR) mode.
H264_3Mode	vbr	vbr, cbr	Specifies whether the 3rd H.264 streaming rate controller operates in Variable Bit Rate (VBR) or constant bit rate (CBR) mode.
H264_4Mode	vbr	vbr, cbr	Specifies whether the 4th H.264 streaming rate controller operates in Variable Bit Rate (VBR) or constant bit rate (CBR) mode.
MaxFPS	**Full HD Multiple Streams series/ Full HD IP PTZ: NTSC (30)** 30 **PAL (25)** 25 **Full HD WDR IP Camera/ UHD IP Camera/**	**Full HD Multiple Streams series/ Full HD IP PTZ: NTSC (30)** 30 **PAL (25)** 25 **Full HD WDR IP Camera/ UHD IP PTZ /UHD IP**	The rate controller will not produce streams with a frame rate higher than this value. This parameter is read only. **Note :** These parameters Image.I#.RateControl.H264Mode, Image.I#.RateControl.H264_2Mode, Image.I#.RateControl.H264_3Mode,

	UHD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series): **NTSC (30)** 30 **NTSC (60)** 60 **PAL (25)** 25 **PAL (50)** 50	Camera /Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera: **NTSC (30)** 30 **NTSC (60)** 60 **PAL (25)** 25 **PAL (50)** 50	Image.I#.RateControl.H264_4Mode must be set to cbr for this parameter to take effect.
MinFPS	1	1	The rate controller will try not to produce streams with a frame rate lower than this value. This parameter is read only.

2.2.6 Image.I0.Text

Description: Image text overlay parameters for each image configuration.

Configuration file: /etc/sysconfig/image_text.conf

[Image.I0.Text]

Parameter name	Default value	Valid values	Description
DateEnabled	no	yes, no	Shows the date at the Position in the image.
DateAlign	left	**Superior HDR IP Camera (P series)/ Prime HDR IP**	Shows the text of date aligned to left or right

		Camera (Q series): left right	
ClockEnabled	no	yes, no	Shows the time at the Position in the image.
TextEnabled	No	yes, no	Shows the String at the Position in the image.
String		A string	The text to show at the Position in the image.
Size	**Full HD Multiple Streams series/Full HD IP PTZ/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0	**Full HD Multiple Streams series/Full HD IP PTZ/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0 … 2	Adjusts the size of text
Color	**Full HD Multiple Streams series/Full HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series): white Full HD WDR IP Camera:** black	**Full HD Multiple Streams series/Full HD IP PTZ/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** black white yellow red green blue cyan magenta **Full HD WDR IP Camera:**	Text color.

		black, white, red, transparent	
BGColor	**Full HD WDR IP Camera:** Transparent	**Full HD WDR IP Camera:** black, white, red, transparent	Text background color.
DatePosition	Bottomleft	topright, topleft, bottomright, bottomleft	Date position.
StringAlign	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** left	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** right, left	String align
SubtitleEnabled	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera**	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR**	Shows the subtitle at the Position in the image.

	(P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera: No	**IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** yes, no	
SubtitleAlign	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** left	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** right, left	Subtitle align
SubtitlePosition	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** Bottomright	**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** topright, topleft, bottomright, bottomleft	Subtitle position

		Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera: A string	
Subtitle[1-5]		**Full HD Multiple Streams series/Full HD IP PTZ/UHD IP Camera/UHD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/Prime H.265 IP Camera:** A string	The subtitle to show at the Position in the image.

2.2.7 ImageSource.I0.Sensor

Description: Parameters for each CCD/CMOS image source. This parameter group is product dependent and only available in network cameras. Check the product specification for supported parameters, default values and valid values.

Configuration file: /etc/sysconfig/image_source.conf

[ImageSource.I0.Sensor]

Parameter name	Default value	Valid values	Description
Exposure	**Full HD Multiple Streams series:** auto **Full HD IP PTZ:** Piris9 **Full HD WDR IP Camera:** auto (The TV system mode	**Full HD Multiple Streams series:** NTSC: auto, autoiris, shutterpriority(1_30, 1_60, 1_90, 1_100, 1_120, 1_180, 1_250, 1_350, 1_500) fixedshutter(10000,	The image exposure **Full HD Multiple Streams series:** NTSC: fixedshutter <10000>: 1 sec., <5000>: 1/2 sec., <2500>: 1/4 sec., <1250>: 1/8 sec., <667>: 1/15 sec.,

	is non-shutter WDR) multipleshutter (The TV system mode is shutter WDR) **Ultra HD IP Camera:** auto **Ultra HD IP PTZ:** auto **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** auto **Superior H.265 IP Camera/ Prime H.265 IP Camera:** auto	5000, 2500, 1250, 667, 333, 167, 111, 100, 83, 56, 40, 28, 20, 14, 10, 5, 3, 1) PAL: auto, autoiris, shutterpriority(1_25, 1_50, 1_75, 1_100, 1_120, 1_150, 1_215, 1_300, 1_425) fixedshutter(6666, 3333, 1666, 833, 400, 200, 133, 100, 83, 66, 46, 33, 23, 16, 8, 4, 2, 1) **Full HD IP PTZ:** auto, shutterpriority(5 … 21), irispriority(1 … 17), piris(7 … 11), manualpreset **Full HD WDR IP Camera:** (The TV system mode is non-shutter WDR) NTSC: auto, autoiris, shutterpriority(1_30, 1_60, 1_90, 1_100, 1_125, 1_180, 1_250, 1_350, 1_500) flickerless, manual PAL: auto, autoiris, shutterpriority(1_25, 1_50, 1_75, 1_100, 1_120, 1_150,	<333>: 1/30 sec., <167>: 1/60 sec., <111>: 1/90 sec., <83>: 1/120 sec., <56>: 1/180 sec., <40>: 1/250 sec., <28>: 1/350 sec., <20>: 1/500 sec., <14>: 1/725 sec., <10>: 1/1000 sec., <5>: 1/2000 sec., <3>: 1/3000 sec., <1>: 1/10000 sec. PAL: fixedshutter <6666>: 1/1.5 sec., <3333>: 1/3 sec., <1666>: 1/6 sec., <833>: 1/12 sec., <400>: 1/25 sec., <200>: 1/50 sec., <133>: 1/75 sec., <100>: 1/100 sec., <83>: 1/120 sec., <66>: 1/150 sec., <46>: 1/215 sec., <33>: 1/300 sec., <23>: 1/425 sec., <16>: 1/600 sec., <8>: 1/1250 sec., <4>: 1/2500 sec., <2>: 1/3500 sec., <1>: 1/10000 sec. **Full HD IP PTZ:** NTSC: shutterpriority <21>: 1/10000 sec., <20>: 1/6000 sec., <19>: 1/4000 sec., <18>: 1/3000 sec.,

		1_215, 1_300, 1_425) flickerless, manual (The TV system mode is shutter WDR) multipleshutter **Ultra HD IP Camera(Ball Lens, Fisheye,P-Iris):** auto, manualpreset **Ultra HD IP Camera:** **Zoom Lens:** auto, autoiris, pirispriority, irispriority0-10, manualpreset NTSC: shutterpriority(1_30, 1_60,1_90,1_100,1_ 120,1_180,1_250,1_ 350,1_500) PAL: shutterpriority(1_25, 1_50,1_75,1_100,1_ 120,1_150,1_215,1_ 300,1_425) Other: auto,autoiris, manualpreset NTSC: shutterpriority(1_30, 1_60,1_90,1_100,1_ 120,1_180,1_250,1_ 350,1_500)	<17>: 1/2000 sec., <16>: 1/1500 sec., <15>: 1/1000 sec., <14>: 1/725 sec., <13>: 1/500 sec., <12>: 1/350 sec., <11>: 1/250 sec., <10>: 1/180 sec., <9>: 1/125 sec., <8>: 1/100 sec., <7>: 1/90 sec., <6>: 1/60 sec., <5>: 1/30 sec. PAL: shutterpriority <21>: 1/10000 sec., <20>: 1/6000 sec., <19>: 1/3500 sec., <18>: 1/2500 sec., <17>: 1/1750 sec., <16>: 1/1250 sec., <15>: 1/1000 sec., <14>: 1/600 sec., <13>: 1/425 sec., <12>: 1/300 sec., <11>: 1/215 sec., <10>: 1/150 sec., <9>: 1/120 sec., <8>: 1/100 sec., <7>: 1/75 sec., <6>: 1/50 sec., <5>: 1/25 sec.

		PAL: shutterpriority(1_25, 1_50,1_75,1_100,1_ 120,1_150,1_215,1_ 300,1_425) **Ultra HD IP PTZ(Xarina WDR mode):** piris(7 … 11), irispriority(1 … 17), manualpreset **Ultra HD IP PTZ(TV SYSTEM=50/60 fps):** auto, piris(3 … 11), shutterpriority(6 … 21), irispriority(1 … 17), manualpreset **Ultra HD IP PTZ(TV SYSTEM= 25/30 fps):** auto, piris(7 … 11), shutterpriority(5 … 21), irispriority(1 … 17), manualpreset **Superior HDR IP Camera (P series):** Ball Lens, PIRIS : auto,manualpreset Zoom Lens : auto, autoiris, pirispriority, irispriority0-10, manualpreset	

		NTSC : shutterpriority1_30, shutterpriority1_60, shutterpriority1_90, shutterpriority1_100 shutterpriority1_120 shutterpriority1_180 shutterpriority1_250 shutterpriority1_350 shutterpriority1_500 PAL : shutterpriority1_25, shutterpriority1_50, shutterpriority1_75, shutterpriority1_100 shutterpriority1_120 shutterpriority1_150 shutterpriority1_215 shutterpriority1_300 shutterpriority1_425 Others : auto, autoiris, manualpreset NTSC : shutterpriority1_30, shutterpriority1_60, shutterpriority1_90, shutterpriority1_100 shutterpriority1_120 shutterpriority1_180 shutterpriority1_250 shutterpriority1_350 shutterpriority1_500 PAL : shutterpriority1_25, shutterpriority1_50, shutterpriority1_75	

		shutterpriority1_100	
		shutterpriority1_120	
		shutterpriority1_150	
		shutterpriority1_215	
		shutterpriority1_300	
		shutterpriority1_425	
		Prime HDR IP Camera (Q series):	
		Ball Lens, PIRIS : auto,manualpreset	
		Zoom Lens : auto, autoiris, pirispriority, irispriority0-10, manualpreset	
		NTSC :	
		shutterpriority1_30,	
		shutterpriority1_60,	
		shutterpriority1_90,	
		shutterpriority1_100	
		shutterpriority1_120	
		shutterpriority1_180	
		shutterpriority1_250	
		shutterpriority1_350	
		shutterpriority1_500	
		PAL :	
		shutterpriority1_25,	
		shutterpriority1_50,	
		shutterpriority1_75,	
		shutterpriority1_100	
		shutterpriority1_120	
		shutterpriority1_150	
		shutterpriority1_215	
		shutterpriority1_300	
		shutterpriority1_425	
		Others :	
		auto,	
		autoiris,	

		manualpreset	
		NTSC :	
		shutterpriority1_30,	
		shutterpriority1_60,	
		shutterpriority1_90,	
		shutterpriority1_100	
		shutterpriority1_120	
		shutterpriority1_180	
		shutterpriority1_250	
		shutterpriority1_350	
		shutterpriority1_500	
		PAL :	
		shutterpriority1_25,	
		shutterpriority1_50,	
		shutterpriority1_75	
		shutterpriority1_100	
		shutterpriority1_120	
		shutterpriority1_150	
		shutterpriority1_215	
		shutterpriority1_300	
		shutterpriority1_425	
		Superior H.265 IP Camera /Prime H.265 IP Camera:	
		auto, autoiris, pirispriority, irispriority0-10, manualpreset	
		NTSC:	
		shutterpriority(1_30, 1_60,1_90,1_100,1_120,1_180,1_250,1_350,1_500)	
		PAL:	
		shutterpriority(1_25, 1_50,1_75,1_100,1_120,1_150,1_215,1_300,1_425)	

		Other: auto,autoiris, manualpreset NTSC: shutterpriority(1_30, 1_60,1_90,1_100,1_ 120,1_180,1_250,1_ 350,1_500) PAL: shutterpriority(1_25, 1_50,1_75,1_100,1_ 120,1_150,1_215,1_ 300,1_425)	
Exposure.MinShutterSpeed	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8 **Full HD IP PTZ:**	**Full HD Multiple Streams series:** NTSC: 1_500, 1_350, 1_250, 1_180, 1_120, 1_100, 1_90, 1_60, 1_50, 1, 2, 4, 8, 15, 30 PAL: 1_425, 1_300, 1_215, 1_150, 1_120, 1_100, 1_75, 1_50, 1, 2, 4, 8, 25 **Full HD IP PTZ:** 0 … 5 **Full HD WDR IP Camera:** NTSC: 1_500, 1_350, 1_250, 1_180, 1_125, 1_100, 1_90, 1_60, 1, 2, 4, 8, 15, 30 PAL:	The image max shutter speed. **Full HD Multiple Streams series:** NTSC: <1>: 1/30 sec., <2>: 1/15 sec., <4>: 1/8 sec., <8>: 1/4 sec., <15>: 1/2 sec., <30>: 1 sec. PAL: <1>: 1/25 sec., <2>: 1/12 sec., <4>: 1/6 sec., <8>: 1/3 sec., <25>: 1/1.5 sec., **Full HD IP PTZ:** NTSC: <5>: Off, <4>: 1/15 sec., <3>: 1/8 sec., <2>: 1/4 sec., <1>: 1/2 sec.,

		1_425, 1_300, 1_215, 1_150, 1_120, 1_100, 1_75, 1_50, 1, 2, 4, 8, 25 **Ultra HD IP Camera:** NTSC: 1_500,1_350,1_250, 1_180,1_120,1_100, 1_90,1_60,1,2,4,8,1 5 PAL: 1_425,1_300,1_215, 1_150,1_120,1_100, 1_75,1_50,1,2,4,8 Others NTSC: 1_500,1_350,1_250, 1_180,1_120,1_100, 1_90,1_60,1,2,4,8,1 5,30 PAL: 1_425,1_300,1_215, 1_150,1_120,1_100, 1_75,1_50,1,2,4,8,2 5 **Ultra HD IP PTZ:** 0 … 5 **Superior HDR IP Camera (P series):** NTSC: 1_500,1_350,1_250, 1_180,1_120,1_100, 1_90,1_60,1,2,4,8,1 5,30 PAL: 1_425,1_300,1_215, 1_150,1_120,1_100,	<0>: 1 sec. PAL: <5>: Off, <5>: 1/12 sec., <3>: 1/6 sec., <2>: 1/3 sec., <1>: 1/1.5 sec., <0>: 1 sec., **Full HD WDR IP Camera:** NTSC: <1>: 1/30 sec., <2>: 1/15 sec., <4>: 1/8 sec., <8>: 1/4 sec., <15>: 1/2 sec., <30>: 1 sec. PAL: <1>: 1/25 sec., <2>: 1/12 sec., <4>: 1/6 sec., <8>: 1/3 sec., <25>: 1/1.5 sec.,

		1_75,1_50,1,2,4,8,25 **Prime HDR IP Camera (Q series):** NTSC: 1_500,1_350,1_250, 1_180,1_120,1_100, 1_90,1_60,1,2,4,8,15,30 PAL: 1_425,1_300,1_215, 1_150,1_120,1_100, 1_75,1_50,1,2,4,8,25 **Superior H.265 IP Camera /Prime H.265 IP Camera:** NTSC: 1_500,1_350,1_250, 1_180,1_120,1_100, 1_90,1_60,1,2,4,8,15 PAL: 1_425,1_300,1_215, 1_150,1_120,1_100, 1_75,1_50,1,2,4,8 Others NTSC: 1_500,1_350,1_250, 1_180,1_120,1_100, 1_90,1_60,1,2,4,8,15,30 PAL: 1_425,1_300,1_215, 1_150,1_120,1_100, 1_75,1_50,1,2,4,8,25	

Exposure.MaxShutterGain	**Full HD IP PTZ:** 8 **Full HD WDR IP Camera:** 80 **Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 3	**Full HD IP PTZ:** 0 … 19 **Full HD WDR IP Camera:** 0 … 240 **Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0 … 3 **Ultra HD IP PTZ:** 0 … 19 **Superior H.265 IP Camera /Prime H.265 IP Camera:** 0 … 3	
Exposure.Multipleshutter.Mode	**Full HD WDR IP Camera:** wdrfirst	**Full HD WDR IP Camera:** wdrfirst, normal	multipleshtter mode
Exposure.Manual.Shutter	**Full HD WDR IP Camera:** 56	**Full HD WDR IP Camera:** NTSC: 1,2,3,5,6,10,14,20,28,40,56,80,100,111,166,333,667,1250,2500,5000,10000 PAL: 1,2,4,5,8,10,16,23,33,46,66,83,100,133,200,400,833,1666,3333,5000,10000	**Full HD WDR IP Camera:** NTSC: <1>: 1/10000 sec., <2>: 1/4000 sec., <3>: 1/3000 sec., <5>: 1/2000 sec., <6>: 1/1500 sec., <10>: 1/1000 sec., <14>: 1/725 sec., <20>: 1/500 sec., <28>: 1/350 sec., <40>: 1/250 sec., <56>: 1/180 sec., <80>: 1/125 sec.,

			<100>: 1/100 sec.,
			<111>: 1/90 sec.,
			<166>: 1/60 sec.,
			<333>: 1/30 sec.,
			<667>: 1/15 sec.,
			<1250>: 1/8 sec.,
			<2500>: 1/4 sec.,
			<5000>: 1/2 sec.,
			<10000>: 1 sec.,
			PAL:
			<1>: 1/10000 sec.,
			<2>: 1/3500 sec.,
			<4>: 1/2500 sec.,
			<5>: 1/1750 sec.,
			<8>: 1/1250 sec.,
			<10>: 1/1000 sec.,
			<16>: 1/600 sec.,
			<23>: 1/425 sec.,
			<33>: 1/300 sec.,
			<46>: 1/215 sec.,
			<66>: 1/150 sec.,
			<83>: 1/120 sec.,
			<100>: 1/100 sec.,
			<133>: 1/75 sec.,
			<200>: 1/50 sec.,
			<400>: 1/25 sec.,
			<833>: 1/12 sec.,
			<1666>: 1/6 sec.,
			<3333>: 1/3 sec.,
			<5000>: 1/2 sec.,
			<10000>: 1 sec.,
Exposure.Manual.Gain	**Full HD WDR IP Camera:** 0	**Full HD WDR IP Camera:** 0 … 240	
Exposure.ManualPreset.Shutter	**Full HD IP PTZ:** 6 **Ultra HD IP**	**Full HD IP PTZ:** 5 … 21 **Ultra HD IP**	Available value table

| | Camera/Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:
167 | Camera(SB):
NTSC:
1, 3, 5, 10, 14, 20, 28, 40, 56, 83, 100, 111, 167, 333, 667, 1250, 2500, 5000
PAL:
1, 2, 4, 8, 16, 23, 33, 46, 66, 83, 100, 133, 200, 400, 833, 1666, 3333
Ultra HD IP Camera:
NTSC:
1, 3, 5, 10, 14, 20, 28, 40, 56, 83, 100, 111, 167, 333, 667, 1250, 2500, 5000, 10000
PAL:
1, 2, 4, 8, 16, 23, 33, 46, 66, 83, 100, 133, 200, 400, 833, 1666, 3333, 6666
Ultra HD IP PTZ(DSS):
0 … 21
Ultra HD IP PTZ(DSS none):
TV SYSTEM=50/60 fps : 6 … 21
TV SYSTEM=25/30 fps : 5 … 21
Superior HDR IP Camera (P series):
NTSC:
1,3,5,10,14,20,28,40,56,83,100,111,167 | |

		,333,667,1250,2500, 5000,10000 PAL: 1,2,4,8,16,23,33,46, 66,83,100,133,200,4 00,833,1666,3333,6 666 **Prime HDR IP Camera (Q series):** NTSC: 1,3,5,10,14,20,28,4 0,56,83,100,111,167 ,333,667,1250,2500, 5000,10000 PAL: 1,2,4,8,16,23,33,46, 66,83,100,133,200,4 00,833,1666,3333,6 666 **Superior H.265 IP Camera / Prime H.265 IP Camera:** NTSC: 1, 3, 5, 10, 14, 20, 28, 40, 56, 83, 100, 111, 167, 333, 667, 1250, 2500, 5000, 10000 PAL: 1, 2, 4, 8, 16, 23, 33, 46, 66, 83, 100, 133, 200, 400, 833, 1666, 3333, 6666	
Exposure.ManualPreset.AG CGain	**Full HD IP PTZ:** 6 **Ultra HD IP Camera/ Ultra HD**	**Full HD IP PTZ:** 1 … 15 **Ultra HD IP Camera:**	

	IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera: 0	<u>V6:</u> 0 … 120 <u>SF:</u> 0 … 150 <u>SD, SB:</u> 0 … 160 <u>others:</u> 0 … 140 **Ultra HD IP PTZ:** 1 … 15 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** <u>V6:</u> 0~120 <u>SD:</u> 0~160 <u>others:</u> 0~140 **Superior H.265 IP Camera:** <u>SI:</u> 0 … 150 <u>SK:</u> 0 … 150 **Prime H.265 IP Camera:** <u>V6:</u> 0 … 120	
Exposure.ManualPreset.Iris	**Full HD IP PTZ/ Ultra HD IP Camera(Zoom Lens)/ Ultra HD IP PTZ / Superior H.265 IP Camera / Prime H.265 IP**	**Full HD IP PTZ/ Ultra HD IP PTZ:** 1 … 17 **Ultra HD IP Camera(Zoom Lens):** 0 … 10	Available value table

	Camera: 6	Superior H.265 IP Camera / Prime H.265 IP Camera(Zoom Lens): 0 … 10	
WhiteBalance	auto	**Full HD Multiple Streams series/ Full HD WDR IP Camera Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** auto, ATW, onepush, manual **Full HD IP PTZ/Ultra HD IP PTZ:** auto, ATW, onepush, manual fixed_indoor, fixed_outdoor,	The image white balance.
WhiteBalance.Rgain	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera/ Ultra HD**	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P**	Rgain value when whitebalance mode is manual, only available in IP PTZ.

	IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera: 57 **Full HD WDR IP Camera:** 239	**series)/ Prime HDR IP Camera (Q series):** 0 … 127 **Full HD IP PTZ/ Full HD WDR IP Camera/ Ultra HD IP PTZ:** 0 … 255	
WhiteBalance.Bgain	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera/Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 54 **Full HD WDR IP Camera:** 239	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 0 … 127 **Full HD IP PTZ/ Full HD WDR IP Camera/ Ultra HD IP PTZ:** 0 … 255	Bgain value when whitebalance mode is manual, only available in IP PTZ.
Backlight	off	on, off	Enable/Disable Backlight Compensation.
Brightness	**Full HD Multiple Streams series/ Ultra HD IP PTZ/ Superior HDR IP**	**Full HD Multiple Streams series/ Full HD WDR IP Camera /Ultra HD**	The image brightness.

	Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera: 128 **Full HD WDR IP Camera:** 0	**IP PTZ/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 0 … 255	
Sharpness	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 4 **Full HD IP PTZ:** 6 **Full HD WDR IP Camera:** 150	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 0 … 15 **Full HD IP PTZ:** 1 … 15 **Full HD WDR IP Camera:** 0 … 255	The image sharpness.
Contrast	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera /**	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q**	The image contrast.

	Prime H.265 IP Camera: 64 **Full HD WDR IP Camera:** 128	**series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 0 … 255	
ColorLevel	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 64 **Full HD WDR IP Camera:** 128	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 0 … 255	
Hue	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 128 **Full HD WDR IP Camera:** 0	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 0 … 255 **Full HD WDR IP Camera:** 0 … 128	

Digitalzoom	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** 1 **Full HD IP PTZ/Ultra HD IP PTZ:** off	**Full HD Multiple Streams series** off, 2 … 8 **Full HD IP PTZ/ Ultra HD IP PTZ:** on, off **Full HD WDR IP Camera:** off, 2 … 16 **Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** off, 1 … 10(off=1x)	The image digital zoom Note : **Full HD IP PTZ:** Only the first stream has digital zoom function. **Ultra HD IP Camera** Fisheye camera support this feature only under backend dewarp mode.
Expcomp	**Full HD IP PTZ/ Ultra HD IP PTZ:** 8	**Full HD IP PTZ/ Ultra HD IP PTZ:** 1 … 15	Exposure compensation
Flip	**Full HD IP PTZ/ Ultra HD IP PTZ:** 0ff	**Full HD IP PTZ/ Ultra HD IP PTZ:** off ME Image	
Wdr	off	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera /**	Enable/Disable WDR function. (Gamma WDR function is only supported in non-shutter WDR mode.)

		Prime H.265 IP Camera: off, 1 … 3 **Full HD IP PTZ/ Full HD WDR IP Camera/ Ultra HD IP PTZ:** off, on	
ShutterWdr	**Ultra HD IP Camera/ Superior H.265 IP Camera / Prime H.265 IP Camera (HDR mode):** off	**Ultra HD IP Camera/ Superior H.265 IP Camera / Prime H.265 IP Camera (HDR mode):** off, on	
AutoDefog	**Full HD IP PTZ(ITN2)/Ultra HD IP PTZ(ITN2):** off	**Full HD IP PTZ(ITN2)/Ultra HD IP PTZ(ITN2):** on off	
2DNR	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** on	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:**	Enable/Disable 2D Noise Reduction function.

	Full HD IP PTZ/Full HD WDR IP Camera: off	on off **Full HD WDR IP Camera:** off, low, middle, high	
3DNR	**Full HD Multiple Streams series / Full HD IP PTZ /Ultra HD IP Camera/Ultra HD IP PTZ(Xarina)/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** off	**Full HD Multiple Streams series/Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera / Prime H.265 IP Camera:** off low middle high **Full HD IP PTZ/Ultra HD IP PTZ(Xarina):** off on	Enable/Disable 3D Noise Reduction function.
SPQCBCRNR	**Full HD Multiple Streams series /Ultra HD IP Camera / Superior H.265 IP Camera / Prime H.265 IP Camera:** off	**Full HD Multiple Streams series /Ultra HD IP Camera / Superior H.265 IP Camera / Prime H.265 IP Camera:** off low	

		middle high	
SpeedByZoom	**Full HD IP PTZ:** off	**Full HD IP PTZ:** on, off	
AutoCalibration	**Full HD IP PTZ:** off	**Full HD IP PTZ:** on, off	
Stabilizer	**Full HD WDR IP Camera/Full HD IP PTZ(Xarina)/Ultra HD IP PTZ(Xarina):** off	**Full HD WDR IP Camera/Full HD IP PTZ(Xarina)/Ultra HD IP PTZ(Xarina):** on, off	Digital image stabilization
~~ICR~~	**Full HD IP PTZ/Ultra HD IP PTZ:** auto	**Full HD IP PTZ/Ultra HD IP PTZ:** auto day night	
DIS	**Full HD WDR IP Camera:** off	**Full HD WDR IP Camera:** on, off	

2.2.8 ImageSource.I0.Video

Description: Parameters for each video image source. This parameter group is product dependent.

Check the product specification for supported parameters, default values and valid values.

Configuration file: /etc/sysconfig/image_source.conf

[ImageSource.I0.Video]

Parameter name	Default value	Valid values	Description
DetectedType	**Full HD Multiple Streams series:** ntsc_30, **Full HD IP PTZ:** ntsc_60, **Full HD WDR IP Camera:** ntsc_30 **Ultra HD IP Camera:** SF,SA,SB pal_60 V6,SD pal_wdr_2shutter **Ultra HD IP PTZ:** ITN2 pal_60 Xarina pal_wdr_30 **Superior H.265 IP Camera:** SI,SK pal_60 **Prime H.265 IP Camera:** V6,SD pal_wdr_2shutter	**Full HD Multiple Streams series:** 6 series ntsc_30, pal_25 ntsc_30(auto iris), pal_25(auto iris) others ntsc_30, pal_25 **Full HD IP PTZ:** ITN2 ntsc_30, pal_25 ntsc_60, pal_50 Xarina ntsc_60 pal_50 ntsc_wdr_30 pal_wdr_25 **Full HD WDR IP Camera:** 6 series ntsc_30 pal_25 ntsc_60 pal_50 ntsc_30(auto iris) pal_25(auto iris) ntsc_60(auto iris) pal_50(auto iris) ntsc_wdr_2 shutter_30 pal_wdr_2 shutter_25 ntsc_wdr_2	

		shutter_30(auto iris),	
		pal_wdr_2	
		shutter_25(auto iris),	
		others	
		ntsc_30	
		pal_25	
		ntsc_60	
		pal_50	
		ntsc_wdr_2	
		shutter_30	
		pal_wdr_2 shutter_25	
		Ultra HD IP Camera/Superior H.265 IP Camera/ Prime H.265 IP Camera:	
		V6,SD	
		ntsc_wdr_3shutter	
		pal_wdr_3shutter	
		ntsc_wdr_2shutter	
		pal_wdr_2shutter	
		ntsc_60	
		pal_50	
		SF,SA,SB	
		ntsc_60	
		pal_50	
		Ultra HD IP PTZ:	
		ITN2	
		ntsc_60	
		pal_50	
		ntsc_30	
		pal_25	
		Xarina	
		ntsc_60	
		pal_50	
		ntsc_wdr_30	
		pal_wdr_25	

2.2.9 Image.I0.ROI.InputWindows

Description: Enable ROI function and set ROI region.

Configuration file: /etc/sysconfig/image_roi.conf

2.2.9.1 [Image.I0.ROI.InputWindows]* -- for Z/P/Q/X/W Series

Parameter name	Default value	Valid values	Description
MJPEG.Enabled	no	yes no	
MJPEG.Pos	**Full HD Multiple Streams IP Camera/ UHD IP Camera/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** X_Y_W_H X:0 Y:0 W:0 H:0	**Full HD Multiple Streams IP Camera:** X_Y_W_H 2M Models (Fig. 1): X: 0~480 Y: 0~270 W: 88~480 H: 60~270(NTSC) 72~270(PAL) 3M Models (Fig. 2): X: 0~512 Y: 0~384 W: 88~512 H: 60~384(NTSC) 72~384(PAL) 5M Models (Fig. 3): X: 0~648 Y: 0~486 W: 88~648 H: 60~486(NTSC) 72~486(PAL) **UHD IP Camera:** <u>SA:</u> X:0 … 680 Y:0 … 440(PAL) 0 … 452(NTSC) W:88 … 768	1. ROI only supports when the streaming is set to Triple stream or Quad stream. 2. Only "stream 4" ROI can be enabled when the resolution is 3M or 5M. 3. For 3M and 5M models, the region will be smaller (R1→R2) when the resolution is changed from larger to smaller (5M→2M) and the original region is not 100% in the new resolution area. (Fig 1) 4. The diminished region will not be back when the resolution changed back to larger one.

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		H:72 ... 512(PAL)	
		60 ... 512(NTSC)	
		SB:	
		X:0 ... 392	
		Y:0 ... 198(PAL)	
		0 ... 210(NTSC)	
		W:88 ...480	
		H:72 ... 270(PAL)	
		60 ... 270(NTSC)	
		SD:	
		X:0 ... 424	
		Y:0 ...312(PAL)	
		0 ... 324(NTSC)	
		W:88 ... 512	
		H:72 ... 384(PAL)	
		60 ... 384(NTSC)	
		V6:	
		X:0 ... 584	
		Y:0 ...306(PAL)	
		0 ...318 (NTSC)	
		W:88 ... 672	
		H:72 ... 378(PAL)	
		60 ...378(NTSC)	
		V6(HDR)	
		X:0 ... 552	
		Y:0 ... 288(PAL)	
		0 ... 300(NTSC)	
		W:88 ... 640	
		H:72 ... 360(PAL)	
		60 ... 360(NTSC)	
		SF:	
		X:0 ... 782	
		Y:0 ... 396(PAL)	
		0 ... 420(NTSC)	
		W:178 ... 960	
		H:144 ... 540(PAL)	
		120 ... 540(NTSC)	

H264.Enabled	no	yes no	
H264.Pos	**Full HD Multiple Streams IP Camera/ UHD IP Camera/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** X_Y_W_H X:0 Y:0 W:0 H:0	**Full HD Multiple Streams IP Camera:** X_Y_W_H 2M Models (Fig. 1): X: 0~480 Y: 0~270 W: 88~480 H: 60~270(NTSC) 72~270(PAL) 3M Models (Fig. 2): X: 0~512 Y: 0~384 W: 88~512 H: 60~384(NTSC) 72~384(PAL) 5M Models (Fig. 3): X: 0~648 Y: 0~486 W: 88~648 H: 60~486(NTSC) 72~486(PAL) **UHD IP Camera:** SA: X:0 … 680 Y:0 … 440(PAL) 0 … 452(NTSC) W:88 … 768 H:72 … 512(PAL) 60 … 512(NTSC) SB: X:0 … 392 Y:0 … 198(PAL) 0 … 210(NTSC) W:88 …480 H:72 … 270(PAL)	

		60 … 270(NTSC) SD: X:0 … 424 Y:0 …312(PAL) 0 … 324(NTSC) W:88 … 512 H:72 … 384(PAL) 60 … 384(NTSC) V6: X:0 … 584 Y:0 …306(PAL) 0 …318 (NTSC) W:88 … 672 H:72 … 378(PAL) 60 …378(NTSC) V6(HDR) X:0 … 552 Y:0 … 288(PAL) 0 … 300(NTSC) W:88 … 640 H:72 … 360(PAL) 60 … 360(NTSC) SF: X:0 … 782 Y:0 … 396(PAL) 0 … 420(NTSC) W:178 … 960 H:144 … 540(PAL) 120 … 540(NTSC)	
H264_2.Enabled	no	yes no	
H264_2.Pos	**Full HD Multiple Streams IP Camera/ UHD IP Camera/Superior HDR IP Camera (P series)/ Prime**	**Full HD Multiple Streams IP Camera:** X_Y_W_H 2M Models (Fig. 1): X: 0~480 Y: 0~270	

	HDR IP Camera (Q series): X_Y_W_H X:0 Y:0 W:0 H:0	W: 88~480 H: 60~270(NTSC) 72~270(PAL) 3M Models (Fig. 2): X: 0~512 Y: 0~384 W: 88~512 H: 60~384(NTSC) 72~384(PAL) 5M Models (Fig. 3): X: 0~648 Y: 0~486 W: 88~648 H: 60~486(NTSC) 72~486(PAL) **UHD IP Camera:** <u>SA:</u> X:0 … 680 Y:0 … 440(PAL) 0 … 452(NTSC) W:88 … 768 H:72 … 512(PAL) 60 … 512(NTSC) <u>SB:</u> X:0 … 392 Y:0 … 198(PAL) 0 … 210(NTSC) W:88 …480 H:72 … 270(PAL) 60 … 270(NTSC) <u>SD:</u> X:0 … 424 Y:0 …312(PAL) 0 … 324(NTSC) W:88 … 512 H:72 … 384(PAL) 60 … 384(NTSC) <u>V6:</u>	

		X:0 ... 584 Y:0 ...306(PAL) 0 ...318 (NTSC) W:88 ... 672 H:72 ... 378(PAL) 60 ...378(NTSC) <u>V6(HDR)</u> X:0 ... 552 Y:0 ... 288(PAL) 0 ... 300(NTSC) W:88 ... 640 H:72 ... 360(PAL) 60 ... 360(NTSC) <u>SF:</u> X:0 ... 782 Y:0 ... 396(PAL) 0 ... 420(NTSC) W:178 ... 960 H:144 ... 540(PAL) 120 ... 540(NTSC)	
H264_3.Enabled	no	yes no	
H264_3.Pos	**Full HD Multiple Streams IP Camera/ UHD IP Camera/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** X_Y_W_H X:0 Y:0 W:0 H:0	**Full HD Multiple Streams IP Camera:** X_Y_W_H 2M Models (Fig. 1): X: 0~480 Y: 0~270 W: 88~480 H: 60~270(NTSC) 72~270(PAL) 3M Models (Fig. 2): X: 0~512 Y: 0~384 W: 88~512 H: 60~384(NTSC) 72~384(PAL)	

		5M Models (Fig. 3):	
		X: 0~648	
		Y: 0~486	
		W: 88~648	
		H: 60~486(NTSC)	
		72~486(PAL)	
		UHD IP Camera:	
		<u>SA:</u>	
		X:0 … 680	
		Y:0 … 440(PAL)	
		0 … 452(NTSC)	
		W:88 … 768	
		H:72 … 512(PAL)	
		60 … 512(NTSC)	
		<u>SB:</u>	
		X:0 … 392	
		Y:0 … 198(PAL)	
		0 … 210(NTSC)	
		W:88 …480	
		H:72 … 270(PAL)	
		60 … 270(NTSC)	
		<u>SD:</u>	
		X:0 … 424	
		Y:0 …312(PAL)	
		0 … 324(NTSC)	
		W:88 … 512	
		H:72 … 384(PAL)	
		60 … 384(NTSC)	
		<u>V6:</u>	
		X:0 … 584	
		Y:0 …306(PAL)	
		0 …318 (NTSC)	
		W:88 … 672	
		H:72 … 378(PAL)	
		60 …378(NTSC)	
		<u>V6(HDR)</u>	
		X:0 … 552	
		Y:0 … 288(PAL)	

		0 … 300(NTSC) W:88 … 640 H:72 … 360(PAL) 60 … 360(NTSC) <u>SF:</u> X:0 … 782 Y:0 … 396(PAL) 0 … 420(NTSC) W:178 … 960 H:144 … 540(PAL) 120 … 540(NTSC)	
H264_4.Enabled	no	yes no	
H264_4.Pos	**Full HD Multiple Streams IP Camera/ UHD IP Camera/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** X_Y_W_H X:0 Y:0 W:0 H:0	**Full HD Multiple Streams IP Camera:** X_Y_W_H 2M Models (Fig. 1): X: 0~480 Y: 0~270 W: 88~480 H: 60~270(NTSC) 72~270(PAL) 3M Models (Fig. 2): X: 0~512 Y: 0~384 W: 88~512 H: 60~384(NTSC) 72~384(PAL) 5M Models (Fig. 3): X: 0~648 Y: 0~486 W: 88~648 H: 60~486(NTSC) 72~486(PAL) **UHD IP Camera:** <u>SA:</u> X:0 … 680	

		Y:0 … 440(PAL) 0 … 452(NTSC) W:88 … 768 H:72 … 512(PAL) 60 … 512(NTSC) SB: X:0 … 392 Y:0 … 198(PAL) 0 … 210(NTSC) W:88 …480 H:72 … 270(PAL) 60 … 270(NTSC) SD: X:0 … 424 Y:0 …312(PAL) 0 … 324(NTSC) W:88 … 512 H:72 … 384(PAL) 60 … 384(NTSC) V6: X:0 … 584 Y:0 …306(PAL) 0 …318 (NTSC) W:88 … 672 H:72 … 378(PAL) 60 …378(NTSC) V6(HDR) X:0 … 552 Y:0 … 288(PAL) 0 … 300(NTSC) W:88 … 640 H:72 … 360(PAL) 60 … 360(NTSC) SF: X:0 … 782 Y:0 … 396(PAL) 0 … 420(NTSC) W:178 … 960	

Parameter name	Default value	Valid values	Description
		H:144 … 540(PAL)	
		120 … 540(NTSC)	

2.2.9.2 [Image.I0.ROI.InputWindows.Stream#]* – for R Series

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable or disable the ROI function of Stream#.
Pos	0_0_0_0	**Superior H.265 IP Camera:** SI: X:0 … 782 Y:0 … 396(PAL) 0 … 420(NTSC) W:178 … 960 H:144 … 540(PAL) 120 … 540(NTSC) SK: X:0 … 680 Y:0 … 440(PAL) 0 … 452(NTSC) W:88 … 768 H:72 … 512(PAL) 60 … 512(NTSC) SD: X:0 … 424 Y:0 …312(PAL) 0 … 324(NTSC) W:88 … 512 H:72 … 384(PAL) 60 … 384(NTSC) **Prime H.265 IP Camera:** V6: X:0 … 584 Y:0 …306(PAL)	

		0 …318 (NTSC)	
		W:88 … 672	
		H:72 … 378(PAL)	
		60 …378(NTSC)	

* **Note:** The # is replaced with a group number starting from 1 to 4,

     e.g. Image.I0.ROI.InputWindows.Stream1.

Fig.1

3M Models

Fig. 2

2M Models
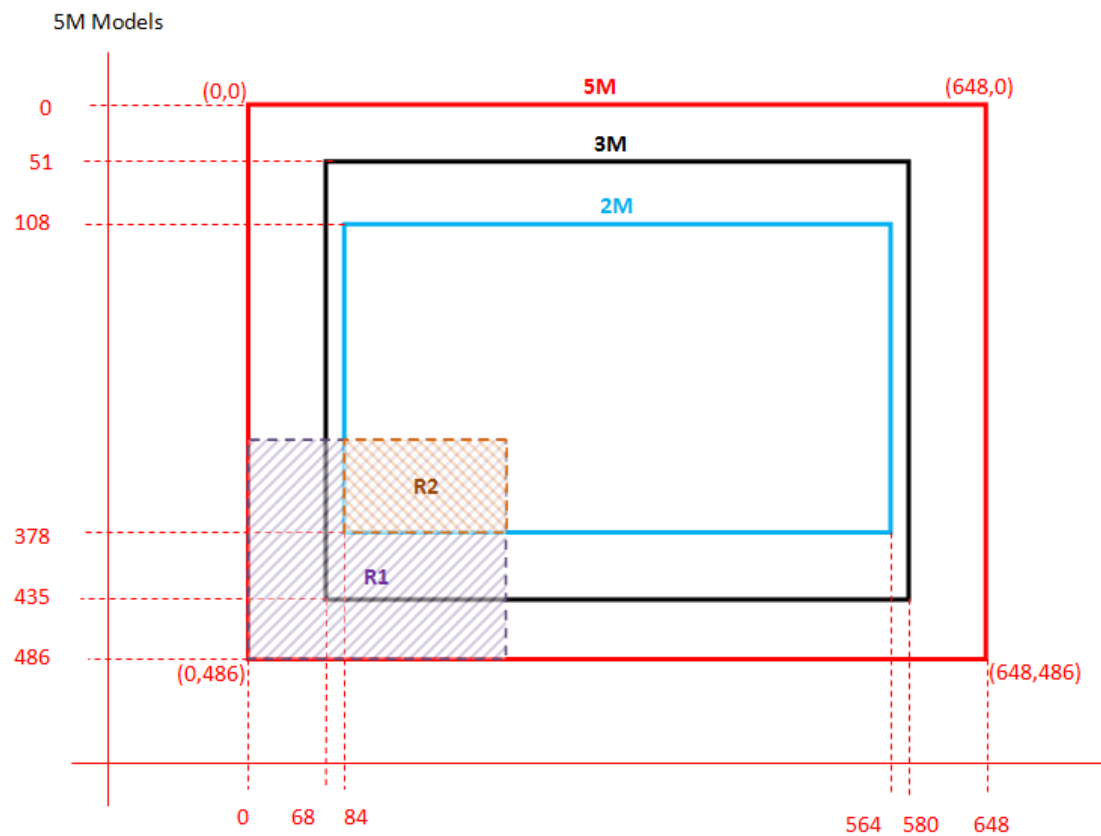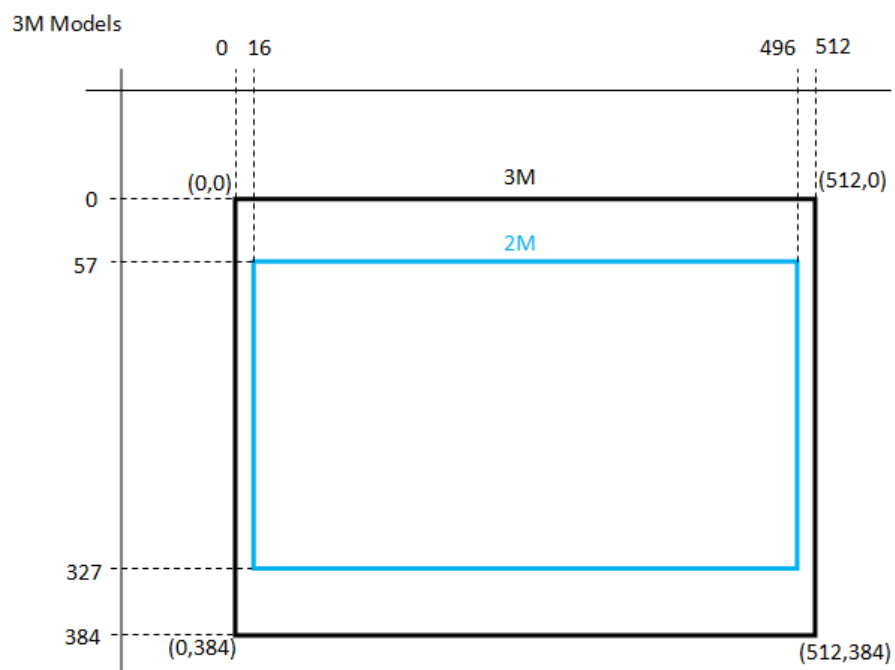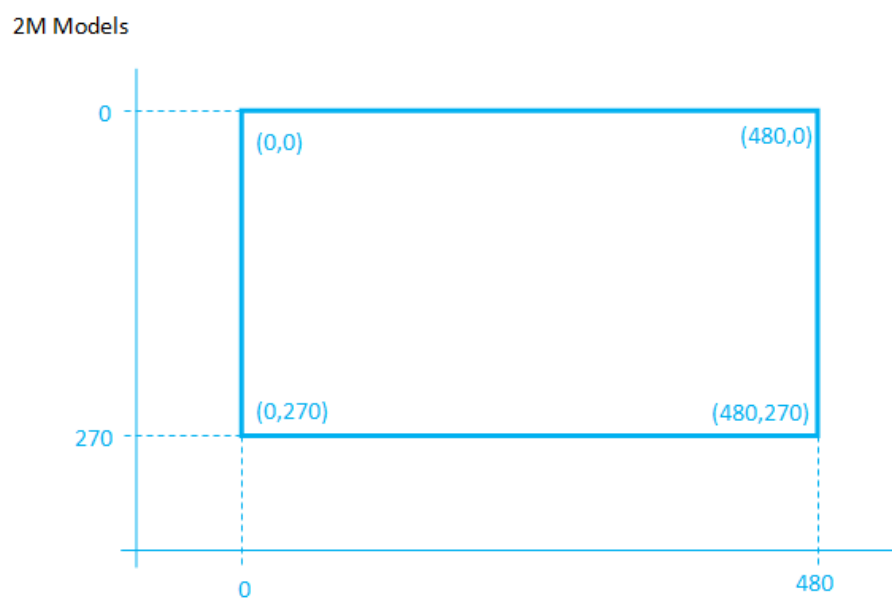
Fig. 3

2.3 I/O

2.3.1 Input

Description: Parameters for hardware input(s).

Configuration file: /etc/sysconfig/inputs.conf

[Input]

Parameter name	Default value	Valid values	Description
NbrOfInputs	Hardware specific	An unsigned integer (Read only)	Number of inputs. Read only.

2.3.2 Input.I#

Description: Parameters for hardware input(s).

Configuration file: /etc/sysconfig/inputs.conf

[Input.I#]*

Parameter name	Default value	Valid values	Description
Name	**Full HD Multiple Streams series/ Full HD WDR IP Camera/Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** Input 1	A string	The name of the input. This parameter is read only.

	Full HD IP PTZ/		
	Ultra HD IP PTZ:		
	Input 1		
	Input 2		
	Input 3		
	Input 4		
Trig	closed	open, closed	Determines when to trigger.

* **Note:** The # is replaced with a group number starting from 0, e.g. Input.I0.

2.3.3 Output

Description: Parameters for hardware output(s).

Configuration file: /etc/sysconfig/outputs.conf

[Output]

Parameter name	Default value	Valid values	Description
NbrOfOutputs	Hardware specific	An unsigned integer (Read only)	Number of outputs.

2.3.4 Output.O#

Description: Parameters for hardware output(s).

Configuration file: /etc/sysconfig/outputs.conf

[Output.O#]

Parameter name	Default value	Valid values	Description
Name	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Ultra HD**	A string	The name of the output. Read only

	IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera: Output 1 Full HD IP PTZ/ Ultra HD IP PTZ: Output 1 Output 2		
Active	open	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** open, closed **Full HD IP PTZ/ Ultra HD IP PTZ:** open	The active state of the output. **Full HD IP PTZ/ Ultra HD IP PTZ:** open(Read only)

2.4 Events

2.4.1 Event.E#

Description: This group defines an event, which is a set of parameters describing how and when the product performs certain actions.

Configuration file: /etc/sysconfig/event.conf

[Event.E#] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no scheduled	1) Event enabled (disabled events are never triggered). 2) Enable event [0-6, 10-12] by schedule.
Schedule		S0-S9	1) S0 refers to schedule 1, S1 refers to schedule 2 and so on. 2) Only available for event [0-6, 10-12]
FileName	image.jpg	A string	Base filename for uploaded image files.
Suffix	0	0-3	Suffix to base name for uploaded image files.
MaxSequenceNumber	0	0 … 9999999	The maximum value of when using a sequence number as file suffix. At this value the counter will wrap to 0.

* Note: the # is replaced with a group number, e.g. 0 means triggered by digital input, 1 means triggered by motion detection, 2 Enabled means triggered by tampering activity, 3,4 &5 means triggered by digital input for IP PTZ, 6 means triggered by Network Failure Detection, 8 means triggered by Audio input, 9 means periodical event 10-12 means motion 1-3, 13 means triggered by Manual trigger, 14 means triggered by Face detection.

2.4.2 Event HW Actions

Description: This group defines an action that controls a digital output.

Configuration file: /etc/sysconfig/event.conf

[Event.E#.Actions.A0] *

Parameter name	Default value	Valid values	Description
Enabled	yes	yes, no	Enable/disable the HW output
Type	N	N	Type of action. N = Notification.
Protocol	HW	HW	Protocol.
Output	1	1	Output number to activate.

[Event.E#.Actions.A9] *

Parameter name	Default value	Valid values	Description
Enabled	yes	yes, no	Enable/disable the HW output
Type	N	N	Type of action. N = Notification.
Protocol	HW	HW	Protocol.
Output	2	2	Output number to activate.

* Note: Event.E#.Actions.A9 is only for Full HD IP PTZ. the # is replaced with a group number, e.g. 0 means triggered by digital input, 1 means triggered by motion detection, 2 Enabled means triggered by tampering activity, 3,4 &5 means triggered by digital input for IP PTZ, 6 means triggered by Network Failure Detection.

2.4.3 Event FTP Actions

Description: This group defines an action that uploads message files to an FTP server.

Configuration file: /etc/sysconfig /event.conf

[Event.E#.Actions.A1] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable the ftp notification
Type	N	N	Type of action. N = Notification. This parameter is read only.
Protocol	FTP	FTP	Protocol. This parameter is read only.
Server	F0	F0 ... Fn (n = number of FTP event servers - 1)	Primary FTP server ID. Refers to a parameter group under root.EventServers.FTP. Example: "F0" refers to the parameter group root.EventServers.FTP.F0.
Server2	F1	F0 ... Fn (n = number of FTP event servers - 1)	Secondary FTP server ID.

* Note: the # is replaced with a group number, e.g. 0 means triggered by digital input, 1 means triggered by motion detection, 2 Enabled means triggered by tampering activity, 3, 4 &5 means triggered by digital input for IP PTZ, 6 means triggered by Network Failure Detection.

2.4.4 Event SMTP Actions

Description: This group defines an action that sends message mail to a mail server.

Configuration file: /etc/sysconfig/event.conf

[Event.E#.Actions.A2] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable the SMTP notification
Type	N	N,	Type of action. N = Notification.
Protocol	SMTP	SMTP	Protocol.
EmailTo	E0	E0, E1	Refers to SMTP.MailServer1.EmailTo Primary SMTP consignee. Refers to a parameter group under root. SMTP. The parameter is read only. Example: "E0" refers to the parameter group root.SMTP.MailServer1.EmailTo
EmailTo2	E1	E0, E1	Refers to SMTP.MailServer1.EmailTo Primary SMTP consignee. Refers to a parameter group under root. SMTP Example: "E0" refers to the parameter group root.SMTP.MailServer1.EmailTo

* Note: the # is replaced with a group number, e.g. 0 means triggered by digital input, 1 means triggered by motion detection, 2 Enabled means triggered by tampering activity, 3,4 &5 means triggered by digital input for IP PTZ, 6 means triggered by Network Failure Detection.

2.4.5 Event Upload Image by FTP Actions

Description: This group defines an action that uploads image files to an FTP server.

Configuration file: /etc/sysconfig/event.conf

[Event.E#.Actions.A3] *

Parameter name	Default value	Valid values	Description
Enabled	No	yes, no	Enable/disable the ftp notification
Type	U	U	Type of action. U = Upload.
Protocol	FTP	FTP	Protocol. This parameter is read only.
Server	F0	F0 ... Fn (n = number of FTP event servers - 1)	Primary FTP server ID. Refers to a parameter group under root.EventServers.FTP. Example: "F0" refers to the parameter group root.EventServers.FTP.F0.
PreFrame	5	1 ... 20	Number of pre-trigger frames.
PostFrame	5	1 ... 20	Number of post-trigger frames.
IncludeBestEffort	no	yes, no	Use best effort duration (continue image upload)
BestEffortDuration	0	0 ... 99999	Best effort duration (in number of seconds). If IncludeBestEffort = yes and BestEffortDuration = 0, the duration will be as long as the event is triggered.
BestEffortInterval	0	0 ... 15	Image frequency during best effort.

* Note: the # is replaced with a group number, 0 means triggered by digital input, 1 means triggered by motion detection input. 2 means triggered by tampering alarm input. e.g. Event.E0.Actions.A3.

2.4.6 Event Upload Image by SMTP Actions

Description: This group defines an action that uploads image files to an SMTP server

Configuration file: /etc/sysconfig /event.conf

[Event.E#.Actions.A4] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable upload image by SMTP
Type	U	U	Type of action. U = Upload.
Protocol	SMTP	SMTP	Protocol. This parameter is read only.
EmailTo	E0	E0, E1	Primary SMTP server ID. Refers to a parameter group under root.SMTP.MailServer# Example: "E0" refers to the parameter group root. SMTP.MailServer1
PreFrame	5	1 … 20	Number of pre-trigger frames.
PostFrame	5	1 … 20	Number of post-trigger frames.
IncludeBestEffort	no	yes, no	Use best effort duration (continue image upload)
BestEffortDuration	0	0 … 99999	Best effort duration (in number of seconds). If IncludeBestEffort = yes and BestEffortDuration = 0, the duration will be as long as the event is triggered.
BestEffortInterval	0	0 … 15	Image frequency during best effort.

* Note: the # is replaced with a group number, 0 means triggered by digital input, 1 means triggered by motion detection input. 2 means triggered by tampering alarm input .e.g. Event.E0.Actions.A4.

2.4.7 Event activated function (PTZ Camera exclusive)

Description: This group defines an action that proceed PTZ function like

Preset/Autopan/Sequence/Cruise.

Configuration file: /etc/sysconfig /event.conf

[Event.E#.Actions.A5] *

Parameter name	Default value	Valid values	Description
Enabled	no	**Full HD IP PTZ:** yes, no **Ultra HD IP PTZ:** yes, no	Enable/disable upload image
Function	**Full HD IP PTZ:** 1 **Ultra HD IP PTZ:** 1	**Full HD IP PTZ:** 1 … 4 **Ultra HD IP PTZ:** 1 … 4	1: preset 2: sequence 3: autopan 4: cruise
FunctionLine		**Full HD IP PTZ:** An unsigned integer **Ultra HD IP PTZ:** An unsigned integer	Depends on PTZ function
DwellTime	**Full HD IP PTZ:** 0 **Ultra HD IP PTZ:** 0	**Full HD IP PTZ:** 0 … 127 **Ultra HD IP PTZ:** 0 … 127	Only for preset function. The dwell time from start point to end point.

* Note: the # is replaced with a group number, 0 means triggered by digital input, 1 means triggered by

motion detection input. 2 means triggered by tampering alarm input .e.g. Event.E0.Actions.A5.

2.4.8 Event recording function

Description: This group defines an action that proceed recording function when event occurs.

Configuration file: /etc/sysconfig /event.conf

[Event.E#.Actions.A6] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable event recording function
Type	R	R	Type of action. R = Recording This parameter is read only
Protocol	RECORD	RECORD	Protocol of action. This parameter is read only
PreTime	1	1 … 3	Number of pre-trigger time (in seconds).
BestEffortDuration	0	0 … 99999	Time interval between frames during best effort (in milliseconds).
RecordTo	S0	S0 S1	S0=SD card S1=NAS

* Note: the # is replaced with a group number, e.g. 0 means triggered by digital input, 1 means triggered by motion detection, 2 Enabled means triggered by tampering activity, 3,4 &5 means triggered by digital input for IP PTZ, 6 means triggered by Network Failure Detection.

[Event.E#.Actions.A7] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable IR cut filter remove
Type	I	I	Type of action. N = This parameter is read only
Protocol	HW		This parameter is read only

* Note: the # is replaced with a group number, 0 means triggered by digital input, 1 means triggered by motion detection input. e.g. Event.E0.Actions.A7.

2.4.9 Event HTTP notification function

Description: This group defines an action that sends notifications to an HTTP server.

Configuration file: /etc/sysconfig /event.conf

[Event.E#.Actions.A8] *

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable HTTP notification function
Type	N	N	Type of action. N = HTTP Notification This parameter is read only
Protocol	HTTP	HTTP	Protocol of action. This parameter is read only
Server	H0	H0, H1	HTTP server ID. Refers to a parameter group under root.EventServers.HTTP.

			Example: "H0" refers to the parameter group root.EventServers.HTTP.H0.
CustomParams		A string	Custom parameters to add to URL. Example: "foo=bar". Spaces are not allowed in this field and all text must be URI-encoded (RFC2396). Example: to set the CGI parameter 'example' to 'Y & Z' enter example=Y+%26+Z in this field.

* The parameters mentioned above are currently available for Full HD Multiple Streams Series Camera and Full HD IP PTZ.

2.5 Event servers

2.5.1 EventServers.FTP.F#

Description: This group defines an FTP server that can be used by an event to upload files to.

Configuration file: /etc/sysconfig/eventservers.conf

[EventServers.FTP.F#] *

Parameter name	Default value	Valid values	Description
Address		An IP address or a host name	IP address or host name of the server
Login		A string	FTP user name
Password		A string	FTP password.
UploadPath		A string	Directory where uploaded files go.
Port	21	0 … 65535	FTP port.

Passive	no	yes, no	Use passive FTP.

* Note: the # is replaced with a group number starting from 0 to 1, e.g. EventServers.FTP.F0.

2.5.2 EventServers.HTTP.H#

Description: This group defines an HTTP server that can be used by an event to send notification messages to.

Configuration file: /etc/sysconfig/eventservers.conf

[EventServers.HTTP.H#] *

Parameter name	Default value	Valid values	Description
Address		An IP address or a host name	URL to the server, including name of CGI script to handle the request. Example: "http://192.168. 254.10/cgi-bin/ upload.cgi".
Login		A string	HTTP user name
Password		A string	HTTP password.

*Note: the # is replaced with a group number starting from 0 to 1, e.g. EventServers.HTTP.H0.

*The parameters mentioned above are currently available for Full HD Multiple Streams Series Camera, Full HD IP PTZ, Full HD WDR IP Camera, UHD IP camera and UHD IP PTZ.

2.6 Time

2.6.1 Time

Description: Common time information which tell the time zone, how date and time is synchronized.

Configuration file: /etc/sysconfig/systime.conf

[Time]

Parameter name	Default value	Valid values	Description
SyncSource	None	PC, NTP, None	The source to synchronize the time with; PC, NTP or None (manually).
TimeZone	GMT	GMT-12, … GMT-1, GMT, GMT+1, … GMT+12	Time zone.

Example: set timezone to GMT+8

http://myserver/cgi-bin/admin/param.cgi?action=update&Time.TimeZone=GMT%2b8

2.6.2 Time.NTP

Description: Contain parameters required when setting time and date with the NTP protocol.

Configuration file: /etc/sysconfig/time_handler.conf

[Time.NTP]

Parameter name	Default value	Valid values	Description
Server	0.0.0.0	An IP address or a	The NTP server to connect to

		host name	when synchronizing the time in the IP Camera
Update	hour	hour, day, week	Time interval between connections to the NTP server.

2.6.3 Time.DST

Description: Contain parameters required to manage Daylight Saving Time, DST.

Configuration file: /etc/sysconfig/time_handler.conf

[Time.DST]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable DST (Daylight Saving Time)
Offset	01:00:00	00:00:00 … 23:59:59	The amount of time the clock should be turned back/forward (hh:mm:ss), due to DST.
StartDay	1	1 … 31, or 0 … 6	The meaning of StartDay depends on StartTypeOfDate. If StartTypeOfDate is 0 (exact date), the StartDay should be interpreted as the day of the month. Otherwise StartDay indicates the day of a week, e.g. 0=Sunday, 1=Monday, etc.
StartMonth	0	0 … 11	The number of months since January in the range 0 to 11.
StartTime	00:00:00	00:00 … 23:59, day, night	Indicates the time (hh:mm:ss) when DST should be enabled. StartTime = 02:00:00 means that DST should be enabled two hours after midnight.

StartTypeOfDate	0	-1, 0, 1, 2, 3, 4	DST can be set as either start from an exact date or from a specific weekday of a month. StartTypeOfDate determines how to interpret StartDay. If 0, then StartDay is an exact date, otherwise it is a day of a week. 0 = StartDay is the exact date as specified (1-31). -1 = The weekday specified in StartDay is the last one of the month. 1: The weekday specified in StartDay is the first one of the month. 2: The weekday specified in StartDay is the second one of the month. 3: The weekday specified in StartDay is the third one of the month. 4: The weekday specified by StartDay is the fourth one of the month. Example1: StartTypeOfDate = 0 StartDay = 12 The 12th of the month Example2: StartTypeOfDate = -1 StartDay = 0 The last Sunday of the month Example 3: StartTypeOfDate = 1 StartDay = 5

			The first Friday of the month
StopDay	1	1 … 31, or 0 … 6	The meaning of StopDay depends on StopTypeOfDate. If StopTypeOfDate is 0 (exact date) then StopDay should be interpreted as the day of the month. Otherwise StopDay indicates the number of days since Sunday in the range 0 to 6.
StopMonth	0	0 … 11	The number of months since January in the range 0 to 11.
StopTime	00:00:00	A time	Indicates the time (hh:mm:ss) when DST should be disabled. StopTime = 02:00:00 means that DST should be disabled two hours after midnight.
StopTypeOfDate	0	-1, 0, 1, 2, 3, 4	DST can be set as either end on an exact date, or a specific weekday of the month. See the description of StartTypeOfDate above for further details.

2.7 Properties

Description: Contains information about the firmware and system of the product. It also contains information about product dependent functionality and functionality that have no ordinary parameters. All user levels should be able to access the property parameters.

Note: The Properties parameters are product dependent. If a parameter does not exist, the functionality is not supported.

2.7.1 Properties.API

Configuration file: /etc/sysconfig/properties.conf

[Properties.API.HTTP]

Parameter name	Default value	Valid values	Description
Version		An unsigned integer	The supported HTTP API version (only the first digit).

2.7.2 Properties.Audio

Configuration file: /etc/sysconfig/properties.conf

[Properties.Audio]

Parameter name	Default value	Valid values	Description
Audio		yes, no	The product has audio support.
Format	g711,g726	A string	The supported formats separated by commas, e.g. g711,g726.

2.7.3 Properties.Firmware

Configuration file: /etc/sysconfig/properties.conf

[Properties.Firmware]

Parameter name	Default value	Valid values	Description
BuildNumber		An unsigned integer	The build number for the current firmware in use.
BuildDate		A string	The build date for the current firmware in use.
Version		A string	The firmware version in use.

2.7.4 Properties.Image

Configuration file: /etc/sysconfig/properties.conf

[Properties.Image]

Parameter name	Default value	Valid values	Description
Rotation		A string	The supported image rotations separated by commas. E.g. 0,flip,mirror,rotate. For products not supporting image rotation the value is 0.
Resolution		A string	The supported resolutions separated by commas. E.g. quadvga, vga, qvga, cif, qcif.
Format		A string	The supported image format. E.g. mjpeg

2.7.5 Properties.PTZ

Configuration file: /etc/sysconfig/properties.conf

[Properties.PTZ]

Parameter name	Default value	Valid values	Description
PTZ		P/T/Z cam, P/T cam, Z/F cam, fixed cam	Function type of the product support. Read only.

2.8 PTZ

2.8.1 PTZ.PresetPos

A dynamic parameter group PTZ.PresetPos.P# is created for each new preset position.# merely denotes the number of the dynamic parameter group and has no connection to any preset position numbers mentioned below.

Description: Dynamic parameter groups, each respresenting a preset position

Configuration file: /etc/dynamic/ptz.conf

[PTZ.PresetPos.P#]

Parameter name	Default value	Valid values	Description
Pos		\<zoom\>,\<pan\>,\<tilt\>	Preset position. This parameter is read only.
Label		A string	Preset name. This parameter is read only.

2.8.2 PTZ.Limit

Configuration file: /etc/dynamic/ptz.conf

[PTZ.Limit.L0]

Parameter name	Default value	Valid values	Description
Mintilt	0	-10 … 10	Lower limit for tilt position
Maxtilt	90	80 … 100 If image flip 170… 190	Upper limit for tilt position

2.8.3 PTZ.Home

Configuration file: /etc/dynamic/ptz.conf

[PTZ.Home]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/ disable the home function
Function	preset	preset sequence autopan cruise	To set the home function.
FunctionNbr	1	1-MaxNbr	MaxNbr= 256 (preset), 8 (sequence), 4 (autopan), 8 (cruise)
DelayTime	1	1-128	The 1-128 refers to minutes. After specified time, the PTZ will go back for predefined home function.

2.9 Autopan(PTZ Camera exclusive)

2.9.1 Autopan.A#

Description: Contain parameters to create PTZ autopan

Configuration file: /etc/ sysconfig /autopan.conf

[Autopan.A#]

Parameter name	Default value	Valid values	Description
State	Idle	setting, Idle	The state of the Autopan function. This parameter is read only.
StartPan		-180 … 180	Start pan position. This parameter is read only.
EndPan		-180 … 180	End pan position. This parameter is read only.
Direction		left, right	Direction of PTZ autopan function. This parameter is read only.
Speed		0 … 3	Speed of PTZ autopan function. This parameter is read only.

* Note: the # is replaced with a group number starting from zero, e.g. Autopan.A0

2.10 Cruise (PTZ Camera exclusive)

2.10.1 Cruise.C#

Description: Contain parameters to create PTZ cruise

Configuration file: /etc/sysconfig/cruise.conf

[Cruise.C#]

Parameter name	Default value	Valid values	Description
State	idle	idle, setting	Cruise setting state. This parameter is read only.

* Note: the # is replaced with a group number starting from zero, e.g. Cruise.C0

2.11 Guard Tour (PTZ Camera exclusive)

2.11.1 GuardTour.G#

Description: Contains parameters to create PTZ guard tours

Configuration file: /etc/dynamic/guardtour.conf

[GuardTour.G#]

Parameter name	Default value	Valid values	Description
Running	no	yes, no	Enable/disable the guardtour

* Note: the # is replaced with a group number starting from zero, e.g. GuardTour.G0

2.11.2 GuardTour.G#.Tour.T#

Description: The PTZ preset positions that are included in the guard tour.

Configuration file: /etc/dynamic/ guardtour.conf

[GuardTour.G#.Tour.T#]

Parameter name	Default value	Valid values	Description
PresetNbr	1	1 … 256	The number of the PTZ preset position.
MoveSpeed	10	0 … 14	The speed at which to move camera to this preset position.
WaitTime	1	0 … 255	The view time for this preset position in seconds.

2.12 Audio

2.12.1 Audio

Description: Common audio parameters used for all audio configurations.

Configuration file: /etc/sysconfig/audio.conf

[Audio]

Parameter name	Default value	Valid values	Description
DuplexMode	disable	full, half, post, get disable	The way audio should be transferred. full = Full duplex - simultaneous two-way audio. Transmit and receive audio at the same time. half = Half duplex - non simultaneous two-way audio. Audio only allowed in one direction at a time. post = Simplex. Audio to the

Parameter name	Default value	Valid values	Description
			server.
			get = Simplex. Audio from the
			server.
			disable=Disable the Audio
			function.
StorageRecording	disable	enable disable	The way audio should be storage and recording. enable = Ensable the Audio function disable = Disable the Audio function

2.12.2 AudioSource.A0

Description: Parameters for each audio source (audio input/chip).

Configuration file: /etc/sysconfig/audio_source.conf

[AudioSource.A0]

Parameter name	Default value	Valid values	Description
BitRate	ulaw	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera:** ulaw , alaw, 16000, 24000, 32000, 40000 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP**	The output bit rate (bits per second) from the encoder. **G711 Standard** ulaw , alaw (64000) **G726 Standard** 16000, 24000, 32000, 40000

		Camera/ Prime H.265 IP Camera: alaw ulaw 16000 24000 32000 40000 aac_128000 L16_128000 L16_256000 L16_384000 L16_768000	
DetectionLevel	10	1 … 100	
TimeInterval	10	0 … 7200	
InputType	line	line, mic(with hardware)	
InputGain	3	0 … 10	Gain setting level for sound received from client.
OutputGain	3	0 … 6	Gain setting level for sound transmitted to client(s).

2.13 Recording

2.13.1 Recording.R#

Description: Recording parameters used for recording schedule.

Configuration file: /etc/sysconfig/recording.conf

[Recording.R#]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable recording function
Weekdays	0000000	0000000 … 1111111 (Only 0 or 1 is valid for each digit)	Enable recording on specific weekdays. The maximum significant bit stands for Sunday, and second digit for Monday etc… 0 is disable, and 1 is enable
Starttime	00:00	00:00 … 23:59	Indicates the time (hh:mm) when recording should be enabled. Starttime = 02:00 means that recording should be started two hours after midnight.
Duration	00:00	00:00 … 168:00	Time interval for recording.

* Note: **the # is replaced with a group number starting from 0 to 9 Full HD Multiple Streams Series Camera.**

2.14 DDNS

2.14.1 DDNS

Description: Common DDNS parameters used for all DDNS configurations.

Configuration file: /etc/sysconfig/ddns.conf

[DDNS]

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable/disable DDNS function
Provider	1	1,2,3,4	The provider list contains four hosts that provide DDNS services. Please connect to the service provider's website to make sure the service charges.
Hostname		A string	Please input the hostname that is registered in the DDNS server.
Login		A string	The username for logging on to the DDNS server
Password		A string	The password for logging on to the DDNS server

2.15 Frame skip ─ for Z/P/Q/X/W Series

2.15.1 Frame rate

Description: Common frame rate parameters used for all frame rate configurations.

Configuration file: /etc/sysconfig/framerate.conf

[Framerate]

Parameter name	Default value	Valid values	Description
Mjpeg	**Full HD Multiple Streams Series & Full HD IP PTZ:** **NTSC (30)** 30 **PAL (25)** 25 **Full HD WDR IP Camera, Ultra HD IP camera & Ultra HD IP PTZ/Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** **NTSC (30)** 30 **NTSC (60)** 60 **PAL (25)** 25 **PAL (50)** 50	**Full HD Multiple Streams Series & Full HD IP PTZ:** **NTSC (30)** 1 … 30 **PAL (25)** 1 … 25 **Full HD WDR IP Camera:** **NTSC (30):** 1 ,2,3,6,7.5,10,15,30 **NTSC (60):** rate limit=60: 1,2,4,6,12,15,20,30,60 rate limit=30: 1,2,4,6,12,15,20,30 rate limit=15: 1,3,5,7.5,15 **PAL (25):** 1,5,13,25 **PAL (50):** rate limit=50: 1,2,5,10,25,50 rate limit=25: 1,2,5,10,25 rate limit=13: 1,5,13	Setting frame rate to desired value. Beware the maximum frame rate of NTSC and PAL TV system are different Note. NTSC (30): TV system=30fps NTSC (60): TV system=60fps PAL (25): TV system=50fps PAL (50): TV system=50fps

		Ultra HD IP camera & Ultra HD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series): NTSC (30) 1 … 30 **NTSC (60)** 1 … 60 **PAL (25)** 1 … 25 **PAL (50)** 1 … 50	
H264	**Full HD Multiple Streams Series & Full HD IP PTZ:** NTSC 30 **PAL** 25 **Full HD WDR IP Camera, Ultra HD IP camera & Ultra HD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** **NTSC (30)** 30 **NTSC (60)** 60 **PAL (25)**	**Full HD Multiple Streams Series & Full HD IP PTZ:** **NTSC** 1 … 30 **PAL** 1 … 25 **Full HD WDR IP Camera:** **NTSC (30):** 1 ,2,3,6,7.5,10,15,30 **NTSC (60):** rate limit=60: 1,2,4,6,12,15,20,30,60 rate limit=30: 1,2,4,6,12,15,20,30 rate limit=15: 1,3,5,7.5,15 **PAL (25):** 1,5,13,25	Setting frame rate to desired value Beware the maximum frame rate of NTSC and PAL TV system are different Note. NTSC (30): TV system=30fps NTSC (60): TV system=60fps PAL (25): TV system=50fps PAL (50): TV system=50fps

	25 **PAL (50)** 50	**PAL (50):** rate limit=50: 1,2,5,10,25,50 rate limit=25: 1,2,5,10,25 rate limit=13: 1,5,13 **Ultra HD IP camera &** **Ultra HD IP** **PTZ/Superior HDR** **IP Camera (P** **series)/Prime HDR** **IP Camera (Q** **series):** **NTSC (30)** 1 … 30 **NTSC (60)** 1 … 60 **PAL (25)** 1 … 25 **PAL (50)** 1 … 50	
H264_2	**Full HD Multiple** **Streams Series &** **Full HD IP PTZ:** **NTSC** 30 **PAL** 25 **Full HD WDR IP** **Camera, Ultra HD** **IP camera & Ultra** **HD IP** **PTZ/Superior HDR** **IP Camera (P** **series)/Prime HDR** **IP Camera (Q**	**Full HD Multiple** **Streams Series & Full** **HD IP PTZ:** **NTSC** 1 … 30 **PAL** 1 … 25 **Full HD WDR IP** **Camera:** **NTSC (30):** 1 ,2,3,6,7.5,10,15,30 **NTSC (60):** rate limit=60: 1,2,4,6,12,15,20,30,60 rate limit=30:	Setting frame rate to desired value Beware the maximum frame rate of NTSC and PAL TV system are different Note. NTSC (30): TV system=30fps NTSC (60): TV system=60fps PAL (25): TV system=50fps PAL (50): TV system=50fps

	series):	1,2,4,6,12,15,20,30	
	NTSC (30)	rate limit=15:	
	30	1,3,5,7.5,15	
	NTSC (60)	**PAL (25):**	
	60	1,5,13,25	
	PAL (25)	**PAL (50):**	
	25	rate limit=50:	
	PAL (50)	1,2,5,10,25,50	
	50	rate limit=25:	
		1,2,5,10,25	
		rate limit=13:	
		1,5,13	
		Ultra HD IP camera &	
		Ultra HD IP	
		PTZ/Superior HDR	
		IP Camera (P	
		series)/Prime HDR	
		IP Camera (Q	
		series):	
		NTSC (30)	
		1 … 30	
		NTSC (60)	
		1 … 60	
		PAL (25)	
		1 … 25	
		PAL (50)	
		1 … 50	
H264_3	**Full HD Multiple Streams Series & Full HD IP PTZ:** NTSC 30 **PAL** 25 **Full HD WDR IP Camera, Ultra HD IP camera & Ultra**	**Full HD Multiple Streams Series & Full HD IP PTZ:** **NTSC** 1 … 30 **PAL** 1 … 25 **Full HD WDR IP Camera:** **NTSC (30):**	Setting frame rate to desired value Beware the maximum frame rate of NTSC and PAL TV system are different Note. NTSC (30): TV system=30fps NTSC (60): TV system=60fps

	HD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series): **NTSC (30)** 30 **NTSC (60)** 60 **PAL (25)** 25 **PAL (50)** 50	1 ,2,3,6,7.5,10,15,30 **NTSC (60):** rate limit=60: 1,2,4,6,12,15,20,30,60 rate limit=30: 1,2,4,6,12,15,20,30 rate limit=15: 1,3,5,7.5,15 **PAL (25):** 1,5,13,25 **PAL (50):** rate limit=50: 1,2,5,10,25,50 rate limit=25: 1,2,5,10,25 rate limit=13: 1,5,13 **Ultra HD IP camera & Ultra HD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** **NTSC (30)** 1 … 30 **NTSC (60)** 1 … 60 **PAL (25)** 1 … 25 **PAL (50)** 1 … 50	PAL (25): TV system=50fps PAL (50): TV system=50fps
H264_4	**Full HD Multiple Streams Series & Full HD IP PTZ:**	**Full HD Multiple Streams Series & Full HD IP PTZ:**	Setting frame rate to desired value Beware the maximum frame

	NTSC (30) 30 **PAL (25)** 25 **Full HD WDR IP Camera, Ultra HD IP camera & Ultra HD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** **NTSC (30)** 30 **NTSC (60)** 60 **PAL (25)** 25 **PAL (50)** 50	**NTSC (30)** 1 … 30 **PAL (25)** 1 … 25 **Full HD WDR IP Camera:** **NTSC (30):** 1 ,2,3,6,7.5,10,15,30 **NTSC (60):** rate limit=60: 1,2,4,6,12,15,20,30,60 rate limit=30: 1,2,4,6,12,15,20,30 rate limit=15: 1,3,5,7.5,15 **PAL (25):** 1,5,13,25 **PAL (50):** rate limit=50: 1,2,5,10,25,50 rate limit=25: 1,2,5,10,25 rate limit=13: 1,5,13 **Ultra HD IP camera & Ultra HD IP PTZ/Superior HDR IP Camera (P series)/Prime HDR IP Camera (Q series):** **NTSC (30)** 1 … 30 **NTSC (60)** 1 … 60 **PAL (25)** 1 … 25 **PAL (50)**	rate of NTSC and PAL TV system are different Note. NTSC (30): TV system=30fps NTSC (60): TV system=60fps PAL (25): TV system=50fps PAL (50): TV system=50fps

		1 ... 50	

2.16 Motion

2.16.1 Motion.M#

Description: The group is for adding/deleting motion detection window.

Configuration file: /etc/sysconfig/motion.conf

[Motion.M#] *

Parameter name	Default value	Valid values	Description
Enabled	yes, when #=0; no, when #=1 to 9	yes no	Enable/ disable Motion detection window
Left	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9	0 … 39	Motion detection window left axis

| Right | **Full HD Multiple Streams series**/**Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 11, when #=0,5; 16, when #=1,6; 21, when #=2,7; 26, when #=3,8; 31, when #=4,9 | 0 … 39 | Motion detection window right axis |
| Top | **Full HD Multiple Streams series**/**Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 6, when #=0 to 4 11, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior** | 0 … 29 | Motion detection window top axis |

	H.265 IP Camera/ Prime H.265 IP Camera: 8, when #=0 to 4 13, when # =5 to 9		
Bottom	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 9, when #=0 to 4 14, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 11, when #=0 to 4 16, when # =5 to 9	0 … 29	Motion detection window bottom axis
Pos		val1,val2,val3,val4,val5,val6 val1 = h264 or h264_2 or jpeg val2 = width x height val3 = 0~ (width - 1) val4 = 0~ (width - 1) val5 = 0~ (height - 1) val6 = 0~ (height - 1)	val1：tells which stream is being connected val2：to divide the image into small rectangular grids. Ex:40(grids)x 30(grids) or 40x21 or others val3：to set the left point of the motion window val4：to set the right point of the motion window val5：to set the top point of the motion window val6：to set the bottom point

			of the motion window

* Note: the # is replaced with a group number starting from 0 to 9, e.g. Motion.M0.

2.16.2 Motion

Description: The group is for the setting of motion detection window.

Configuration file: /etc/sysconfig/motion.conf

[Motion]

Parameter name	Default value	Valid values	Description
SamplingInterval	1	1 … 10	Motion detection sampling pixel interval
DetectionLevel	10	1 … 100	Motion detection level
Sensitivity	80	1 … 100	The sensitivity of detection block
TimeInterval	10	0 … 7200	The time interval of detection

2.16.3 Motion1.M#

Description: The group is for adding/deleting motion detection window.

Configuration file: /etc/sysconfig/motion.conf

[Motion1.M#] *

Parameter name	Default value	Valid values	Description
Enabled	yes, when #=0; no, when #=1 to 9	yes no	Enable/ disable motion detection window
Left	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):**	0 … 39	Motion detection window left axis

	5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9		
Right	**Full HD Multiple Streams series**/**Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 11, when #=0,5;	0 … 39	Motion detection window right axis

	16, when #=1,6; 21, when #=2,7; 26, when #=3,8; 31, when #=4,9		
Top	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 6, when #=0 to 4 11, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis
Bottom	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 9, when #=0 to 4 14, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP**	0 … 29	Motion detection window bottom axis

	Camera: 11, when #=0 to 4 16, when # =5 to 9		
Pos		val1,val2,val3,val4,val5,val6 val1 = h264 or h264_2 or jpeg val2 = width x height val3 = 0~ (width - 1) val4 = 0~ (width - 1) val5 = 0~ (height - 1) val6 = 0~ (height - 1)	val1：tells which stream is being connected val2：to divide the image into small rectangular grids. Ex:40(grids)x 30(grids) or 40x21 or others val3：to set the left point of the motion window val4：to set the right point of the motion window val5：to set the top point of the motion window val6：to set the bottom point of the motion window

* Note: the # is replaced with a group number starting from 0 to 9, e.g. Motion1.M0.

2.16.4 Motion2.M#

Description: The group is for adding/deleting motion detection window.

Configuration file: /etc/sysconfig/motion.conf

[Motion2.M#] *

Parameter name	Default value	Valid values	Description
Enabled	yes, when #=0; no, when #=1 to 9	yes no	Enable/ disable Motion detection window
Left	**Full HD Multiple** **Streams series/Full** **HD IP PTZ/Full HD** **WDR IP Camera/** **Superior HDR IP** **Camera (P series)/**	0 … 39	Motion detection window left axis

	Prime HDR IP Camera (Q series): 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9		
Right	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:**	0 … 39	Motion detection window right axis

	11, when #=0,5; 16, when #=1,6; 21, when #=2,7; 26, when #=3,8; 31, when #=4,9		
Top	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 6, when #=0 to 4 11, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis
Bottom	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 9, when #=0 to 4 14, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/**	0 … 29	Motion detection window bottom axis

	Prime H.265 IP Camera: 11, when #=0 to 4 16, when # =5 to 9		
Pos		val1,val2,val3,val4,val5,val6 val1 = h264 or h264_2 or jpeg val2 = width x height val3 = 0～ (width - 1) val4 = 0～ (width - 1) val5 = 0～ (height - 1) val6 = 0～ (height - 1)	val1：tells which stream is being connected val2：to divide the image into small rectangular grids. Ex:40(grids)x 30(grids) or 40x21 or others val3：to set the left point of the motion window val4：to set the right point of the motion window val5：to set the top point of the motion window val6：to set the bottom point of the motion window

* Note: the # is replaced with a group number starting from 0 to 9, e.g. Motion2.M0.

2.16.5 Motion3.M#

Description: The group is for adding/deleting motion detection window.

Configuration file: /etc/sysconfig/motion.conf

[Motion3.M#] *

Parameter name	Default value	Valid values	Description
Enabled	yes, when #=0; no, when #=1 to 9	yes no	Enable/ disable Motion detection window
Left	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP**	0 … 39	Motion detection window left axis

	Camera (P series)/ **Prime HDR IP** **Camera (Q series):** 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 **Ultra HD IP** **Camera/Ultra HD** **IP PTZ/ Superior** **H.265 IP Camera/** **Prime H.265 IP** **Camera:** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9		
Right	**Full HD Multiple** **Streams series**/**Full** **HD IP PTZ/Full HD** **WDR IP Camera/** **Superior HDR IP** **Camera (P series)/** **Prime HDR IP** **Camera (Q series):** 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 **Ultra HD IP** **Camera/Ultra HD** **IP PTZ/ Superior** **H.265 IP Camera/** **Prime H.265 IP**	0 … 39	Motion detection window right axis

	Camera: 11, when #=0,5; 16, when #=1,6; 21, when #=2,7; 26, when #=3,8; 31, when #=4,9		
Top	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 6, when #=0 to 4 11, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis
Bottom	**Full HD Multiple Streams series/Full HD IP PTZ/Full HD WDR IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 9, when #=0 to 4 14, when # =5 to 9 **Ultra HD IP Camera/Ultra HD IP PTZ/ Superior**	0 … 29	Motion detection window bottom axis

	H.265 IP Camera/ Prime H.265 IP Camera: 11, when #=0 to 4 16, when # =5 to 9		
Pos		val1,val2,val3,val4,val5,val6 val1 = h264 or h264_2 or jpeg val2 = width x height val3 = 0~ (width - 1) val4 = 0~ (width - 1) val5 = 0~ (height - 1) val6 = 0~ (height - 1)	val1：tells which stream is being connected val2：to divide the image into small rectangular grids. Ex:40(grids)x 30(grids) or 40x21 or others val3：to set the left point of the motion window val4：to set the right point of the motion window val5：to set the top point of the motion window val6：to set the bottom point of the motion window

* Note: the # is replaced with a group number starting from 0 to 9, e.g. Motion3.M0.

2.17 Tampering

2.17.1 Tampering Alarm

Description: Minimum duration in the camera tampering settings determines the timing of identifying tampering events and reacting as prearranged.

Configuration file: /etc/sysconfig/tampering.conf

[Tampering.T0]

Parameter name	Default value	Valid values	Description
MinDuration	20	10 … 3600	Full HD Multiple Streams Series Camera, Full HD IP PTZ**, UHD**

			IP camera:
			Time for processing video analysis to decide whether camera tampering has occurred. Minimum duration time range is from 10 to 3600 seconds. Full HD WDR IP Camera: The minimum duration time between two trigger actions

* The parameter mentioned above is currently only available for Full HD Multiple Streams Series Camera, Full HD IP PTZ, Full HD WDR IP Camera, UHD IP Camera and UHD IP PTZ.

2.18 Network Failure Detection

2.18.1 Network Failure Detection

Description: Network Failure Detection allows to ping another IP device in the network within a predetermined time interval.

Configuration file: /etc/sysconfig/network_failure.conf

[NetworkFailure]

Parameter name	Default value	Valid values	Description
DetectAddress	0.0.0.0	An IP Address	The IP address of the target IP device
DetectInterval	1	1 … 99	Interval of time, in minute, to ping another network IP address.

* The parameter mentioned above is currently only available Full HD Multiple Streams Series Camera, Full HD IP PTZ, Full HD WDR IP Camera, UHD IP Camera and UHD IP PTZ.

2.19 IR

2.19.1 IR Mode

Description: Set different mode of IR

Configuration file: /etc/sysconfig/ir.conf

[IR]

Parameter name	Default value	Valid values	Description
Mode	**Superior H.265 IP Camera/ Prime H.265 IP Camera** auto **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** lightsensor	**Full HD Multiple Streams series, Full HD WDR IP Camera:** auto manualon manualoff smart <u>Built-in IR LED model:</u> auto manualon manualoff lightsensor, lighton, lightoff **Full HD IP PTZ:** auto manualon manualoff **Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** auto	auto: remove IR cut filter (ICR) automatically manualon/manualoff: remove ICR manually lightsensor: IR LEDs switched on/off automatically. When IR LEDs are turn on, ICR will be removed; when IR LEDs are turned off, ICR will be off. lighton: IR LEDs are forced on; ICR on lightoff: IR LEDs are forced off; ICR off smart: IR cut filter keeps open(night mode) in the scenario that IR illumination is dominant

		manualon	
		manualoff	
		lightsensor	
		lighton	
		lightoff	
		smart	
		Ultra HD IP PTZ:	
		auto	
		manualon	
		manualoff	
		Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):	
		auto,	
		manualon,	
		manualoff,	
		lightsensor,	
		lighton, lightoff,	
		smart	
Active	on	**Full HD Multiple Streams series/ Full HD WDR IP Camera/Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** on, off	Set IR mode, on or off, when alarm is triggered.

Threshold.DayMode	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 7	**Full HD Multiple Streams series, Full HD IP PTZ, Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 0 … 10	
Threshold.NightMode	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 3	**Full HD Multiple Streams series/ Full HD IP PTZ/ Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 0 … 10	
LightCompensation	off	**Full HD Multiple Streams series/ Full HD WDR IP Camera/ Full HD IP PTZ/ Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** on, off	Eliminates the white out effect and saturation on close objects, producing a clear and recognizable image

2.20 RS-485 Control

2.20.1 RS-485 Control

Description: This group defines an action that allows implementation of RS-485 control for the models with RS-485 control support.

Configuration file: /etc/sysconfig/rs485protocol.conf

[RS485Control]

Parameter name	Default value	Valid values	Description
Switch	**Full HD Multiple Streams series/ Ultra HD IP Camera /Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 0	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 0, 1 **Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** 0-1 [RS485 only]	Enable/disable RS-485 control
Mode	**Full HD Multiple Streams series/ Ultra HD IP Camera/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 0	**Full HD Multiple Streams series:** 0 … 6 **Ultra HD IP Camera/ Superior H.265 IP Camera/ Prime H.265 IP Camera:** 0 … 7 **Superior HDR IP Camera (P series)/ Prime HDR IP**	Each number presents a protocol with specified baud rate. 0 = DSCP 9600 1 = PelcoD 2400 2 = PelcoD 4800 3 = PelcoD 9600 4 = PelcoP 2400 5 = PelcoP 4800 6 = PelcoP 9600 7= Universal protocol

		Camera (Q series): 0-7 [RS485 only]	
Protocol	**Video Server:** dscp	**Video Server:** dscp Pelcod Pelcop	The protocol assigned for the Video Server
Baudrate	**Video Server:** 9600	**Video Server:** 9600 4800 2400	
BaudrateType	9600, 8, n, 1	**Baudrate:** [2400/ 4800/ 9600/ 19200] **Databits:** [5-8] **Parity:** [n/e/o] **Stop bits:** [1-2]	Baudrate = It's the number of bits per second that are being transmitted or received Databits = Data is transmitted as a series of 5,6,7 or 8 bits with the LSB sent first. Parity= To check whether corruption has occurred. Stop bits = This bit tells us that the last character was just sent (This command must be set in mode 7.)

Example: To set the BaudrateType

http://myserver/cgi-bin/admin/param.cgi?action=update&RS485Control.BaudrateType=2400,8,n,1

2.20.2 RS-485 universal protocol control

Description: This group defines an action that transfer packets through RS-485 universal protocol

Configuration file: /etc/sysconfig/rs485protocol.conf

Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/com/ptz.cgi? *BypassCmd* =*<value>*[&*<parameter>*=*<value>*...]

With the following parameters and values

Parameter name	Default value	Valid values	Description
BypassCmd	None	Byte1, Byte2, …, Byte20	To transfer the packets This command must be set in mode 7. From Byte1 to Byte20 are all hexadecimal value The value of Byte1 to Byte20 could be either representing with "0x" or not. For example, 0x2F or 2F

Example: To set the protocol mode to universal protocol.

http://myserver/cgi-bin/admin/param.cgi?action=update&RS485Control.Mode=7

Example: To send packets

http://myserver/cgi-bin/com/ptz.cgi?BypassCmd=12,aa,55,AB,88

2.21 Storage Management

2.21.1 Storage.S0

Description: Describe the parameter for Micro SD card storage management feature.

Configuration file: /etc/sysconfig/storage.conf

Method: GET

Syntax:

http://*<servername>*/cgi-bin/ admin/param.cgi?action =update[&*<parameter>*=*<value>*...]

[Storage.S0]

Parameter name	Default value	Valid values	Description
Cleanuplevel	85	1 … 99 (Unit: percentage)	If the value of CleanupPolicyActive is **yes**, the data stored in the memory card of an IP Camera will be deleted in two cases:
CleanupMaxAge	1	1 … 999 (Unit: day)	1. The capacity of stored data exceeds the preconfigured capacity percentage (Cleanuplevel) of the memory card.
CleanupPolicyActive	no	no, yes	2. The time data stored in memory card is larger than a specified number of days(CleanupMaxAge)

2.21.2 Storage.S1

Description: Describe the parameter for NAS storage management feature.

Configuration file: /etc/sysconfig/storage.conf

[Storage.S1]

Parameter name	Default value	Valid values	Description
Cleanuplevel	85	1 … 99 (Unit: percentage)	If the value of CleanupPolicyActive is **yes**, the data stored in the memory card of an IP Camera will be deleted in two cases:
CleanupMaxAge	1	1 … 999 (Unit: day)	3. The capacity of stored data exceeds the preconfigured capacity percentage (Cleanuplevel) of the memory card.
CleanupPolicyActive	no	no, yes	4. The time data stored in memory card is larger than a specified number of days(CleanupMaxAge)

2.21.3 Network share setting

Description: The Network setting of the NAS

Configuration file: /etc/sysconfig/networkshare.conf

[NetworkShare.N0]

Parameter name	Default value	Valid values	Description
Address		An IP address	The IP address of the NAS
Share		A string	The folder name of the NAS
Username		A string	The username of the NAS

Password		A string	The password of the NAS
Protocol	SAMBA		This parameter is read only.

2.21.4 Recording source

Description: The recording source for the NAS and SD card

Configuration file: /etc/sysconfig/storage.conf.conf

[Storage]

Parameter name	Default value	Valid values	Description
RecordingSource	**Full HD Multiple Streams IP Camera/ Full HD IP PTZ/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** h264 **Superior H.265 IP Camera/ Prime H.265 IP Camera:** stream1	**Full HD Multiple Streams IP Camera/ Full HD IP PTZ/ Full HD WDR IP Camera/ Ultra HD IP Camera/ Ultra HD IP PTZ/ Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series):** h264, h264_2, h264_3, h264_4, mjpeg **Superior H.265 IP Camera/ Prime H.265 IP Camera:** stream#	Recording source for the NAS and SD Card

* **Note:** The # is replaced with a group number starting from 1 to 4.

2.22 Fisheye Setting

2.22.1 Fisheye Location

Description: Wall and ceiling mount types for different fisheye camera installation way.

Configuration file: /etc/sysconfig/fisheye.conf

Method: GET

Syntax:

http://*<servername>*/cgi-bin/ admin/param.cgi?action =update[&*<parameter>*=*<value>*…]

[Fisheye.F0]

Parameter name	Default value	Valid values	Description
Correction	front	front back	1. Change mounting type according to ceiling mount or wall mount for fisheye camera to have correct view mode.
ViewMode	None overview 4ptz none none	Ceiling mount: overview, ptz, 360, 4ptz, none Wall mount: overview, 180, 180_2ptz, none	2. Wall.Angle only available when Location set to "wall" mount. Can adjust the horizontal level of image to calibrate unlevel installation.
Location	ceiling	Ceiling wall	

Wall.Angle	0	0 ... 359	Note:Just implemented on
		(Unit: degree)	wall mount.

Example: To set the wall mounting types of fisheye

http://myserver/cgi-bin/admin/param.cgi?action=update&Fisheye.F0.Location=wall

Example: To set the backend dewarping mode of fisheye

http://myserver/cgi-bin/admin/param.cgi?action=update**&**Fisheye.F0.Correction**=**back

2.22.2 Fisheye.F0

Description: Get fisheye related parameters to have 360-degree panorama view and dewarp view on backend software by utilizing Fisheye SDK.

*See also: The SDK of Fisheye IP Camera

Configuration file: /etc/sysconfig/fisheye.conf

[Fisheye.F0]

Parameter name	Value	Description
Projection	stereographic, equidistant	This parameter is read only.
View.Mjpeg	V#	Mjpeg Streaming fisheye original view (refer to

		View.V#).
		The # is replaced with a view number.
		This parameter is read only.
View.H264	V#	The # is replaced with a view number.
		This parameter is read only.
View.H264_2	V#	The # is replaced with a view number.
		This parameter is read only.
View.H264_3	V#	The # is replaced with a view number.
		This parameter is read only.
View.H264_4	V#	The # is replaced with a view number.
		This parameter is read only.
View.V#.Width	An integer	The width of fisheye original view.
		This parameter is read only.
View.V#.Height	An integer	The height of fisheye original view.
		This parameter is read only.
View.V#.CenterX	An integer	x coordinate of fisheye original view center.
		This parameter is read only.
View.V#.CenterY	An integer	y coordinate of fisheye original view center.
		This parameter is read only.
View.V#.Diameter	An integer	The diameter of fisheye original view.
		This parameter is read only.
View.V#.FocalLngth	An integer	The focal length of the fisheye lens.
		This parameter is read only.

2.23 Schedule

2.23.1 Schedule.S#

Description: Schedule parameters used for event detection scheduling.

Configuration file: /etc/sysconfig/schedule.conf

[Schedule.S#]

Parameter name	Default value	Valid values	Description
Weekdays	0000000	0000000 … 1111111 (Only 0 or 1 is valid for each digit)	Event detection enabled on specific weekdays. The maximum significant bit stands for Sunday, and second digit for Monday etc… 0 is disable, and 1 is enabled
Starttime	00:00	00:00 … 23:59	Indicates the time (hh:mm) when event detection should be enabled. Starttime = 02:00 means that event detection should be started two hours after midnight.
Duration	00:00 **Superior HDR IP Camera (P series):** 24:00 **Prime HDR IP Camera (Q series):** 24:00	00:00 … 168:00	Time interval for event detection.

2.24 Periodical event

Description: Upload image to FTP or email in a fixed time period

Configuration file: /etc/sysconfig/periodical.conf

[Periodical.P0]

Parameter name	Default value	Valid values	Description
Interval	60	60 … 3600	The time interval of uploading image

Note. This parameter is only available for Full HD WDR IP Camera, Ultra HD IP Camera and Ultra HD IP PTZ.