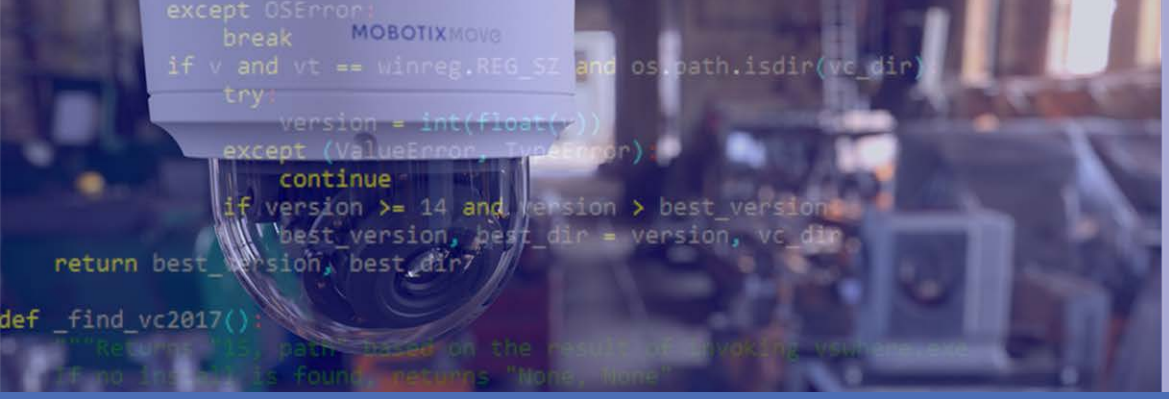

Reference Manual

MOBOTIX MOVE Camera API Parameters V7.0.0

HEVCAdvance™

BeyondHumanVision

MOBOTIX MOVE

V1.00_3/30/2022

Table of Contents

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OVERVIEW

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

Classification	Model name
(Q Series)	Mx-BC1A-2-IR Mx-VD1A-2-IR
(R2 Series)	Mx-SD1A-330 Mx-SD1A-340-IR

(R3 Series) + (S Series)	Mx-BC1A-4-IR-D Mx-VD1A-4-IR-D Mx-VD1A-4-IR Mx-BC1A-4-IR Mx-VB1A-4-IR-D Mx-VB1A-4-IR Mx-VD1A-5-IR-VA Mx-VB1A-5-IR-VA Mx-VD2A-2-IR-VA Mx-VB2A-2-IR-VA
(U2 series)	Mx-VH1A-12-IR-VA

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
(Q Series)	mb20201120NSQ
(R3 Series)	mb20210607RS
(R2 Series)	mb20210604RS
(U2 Series)	Mb20210602u Mb20210602U Mb20210602U Mb202105285X

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

General

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.

General

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.

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 IR PTZ	A host name	The name of the device on the network, usually the same as the DNS name.
DNSServer1		An IP address	Primary Domain Name System server.
DNSServer2		An IP address	Secondary Domain Name System server.
Port	80	80 1024 ... 65535	The port of web server.

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.

[Network.Port]

Parameter name	Default value	Valid values	Description
Port		80	

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.

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.

Network.RTSP

Description: Parameters needed by the RTSP daemon.

Configuration file: /etc/sysconfig/network.conf

[Network.RTSP] – for P/Q/R/T/U 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.

[Network.RTSP.Stream#] – for R/T/U 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.

Network.RTP.R0

Description: Parameters related to multicast RTP.

Configuration file: /etc/sysconfig/network.conf

[Network.RTP.R0] – for P/Q Series

Parameter name	Default value	Valid values	Description
VideoAddress		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.
VideoAddress3	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.
VideoAddress4	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

[Network.RTP.R0] – for R/T/U Series

[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.

[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

[Network.RTP.R0.Stream#] – for Metadata

Parameter name	Default value	Valid values	Description
MetadataAddress	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
MetadataPort	0	0, 1024 ... 65535	The multicast destination port number for the RTP stream#. 0 means no distribution.
MetadataTTL	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.

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.

Network.UPnP

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

Configuration file: /etc/sysconfig/network.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.

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/network.conf

[Network.UpnP.NATTraversal]

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

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	

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

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.
Type		EAPMD5 EAPTLS EAPTTLS EAPPEAP	
EAPMD5.Identity		A string	
EAPMD5.Password		A string	

EAPTLS.Identity		A string	Identity for EAP-TLS authentication
EAPTLS.PrivateKeyPassword		A string	Private Key password for EAP-TLS authentication
EAPTTLS.Identity		A string	
EAPTTLS.Password		A string	
EAPTTLS.Anonymous		A string	
EAPTTLS.Phase2	CHAP	EAP-MSCHAPV2 EAP-MD5 MSCHAP MSCHAPV2 PAP	
EAPPEAP.Identity		A string	
EAPPEAP.Password		A string	

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] – for P/Q Series

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.

[Network.QoS] – for R/T/U Series

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.Stream1	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
Class1.DSCP.Stream2	0	0 … 63	
Class1.DSCP.Stream3	0	0 … 63	
Class1.DSCP.Stream4	0	0 … 63	
Class2.Desc	LiveAudio	LiveAudio	Class2 represents audio service, which is only available in the products that support audio.
Class2.DSCP.Stream1	0	0 … 63	DSCP value for audio service. DSCP=0 indicates that DSCP is disabled for audio service.
Class2.DSCP.Stream2	0	0 … 63	
Class2.DSCP.Stream3	0	0 … 63	
Class2.DSCP.Stream4	0	0 … 63	
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.

Network.CoS

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

Configuration file: /etc/sysconfig/network.conf

[Network.CoS]

Parameter name	Default value	Valid values	Description
Enabled	no	Yes, no	Enables/disables VLAN support
VLANID	20	1…4095	
Class1.Desc	LiveVideo		
Class1.Priority	0	0…7	
Class2.Desc	LiveAudio		
Class2.Priority	0	0…7	
Class4.Desc	Management		
Class4.Priority	0	0…7	

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, digest	When the client send a RTSP command to server, the authorization information is required. Currently, we support two different mechanisms: basic and digest.
Authentication.HTTP	basic	basic, digest	
Authentication.Lockout.Enabled	no		
Authentication.Lockout.Threshold	5		
Authentication.Lockout.Duration	10		

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

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.

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.

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, yes	Enables/disables SNMPv2
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.

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 User-name/Password info from snooping.

H.264/MJPEG

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.

Image.I0.Appearance

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

Configuration file: /etc/sysconfig/image_appearance.conf

[Image.I0.Appearance] – for P/Q 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	(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	/ (Q series): 0	/ (Q series): 0 … 10	The level of H.264-2 image compression. High compression reduces the file size. Low compression produces optimum picture quality, but larger file size.
H264_3Compression	/ (Q series): 0	/ (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	/ (Q series): 0	/ (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	/ (Q series): 4096	/ (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	/ (Q series): 1024	/ (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	/ (Q series): 1024	/ (Q series): 64 … 20480	The value of H.264-3 image compression. Higher value means lower compression and higher quality and larger file size.
H264_4Bitrate	/ (Q series): 1024	/ (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	: P2SD disable,3m,d1, disable P2V6 dis- able,2688x1512,d1,dis- able,disable P2SA disable,5m,d1, disable (Q series): Q2SD disable,3m,d1, disable Q2V6 dis- able,2304x1296,d1,disable	: 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 2688x1512,2560x144-0, 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,	The image resolution. Note: 1. sxga is not available for Full HD Multiple Streams 10x/18x Zoom AF IP Camera.

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

(Q series):

Q2V6

Combination of 2688x151215,2560x1-44015, 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	/ (Q series): 0, flip, mirror, rotate, clockwise, counterclockwise	Rotates the image. 0 = Normal. flip = up/down inversion. mirror = left/right inversion rotate = both up/-down and left/right inversion clock-wise/-counterclockwise = 90 degree rotation

H264VideoKeyFrameInterval	60 (NTSC) 50 (PAL)	/ (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)	/ (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)	/ (Q series): 1-225	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 the TV system user choose.

H264_ 4VideoKeyFrameInterval	30 (NTSC) 25 (PAL)	/ (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.

[Image.I0.Appearance.Stream.S#] – for R/T/U Series

Parameter name	Default value	Valid values	Description
Enabled	yes	yes, no	Enable or disable Stream#. Stream1 is always open.

Source (ViewMode)	(U2 series): None Overview 4ptz	(U2 series): [Front End] Wall Mount: Overview ptz 180 180_2ptz Ceiling Mount: Overview Ptz 360 4ptz	This parameter is applied only in (U2 series)
EncodeType	h264	h264, mjpeg, h265	The Video Codec type.

Resolution	(R2 series): 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) (R3 series): V6: 2688x1512(25/30 fps)+800x600(25/30 fps) DNN Network IP Camera(U2 series): SM: 3840x2160 (25/30fps)+1920x1-080(25/30fps) (U2 series): SF: [Front End] 2048x2048 (15fps)+960x960 (15fps) [Back End] 4000x3000 (20fps)+720x480 (20fps)	S0	(R2 series): SI: 3840x2160 1920x1080 1280x1024 1280x720 1024x768 SK: 3072x2048 1920x1080 1280x1024 1280x720 1024x768 800x600 (R3 series): V6: 2688x1512 1920x1080 1280x1024 1280x720 720x480 (NTSC) 720x576 (PAL) PAL: (up to 50 fps) 3840x1920 3840x1600 1920x960 DNN Network IP Camera(U2 series): SM: NTSC: (up to 60 fps) 3840x2160 3200x1800

1920x1080
1280x1024
1280x720
PAL:
(up to 50 fps)
3840x2160
3200x1800
1920x1080
1280x1024
1280x720
(U2 series):
SF:
[Front End]
NTSC:
(up to 60 fps)
2048x2048
2048x1536
1920x1080
PAL:
(up to 50 fps)
2048x2048
2048x1536
1920x1080

[Back End]
NTSC:
(up to 60 fps)
4000x3000
3840x2160
3200x1800
1920x1080
1280x1024
PAL:
(up to 50 fps)
4000x3000

	3840x2160
	3200x1800
	1920x1080
	1280x1024

	S1~S3	(R2 Series): 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:

S3	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
	(R3 Series):
	V6:
	NTSC:
	(up to 60 fps)
	2688x1512
	1920x1080
	1280x1024
	1280x720
	1024x768

Framerate	30 (NTSC) 25 (PAL) 60 (NTSC) 50 (PAL) (U2 series): 60 (NTSC) 50 (PAL)	1 … 30 (NTSC) 1 … 25 (PAL) (U2 series): SF: [Front End] 1 … 30 (NTSC) 1 … 25 (PAL) Only when all streaming is enabled simultaneously and one of the streaming is set to: [Front End] 2048x2048à1…15 [Back End] 4000x3000à1…20	When 1. HDR Mode 2. Linear Mode All streaming is enabled simultaneously and one of the four streaming is set to: Superior H.265 IP camera(R2 Series): SI: 3840x2160 SK: 3072x2048 Prime H.265 IP camera(R3 Series): V6: 2688x1512 1920x1080 1280x1024 DNN Network IP Camera(U2 series): SM: 3840X2160 3200X1080
		1 … 60 (NTSC) 1 … 50 (PAL) (U2 series): [Back End] 1 … 60 (NTSC) 1 … 50 (PAL)	Others

VideoKeyFrameInterval	25 DNN Network IP Camera(U2 series): 30 (U2 series): 50	1 … 4094	
VideoKeyFrameInterval.Mode	(U2 series): fixed	Fixed,dynamic	
VideoKeyFrameInterval.Dynamic	(U2 series): 255	1…4094	
Profile	main	main, high	
RateControl.Mode	vbr	vbr, cbr, lbr	
Bitrate	(R2 Series)、 (R3 Series) : 4096 (U2 series): 12288 4096 2048 2048 (U2 series): 4096 4096 2048 2048	(R2 Series)、 (R3 Series) : 64 … 10240 (U2 series): 64…20480	The value of image compression. Higher value means lower compression and higher quality and larger file size.
RateControl.LBR.Motion	(R2 Series)、 (R3 Series): high	high, mid, low	
RateControl.LBR.Noise	(R2 Series)、 (R3 Series): High	high, mid, low	

RateControl.LBR.Level	U2 series): High	high, mid, low	
Qfactor	35	1 … 70	The value of MJPEG 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.
Rotation	0	0, flip, mirror, rotate, counterclockwise, clockwise, clockwise_mirror, clockwise_flip	Rotates the image. 0 = Normal. flip = up/down inversion. mirror = left/right inversion rotate = both up/down and left/right inversion clockwise/counterclockwise = 90 degree rotation

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

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

[Image.I0.Appearance.Stream.S#] – for T/U Series (PTZ)

Parameter name	Default value	Valid values	Description
Enabled	yes	yes, no	Enable or disable Stream#. Stream1 is always open.

Source	S0:Overview S1:PTZ S2:Overview S3:Overview		
EncodeType	h264	h264, mjpeg, h265	The Video Codec type.

Resolution	Network IR PTZ (T2 series): SM: 3840x2160 (25/30fps)+720x480(25/30fps) DNN Network IR PTZ (U2 series): SM: 3840x2160(25/30 fps)+1920x1080 (25/30 fps)	S0	Network IR PTZ(T2 Series)/DNN Network IR PTZ(U2 series): SM: NTSC: (up to 60 fps) 3840x2160 3200x1800 1920x1080 1280x1024 1280x720 PAL: (up to 50 fps) 3840x2160 3200x1800 1920x1080 1280x1024 1280x720

		S1~S3	Network IR PTZ(T2 Series): SM: NTSC: (up to 60 fps) 3840x2160 1920x1080 1280x1024 1280x720 1024x768 800x600 720x480 640x480 352x240 320x240 PAL: (up to 50 fps) 1920x1080 1280x1024 1280x720 1024x768 800x600 720x576 640x480 352x288 320x240 DNN Network IR PTZ(U2 series): SM: NTSC (up to 60	

SM:

NTSC:

(up to 60 fps)

3840x2160

1920x1080

1280x1024

1280x720

1024x768

800x600

720x480

640x480

352x240

320x240

PAL:

(up to 50 fps)

1920x1080

1280x1024

1280x720

1024x768

800x600

720x576

640x480

352x288

320x240

DNN

		Net- work IR PTZ(U2 series): SM: NTSC (up to 60 fps) 3840x21- 60 1920x10- 80 1280x10- 24 1280x72- 0 1024x76- 8 800x600 720x480 640x480 352x240 320x240 PAL (up tp 50 fps) 3840x21- 60 1920x10- 80 1280x10- 24 1280x72- 0 1024x76-

		8 800x600 720x576 640x480 352x288 320x240
Framerate	30(NTSC) 25(PAL)	1 … 30 (NTSC) 1 … 25 (PAL) 1 … 60 (NTSC) 1 … 50 (PAL)
VideoKeyFrameInterval	(T2 series): 60 (U2 series): 25	1…4094
VideoKeyFrameInterval.Mode	Fixed	Fixed,dynamic
VideoKeyFrameInterval.Dynamic	255	1…4094
Profile	Main	Main,high
RateControl.Mode	Vbr	Cbr, Vbr, Lbr
Bitrate	(U2 Series): 12288 4096 2048 2048	(U2 Series): 64…20480
RateControl.LBR.Level	High	High Mid low

Qfactor	35	1…70	The value of MJPEG 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.
Rotation	0	0, flip, mirror, rotate, counterclockwise, clockwise, clockwise_mirror, clockwise_flip	Rotates the image. 0 = Normal. flip = up/down inversion. mirror = left/right inversion rotate = both up/down and left/right inversion clockwise/counterclockwise = 90 degree rotation.

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

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

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
Color	black	/ (Q series): Black (R2 series)/(R3 series)/(U2 series): Black,white,yellow, red,green,blue,cyan, magenta	color of mask.

Image.I0.Overlay.MaskWindows.M#

Description: The group is for enabling mask.

Configuration file: /etc/sysconfig/image_overlay.conf [Image.I0.Overlay.MaskWindows.M#] * for P/Q/R series

Parameter name	Default value	Valid values	Description
XPos	/ (Q series): 40, when#=0; 55, when#=1; 70, when#=2; 85, when#=3; 100, when#=4	: 0-191(3072x2048), 0-167(2688x1512), 0-159(2560x1440), 0-127(2048x1536), 0-119(1920x1080) (Q series): 0-167(2688x1512), 0-159(2560x1440), 0-127(2048x1536), 0-119(1920x1080) (R2 series)/(R3 series): 3840x2160: 0 … 959 3072x2048: 0 … 767 2688x1512: 0 … 671 2048x1536: 0 … 511 1920x1080: 0 … 479 V6: 2688x1512:0…671 1920x1080:0...479 1280x1024:0…319 1280x720:0…319 1024x768:0…255 720x576:0…179 720x480:0…179	The X position of mask

YPos	/ (Q series) 40, when#=0-4	: 0-127(3072x2048), 0-93(2688x1512), 0-89(2560x1440), 0-95(2048x1536), 0-66(1920x1080) (Q series): 0-93(2688x1512), 0-89(2560x1440), 0-95(2048x1536), 0-66(1920x1080) (R2 series) / (R3 series): 3840x2160: 0 … 539 3072x2048: 0 … 511 2688x1512: 0 … 377 2048x1536: 0 … 383 1920x1080: 0 … 269 V6: 2688x1512:0…377 1920x1080:0...269 1280x1024:0…255 1280x720:0…179 1024x768:0…191 720x576:0…144 720x480:0…119	The Y position of mask.
Width	/ (Q series): 8, when#=0-4	: 0-192(3072x2048), 0-168(2688x1512), 0-160(2560x1440), 0-128(2048x1536), 0-120(1920x1080) (Q series): 0-168(2688x1512), 0-160(2560x1440), 0-128(2048x1536), 0-120(1920x1080) (R2 series)/ (R3 series): 3840x2160: 0 … 960 3072x2048: 0 … 768 2688x1512: 0 … 672 2048x1536: 0 … 512 1920x1080: 0 … 480	The width of mask.

Height	/ (Q series): 5, when#=0-4	: 0-128(3072x2048), 0-94(2688x1512), 0-90(2560x1440), 0-96(2048x1536), 0-67(1920x1080) (Q series): 0-94(2688x1512), 0-90(2560x1440), 0-96(2048x1536), 0-67(1920x1080) (R2 series)/ (R3 series): 3840x2160: 0 … 540 3072x2048: 0 … 512 2688x1512: 0 … 378 2048x1536: 0 … 384 1920x1080: 0 … 270	The height of mask.

Image.I0.Overlay.MaskWindows.M#

Description: The group is for enabling mask.

Configuration file: /etc/sysconfig/image_overlay.conf [Image.I0.Overlay.MaskWindows.M#] * for T/U series

Parameter name	Default value	Valid values	Description

XPos	H.265 IP Camera(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ DNN Network IP Camera(U2 series)/(U2 series): 40, when#=0; 55, when#=1; 70, when#=2; 85, when#=3; 100, when#=4 Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): 40, when#=0; 55, when#=1; 70, when#=2; 85 , when#=3; 100, when#=4	H.265 IP Camera (T2 series): 3840x2160: 0…959 3200x1800: 0…799 1920x1080: 0…479 1280x1024: 0…319 1280x720: 0…319 H.265 180 Fisheye Bullet IP Camera (T2 series): 3840x1920: 0…959 3840x1600: 0…959 1920x960: 0…479 1280x1024: 0…319 1280x720: 0…319 DNN Network IP Camera(U2 series): 3840x2160: 0…959 3200x1800: 0…799 1920x1080: 0…479 1280x1024: 0…319 1280x720: 0…319 (U2 series): 4000x3000:0…999 3840x2160:0…959 3200x1800:0…799 2048x2048:0…511 2048x1536:0…511 1920x1080:0…479 1280x1024:0…319 Network IR PTZ(T2 series): 3840x2160: 0…959 3200x1800: 0…799 1920x1080: 0…479 1280x1024: 0…319

		1280x720: 0…319 DNN Network IR PTZ(U2 series): 3840x2160: 0…959 3200x1800: 0…799 1920x1080: 0…479 1280x1024: 0…319 1280x720: 0…319
XPos2	10, when#=0…4	10, when#=0…4
XPos3	10, when#=0…4	10, when#=0…4
XPos4	10, when#=0…4	10, when#=0…4

YPos	(U2 series): 40, when#=0-4	H.265 IP Camera (T2 series): 3840x2160: 0…539 3200x1800: 0…449 1920x1080: 0…269 1280x1024: 0…255 1280x720: 0…179 H.265 180 Fisheye Bullet IP Camera (T2 series): 3840x1920: 0…479 3840x1600: 0…399 1920x960: 0…239 1280x1024: 0…255 1280x720: 0…179 DNN Network IP Camera(U2 series): 3840x2160: 0…539 3200x1800: 0…449 1920x1080: 0…269 1280x1024: 0…255 1280x720: 0…179 (U2 series): 4000x3000:0…749 3840x2160:0…539 3200x1800:0…449 2048x2048:0…511 2048x1536:0…383 1920x1080:0…269 1280x1024:0…255 Network IR PTZ(T2 series): 3840x2160: 0…539 3200x1800: 0…449 1920x1080: 0…269

		1280x1024: 0…255 1280x720: 0…179 DNN Network IR PTZ(U2 series): 3840x2160: 0…539 3200x1800: 0…449 1920x1080: 0…269 1280x1024: 0…255 1280x720: 0…319
YPos2	10, when#=0…4	10, when#=0…4
YPos3	10, when#=0…4	10, when#=0…4
YPos4	10, when#=0…4	10, when#=0…4

Width	H.265 IP Camera(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ Network IR PTZ(T2 series)/(U2 series): 20, when#=0-4	H.265 IP Camera (T2 series): 3840x2160: 1…960 3200x1800: 1…800 1920x1080: 1…480 1280x1024: 1…320 1280x720: 1…320 H.265 180 Fisheye Bullet IP Camera (T2 series): 3840x1920: 1…960 3840x1600: 1…960 1920x960: 1…480 1280x1024: 1…320 1280x720: 1…320 Network IR PTZ(T2 series): 3840x2160: 1…960 3200x1800: 1…800 1920x1080: 1…480 1280x1024: 1…320 1280x720: 1…320 DNN Network IP Camera(U2 series): 3840x2160: 1…960 3200x1800: 1…800 1920x1080: 1…480 1280x1024: 1…320 1280x720: 1…320 (U2 series): 4000x3000: 1…1000 3840x2160: 1 … 960 3200x1800: 1…800 2048x2048: 1…512

	2048x1536: 1…512 1920x1080: 1…480 1280x1024: 1…320 DNN Network IR PTZ(U2 series): 3840x2160: 1…960 3200x1800: 1…800 1920x1080: 1…480 1280x1024: 1…320 1280x720: 1…320

Height	H.265 IP Camera(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ Network IR PTZ(T2 series)/(U2 series): 20, when#=0-4	H.265 IP Camera (T2 series): 3840x2160: 1…540 3200x1800: 1…450 1920x1080: 1…270 1280x1024: 1…256 1280x720: 1…180 H.265 180 Fisheye Bullet IP Camera (T2 series): 3840x1920: 1…480 3840x1600: 1…400 1920x960: 1…240 1280x1024: 1…256 1280x720: 1…180 Network IR PTZ(T2 series): 3840x2160: 1…540 3200x1800: 1…450 1920x1080: 1…270 1280x1024: 1…256 1280x720: 1…180 DNN Network IP Camera(U2 series): 3840x2160: 1…540 3200x1800: 1…450 1920x1080: 1…270 1280x1024: 1…256 1280x720: 1…180 (U2 series): 4000x3000:1…750 3840x2160:1…540 3200x1800:1…450 2048x2048:1…512 2048x1536:1…384

		1920x1080:1…270 1280x1024:1…256 DNN Network IR PTZ(U2 series): 3840x2160: 1…540 3200x1800: 1…450 1920x1080: 1…270 1280x1024: 1…256 1280x720: 1…320
Enabled	H.265 IP Camera(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ DNN Network IP Camera(U2 series)/(U2 series)/Network IR PTZ (T2series)/ DNN Network IR PTZ(U2 series): no	Yes, no
ZoomFactor	Network IR PTZ(T2series)/ DNN Network IR PTZ(U2 series): off	Off, on

[Image.I0.Overlay.Image] – for T/U Series

Parameter name	Default value	Valid values	Description
Enabled	no	Yes, No	
Pos	1_1		Width should be multiple of 32, height should be multiple of 4
Transparency	255	0…255	
Align	left	Left,right	

Image.I0.RateControl - for P/Q/R/T/U 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	/ (Q series): vbr, cbr (R2 Series)/(R3 Series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera (T2 series)/Network IR PTZ(T2 series)/(U2 series): Vbr cbr lbr	Specifies whether the 1st H.264 streaming rate controller operates in Variable Bit Rate (VBR), constant bit rate (CBR) mode or Low Bit Rate(LBR) mode(Only for T/U series).
H264_2Mode	vbr	/ (Q series): vbr, cbr (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera (T2 series)/Network IR PTZ(T2 series) /(U2 series): Vbr cbr lbr	Specifies whether the 2nd H.264 streaming rate controller operates in Variable Bit Rate (VBR), constant bit rate (CBR) mode or Low Bit Rate(LBR) mode(Only for T/U series).
H264_3Mode	vbr	vbr, cbr (R2 Series)/(R3 Series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera (T2 series)/Network IR PTZ(T2 series)/(U2 series): Vbr	Specifies whether the 3rd H.264 streaming rate controller operates in Variable Bit Rate (VBR), constant bit rate (CBR) mode or Low Bit Rate(LBR) mode(Only for T/U series).

		cbr lbr	
H264_4Mode	vbr	vbr, cbr (R2 Series)/(R3 Series)/H.265 IP Camera(T2 series)/ H.265 180 Fisheye Bullet IP Camera (T2 series)/Network IR PTZ(T2 series)/(U2 series): Vbr cbr lbr	Specifies whether the 4th H.264 streaming rate controller operates in Variable Bit Rate (VBR), constant bit rate (CBR) mode or Low Bit Rate(LBR) mode(Only for T/U series).
MaxFPS	/ (Q series)/ (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/ DNN Network IP Camera(U2 series)/DNN Network IR PTZ(U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP	Superior HDR IP Camera (P series)/ Prime HDR IP Camera (Q series)/ (R2 Series)/ Prime H.265 IP Camera(R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/DNN Network IP Camera(U2 series)/DNN Network IR PTZ(U2 series): NTSC (30) 30 NTSC (60)	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, Image.I#.RateControl.H264_4Mode must be set to cbr for this parameter to take effect.

	Camera(T2 series)/(U2 series): NTSC(60) 30 PAL(50) 25	60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera(T2 series)/(U2 series): NTSC(60) 30 PAL(50) 25	
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.

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	/ (Q series)/ (R2 Series)/ (R3 Series)H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/(U2 series): left right	Shows the text of date aligned to left or 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	/ (Q series)/ (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/ (U2 series): 0	/ (Q series)/ (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/ (U2 series): 0 1 2	Adjusts the size of text. 0,1,2 respectively stand for small, medium, large.

Color	/ (Q series)/ (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/ Network IR PTZ(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ (U2 series): white	/ (Q series)/(R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/ Network IR PTZ(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ (U2 series): black white yellow red green blue cyan magenta	Text color.
DatePosition	/ (Q series): Bottomleft (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): Topright	topright, topleft, bottomright, bottomleft H.265 180 Fisheye Bullet IP Camera(T2 series)/(U2 series): X:0…90 Y:0…95	Date position.

StringAlign	/ (Q series)/ (R2 series)/(R3 series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): left	/ (Q series)/ (R2 series)/(R3 series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ(U2 series): right, left	String align
StringPosition	(R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): bottomleft	(R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): X:0…90 Y:0…95	
SubtitleEnabled	/ (Q series)/ (R2 series)/(R3 Series) (U2 series): No	/ (Q series)/ (R2 series)/(R3 series)/ (U2 series): yes, no	Shows the subtitle at the Position in the image.
SubtitleAlign	/ (Q series)/ (R2 series) /(R3 series)/H.265 IP Camera (T2 series)/ Network IR PTZ (T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): left	/ (Q series)/ (R2 series)/(R3 series)/H.265 IP Camera(T2 series)/ Network IR PTZ(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/ (U2 series): right, left	Subtitle align

SubtitlePosition	/ (Q series)/ (R2 series) /(R3 series)/H.265 IP Camera (T2 series)/Network IR PTZ(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): Bottomright	/ (Q series)/ (R2 series) /(R3 series)/H.265 IP Camera (T2 series)/Network IR PTZ(T2 series)/DNN Network IP Camera(U2 series)/DNN Network IR PTZ (U2 series): topright, topleft, bottomright, bottomleft H.265 180 Fisheye Bullet IP Camera(T2 series)/(U2 series): X:0…90 Y:0…95	Subtitle position
Subtitle[1-5]		/ (Q series)/ (R2 series)/(R3 series)/ (U2 series): A string	The subtitle to show at the Position in the image.
AzimuthEnabled	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): no	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): Yes,compass	Devices which are functioned with RS485, are available on Azimuth parameter
AzimuthPosition	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): topleft	Network IR PTZ(T2 series)/DNN Network IR PTZ(U2 series): 0_0…90_95	
AzimuthAlign	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): left	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): Left, right	

ZoomRatioEnabled	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): no	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): Yes,no
ZoomRatioPosition	Network IR PTZ(T2 series) /DNN Network IR PTZ (U2 series): 0_0	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): 0_0…90_95
ZoomRatioAlign	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): right	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): Left, right

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	/ (Q series): auto (R2 series)/ (R3 series)/ (U2 series): auto	: Ball Lens, PIRIS : auto,manualpreset Zoom Lens : auto, autoiris, pirispriority, irispriority0-10, manualpreset NTSC : shutterpriority1_30, shutterpriority1_60, shutterpriority1_90, shutterpriority1_100shutterpriority1_120shutterpriority1_180shutterpriority1_250shutterpriority1_350shutterpriority1_500 PAL : shutterpriority1_25, shutterpriority1_50, shutterpriority1_75, shutterpriority1_100shutterpriority1_120shutterpriority1_150shutterpriority1_215shutterpriority1_300shutterpriority1_425 Others : auto, autoiris, manualpreset NTSC : shutterpriority1_30, shutterpriority1_60, shutterpriority1_90, shutterpriority1_100shutterpriority1_120shutterpriority1_180shutterpriority1_250shutterpriority1_350shutterpriority1_500 PAL : shutterpriority1_25, shutterpriority1_50,	The description of exposure for R/T/U IP Camera: Board Lens, P-Iris: Auto, manualpreset “Auto” refers to “P-Iris Priority” on User Interface

shutterpriority1_75 shutterpriority1_100 shut-
terpriority1_120shutterpriority1_150shut-
terpriority1_215shutterpriority1_
300shutterpriority1_425

(Q series):

Ball Lens, PIRIS : auto,manualpreset

Zoom Lens :

auto, autoiris, pirispriority,

irispriority0-10,

manualpreset

NTSC :

shutterpriority1_30,

shutterpriority1_60,

shutterpriority1_90,

shutterpriority1_100shutterpriority1_120shut-
terpriority1_180shutterpriority1_250shut-
terpriority1_350shutterpriority1_500

PAL :

shutterpriority1_25,

shutterpriority1_50,

shutterpriority1_75,

shutterpriority1_100shutterpriority1_120shut-
terpriority1_150shutterpriority1_215shut-
terpriority1_300shutterpriority1_425

Others :

auto,

autoiris,

manualpreset

NTSC :

shutterpriority1_30,

shutterpriority1_60,

shutterpriority1_90,

shutterpriority1_100shutterpriority1_120shut-
terpriority1_180shutterpriority1_250shut-
terpriority1_350shutterpriority1_500

PAL :

shutterpriority1_25,

shutterpriority1_50,

shutterpriority1_75 shutterpriority1_100 shut-terpriority1_120shutterpriority1_150shut-terpriority1_215shutterpriority1_300shutterpriority1_425

(R2 series)/(R3 series)/ H.265 IP Camera(T2 series)/DNN Network IP Camera(U2 series):

Board Lens, P-Iris:

auto, manualpreset

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)

Others:

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)

180 Fisheye Bullet IP Camera(T2 series)/(U2 series):

Fisheye Lens:

auto

manualpreset

Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series):

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)

Piris.Irisvalue	Network IR PTZ(T2 series)/DN-N Network IR PTZ(U2 series): Zoom Lens: 22x,31x: 3600	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): Zoom Lens: 22x: 0..4095 31x: 0…4095 35x: 0…110	1. Iris value can be adjusted only when “exposure” is set to P-Iris Priority. 2. The irisvalue might change due to different lens correction value.

Exposure.MinShutterSpeed	/ (Q series)/ (R2 series)/(R3 series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/Network IR PTZ(T2 series)/ (U2 series): 8	: 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 (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 (R2 series) /(R3 series)/H.265 IP Camera(T2 series): 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 H.265 180 Fisheye Bullet IP Camera(T2 series): 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 DNN Network IP Camera(U2 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 (U2 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	The image max shutter speed.

		Network IR PTZ(T2 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 DNN Network IR PTZ(U2 series): 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_50,1,2,4,8,25
Exposure.MaxShutterGain	/ (Q series)/ (R2 series)/(R3 Series)/ H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/Network IR PTZ(T2 series)/ (U2 series): 3	/ (Q series): 0 ... 3 (R2 series) /(R3 series)/ H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series) /Network IR PTZ(T2 series)/ (U2 series): 0 ... 3

Exposure.ManualPreset.Shutter	/ (Q series): 167 (R2 series)/ (R3 series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/(U2 series)/DNN Network IP Camera (U2 series)/831 Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): 200	: NTSC: 1,3,5,10,14,20,28,40,56,83,100,111,167,333,667,1-250,2500,5000,10000 PAL: 1,2,4,8,16,23,33,46,66,83,100,133,200,400,833,16-66,3333,6666 (Q series): NTSC: 1,3,5,10,14,20,28,40,56,83,100,111,167,333,667,1-250,2500,5000,10000 PAL: 1,2,4,8,16,23,33,46,66,83,100,133,200,400,833,16-66,3333,6666 (R2 series)/(R3 series)/H.265 IP Camera(T2 series): 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 H.265 180 Fisheye Bullet IP Camera(T2 series): 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 DNN Network IP Camera(U2 series): NTSC: 1, 3, 5, 10, 14, 20, 28, 40, 56, 83, 100, 111, 167, 333, 667, 1250, 2500, 5000, 10000 PAL: 1,2,4,8,16,23,33,46,66,83,100,133,200,400,833,16-66,3333,6666 Network IR PTZ(T2 series):	Available value table

NTSC:

1,3,5,10,14,20,28,40,56,83,100,111,167,333,667,1-250,2500,5000,10000

PAL:

1,2,4,8,16,23,33,46,66,83,100,133,200,400,833,16-66,3333,6666

(U2 series):

NTSC:

1,3,5,10,14,20,28,40,56,83,100,111,167,333,667,1-250,2500,5000,10000

PAL:

1, 2, 4, 8, 16, 23, 33, 46, 66, 83, 100, 133, 200, 400, 833, 1666, 3333, 6666

DNN Network IR PTZ(U2 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, 400, 833, 1666, 3333, 6666

Exposure.ManualPreset.AGCGain	/ (Q series)/ (R2 series)/ (R3 series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series)/DNN Network IP Camera (U2 series)/ (U2 series)/DNN Network IR PTZ (U2 series): 0	Superior HDR IP Camera (P series)/ (Q series): V6: 0~120 SD: 0~160 others: 0~140 (R2 series): SI: 0 … 150 SK: 0 … 150 (R3 series): V6: 0 … 120 H.265 IP Camera(T2 series): V8: 0…160 H.265 180 Fisheye Bullet IP Camera(T2 series): V8: 0…160 DNN Network IP Camera(U2 series): SM: 0…160 (U2 series): SF: 0…160 Network IR PTZ(T2 series): SM: 0…160 DNN Network IR PTZ(U2 series): SM: 0…160

Exposure.ManualPreset.Iris	(R2 series) / (R3 series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): 6	(R2 series) /(R3 series, Zoom Lens) H.265 IP Camera(T2 series)/ Network IR PTZ(T2 series)/DNN Network IR PTZ(U2 series): 0 … 10	Available value table
WhiteBalance	auto	/ (Q series): ATW, onepush, manual (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 series)/Network IR PTZ(T2 series)/ H.265 180 Fisheye Bullet IP Camera(T2 series): Auto ATW Smart One push Smart touch Manual (U2 series): AWB.normal AWB.wide AWB.all Smart One Push Smart Touch Manual	The image white balance.

WhiteBalance.Rgain	/ (Q series)/ (R2 series) / (R3 Series)/ (U2 series): 57	/ (Q series): 0 … 127 Camera(R2 series) / (R3 Series)/ (U2 series): 0…249	Rgain value when white-balance mode is manual, only available in IP PTZ.
WhiteBalance.Bgain	/ (Q series)/ (R2 series) / (R3 Series)/ (U2 series): 54	/ (Q series): 0 … 127 (R2 Series)/ (R3 Series)/ (U2 series): 0…249	Bgain value when white-balance mode is manual, only available in IP PTZ.
WhiteBalance.SmartTouch.Pos	(U2 series): 0_0_50_50 X:0 Y:0 W:50 H:50	(U2 series): X_Y_W_H X:0…255 Y:0…255 W:1…255 H:1…255 X+W<256；Y+H<256	
Backlight	U2 series): Off (U2 series): on	on, off	Enable/Disable Backlight Compensation.

Brightness	/ (Q series)/ (R2 series)/ (R3 series) (U2 series): 128	/ (Q series)/ (R2 series) / (R3 series)/ (U2 series): 0 … 25	The image brightness.
Sharpness	/ (Q series)/ (R2 series) /(R3 series)/ (U2 series): 4	/ (Q series)/ (R2 series) /(R3 series)/ (U2 series): 0 … 15	The image sharpness.
Contrast	/ (Q series)/ (R2 series) /(R3 series)/H.2-65 IP (U2 series): 64	/ (Q series)/ (R2 series) /(R3 series)/H.265 IP (U2 series): 0 … 25	The image contrast.
ColorLevel	/ (Q series)/ (R2 series) /(R3 series)/ (U2 series): 64	/ (Q series)/ (R2 series) /(R3 series)/ (U2 series): 0 … 25	Parameter “Color Level” refers to Saturation on User Interface.

Hue	/ (Q series)/ (R2 series)/ (R3 series)/H.2-65 IP Cam-era(T2 series)/H.2-65 180 Fisheye Bul-let IP Cam-era(T2 series)/Net-work IR PTZ(T2 series)/ DNN Net-work IP Camera(U2 series)/(U2 series)/DN-N Network IR PTZ (U2 series): 128	/ (Q series)/ (R2 series) /(R3 series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/Network IR PTZ(T2 series)/ DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): 0 … 25

Digitalzoom	/ (Q series)/ (R2 series)/(R3 series)/H.265 IP Camera(T2 series)/H.265 180 Fisheye Bullet IP Camera(T2 series)/Network IR PTZ(T2 series)/ DNN Network IP Camera(U2 series)/(U2 series)/DNN Network IR PTZ (U2 series): 1(off)	/ (Q series)/(R2 series)/(R3 series)/H.265 IP Camera(T2 series)/DNN Network IP Camera(U2 series)/(U2 series): 1 … 10(off=1) Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): On, off
Flip	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): Off	Off, M.E, Image

Wdr	off	/ (Q series)/(R2 series) /(R3 series)/ (U2 series): off, 1 … 3	Enable/Disable WDR function. (Gamma WDR function is only supported in non-shutter WDR mode.) 1,2,3 respectively stand for low, mid and high
SpeedByZoom	(U2 series): on	(U2 series): on, off	
2DNR	/ (Q series)/ (R2 series)/ (R3 series) /(U2 series): on	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): on off	Enable/Disable 2D Noise Reduction function.
3DNR	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): low	/ (Q series)/(R2 series)/ (R3 series)/ (U2 series): off low middle high	Enable/Disable 3D Noise Reduction function.

SPQCBCRNR	(R2 series) /(R3 series)/ (U2 series): off	(R2 series) /(R3 series)/ (U2 series): off low middle high	Parameter “SPQCBCR-NR” refers to Color NR on User Interface.
AutoCalibration	Network IR PTZ(T2 series)/DN-N Network IR PTZ (U2 series): on	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): On,off	
AutoDefog	Network IR PTZ(T2 series)/DN-N Network IR PTZ (U2 series): off	DNN Network IR PTZ (U2 series): On, off	

Stabilizer	Network IR PTZ(T2 series)/DN-N Network IR PTZ (U2 series): off	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): On, off
Stab-ilizer.AutoCalibration	Network IR PTZ(T2 series)/DN-N Network IR PTZ (U2 series): off	Network IR PTZ(T2 series)/DNN Network IR PTZ (U2 series): On, off

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

DetectedType	(R2 series): SI,SK pal_60 (R3 series)/H.265 IP Camera(T2 series): V6,SD,V8 Pal wdr 2shutter H.265 180 Fisheye Bullet IP Camera(T2 series): V8: Pal wdr 2shutter Network IR PTZ(T2 series): Pal wdr 2shutter DNN Network IP Camera(U2 series): SM: Pal wdr 2shutter (U2 series): SF: Pal_50 DNN Network IR PTZ (U2 series): SM: Pal wdr 2shutter	(R2 series)/(R3 series): 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 H.265 IP Camera(T2 series): V8: ntsc_wdr_2shutter pal_wdr_2shutter ntsc_60 pal_50 H.265 180 Fisheye Bullet IP Camera(T2 series): V8: ntsc_wdr_2shutter pal_wdr_2shutter ntsc_60 pal_50 Network IR PTZ(T2 series): SM: ntsc_wdr_2shutter pal_wdr_2shutter ntsc_60 pal_50 (U2 series): SF: Ntsc_60 Pal_50 DNN Network IP Camera(U2 series):

	SM: ntsc_wdr_2shutter pal_wdr_2shutter ntsc_60 pal_50 DNN Network IR PTZ (U2 series): SM: ntsc_wdr_2shutter pal_wdr_2shutter ntsc_60 pal_50

Image.I0.ROI.InputWindows

Description: Enable ROI function and set ROI region.

Configuration file: /etc/sysconfig/image_roi.conf

[Image.I0.ROI.InputWindows]* -- for P/Q Series

Parameter name	Default value	Valid values	Description
MJPEG.Enabled	no	yes no	

MJPEG.Pos	/ (Q series): X_Y_W_H X:0 Y:0 W:0 H:0		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.
H264.Enabled	no	yes no	
H264.Pos	/ (Q series): X_Y_W_H X:0 Y:0 W:0 H:0		
H264_2.Enabled	no	yes no	
H264_2.Pos	/ (Q series): X_Y_W_H X:0 Y:0 W:0 H:0		

H264_3.Enabled	no	yes no
H264_3.Pos	/ (Q series): X_Y_W_H X:0 Y:0 W:0 H:0	
H264_4.Enabled	no	yes no
H264_4.Pos	/ (Q series): X_Y_W_H X:0 Y:0 W:0 H:0	

[Image.I0.ROI.InputWindows.Stream#]* – for R/T/U 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	(R2 series): 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) (R3 series): V6: X:0 … 584 Y:0 …306(PAL) 0 …318 (NTSC) W:88 … 672 H:72 … 378(PAL) 60 …378(NTSC) H.265 IP Camera(T2 series): V8: X:0 … 782 Y:0 … 396(PAL) 0 … 420(NTSC)	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.

	W:178 … 960 H:144 … 540(PAL) 120 … 540(NTSC) DNN Network IP Camera(U2 series): SM: X:0 … 782 Y: 0 … 420(NTSC) 0 … 396(PAL) W:178 … 960 H: 120 … 540(NTSC) 144 … 540(PAL)

- Note: The # is replaced with a group number starting from 1 to 4, e.g. Image.I0.ROI.InputWindows.Stream1.

[Image.I0.ROIEncoding.Stream#]* – for R/T/U Series

Parameter name	Default value	Valid values	Description
Enabled	no	yes, no	Enable or disable the ROI function of Stream#.
Quality	(R2 series)/(R3 series) /(U2 series): 15	(R2 series)/(R3 series)/ U2 series): 0…30	
S#.InputWindows1.enabled	no	Yes, no	
S#.InputWindows1.Pos	10_10_10_10	(R2 series)/(R3 series)/ U2 series): NTSC/PAL: X: 0…99 Y: 0…99 W:1…100 H:1…100	

S#.InputWindows2.enabled	no	Yes, no
S#.InputWindows2.Pos	20_10_10_10	(R2 series)/(R3 series)/ U2 series): NTSC/PAL: X: 0…99 Y: 0…99 W:1…100 H:1…100
S#.InputWindows3.enabled	no	Yes, no
S#.InputWindows3.Pos	30_10_10_10	(R2 series)/(R3 series)/(U2 series): NTSC/PAL: X: 0…99 Y: 0…99 W:1…100 H:1…100

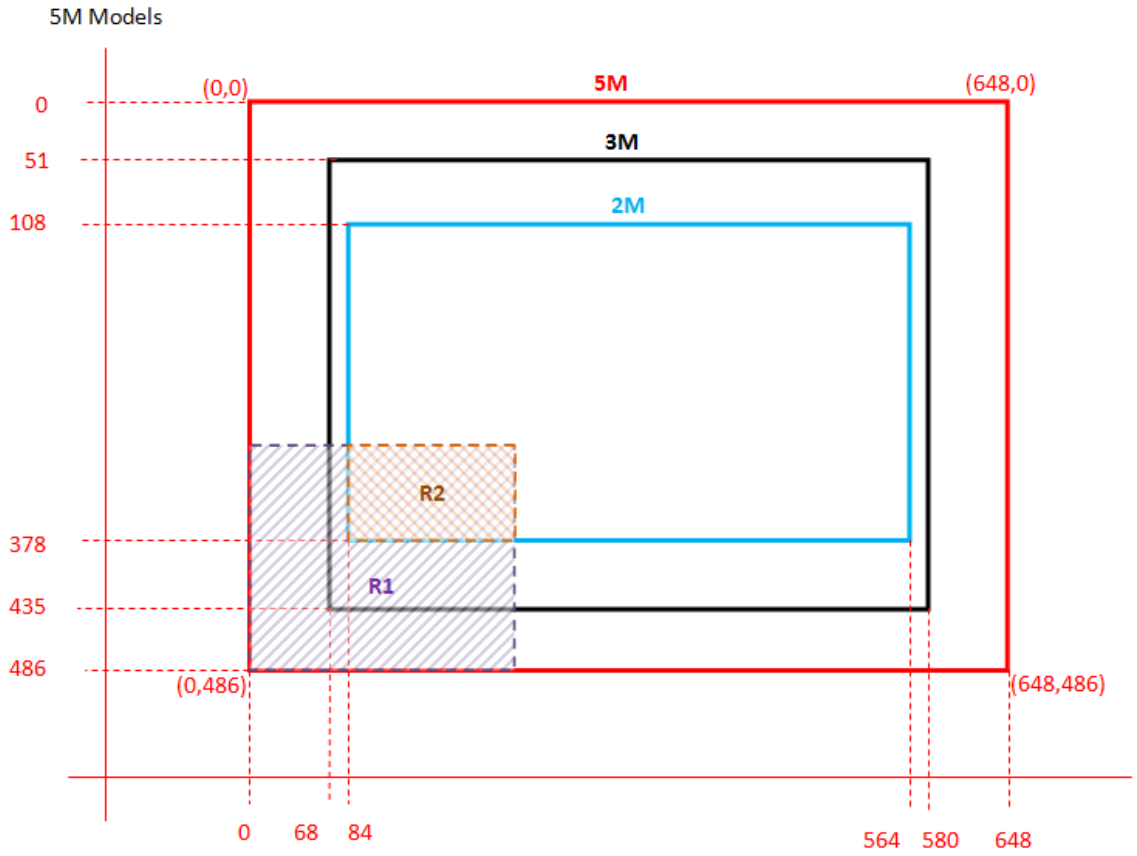

5M Models
(0,0)
5M
(648,0)
3M
2M
R2
R1
0
51
108
378
435
486
(0,486)
(648,486)
0
68
84
564
580
648

Fig.1

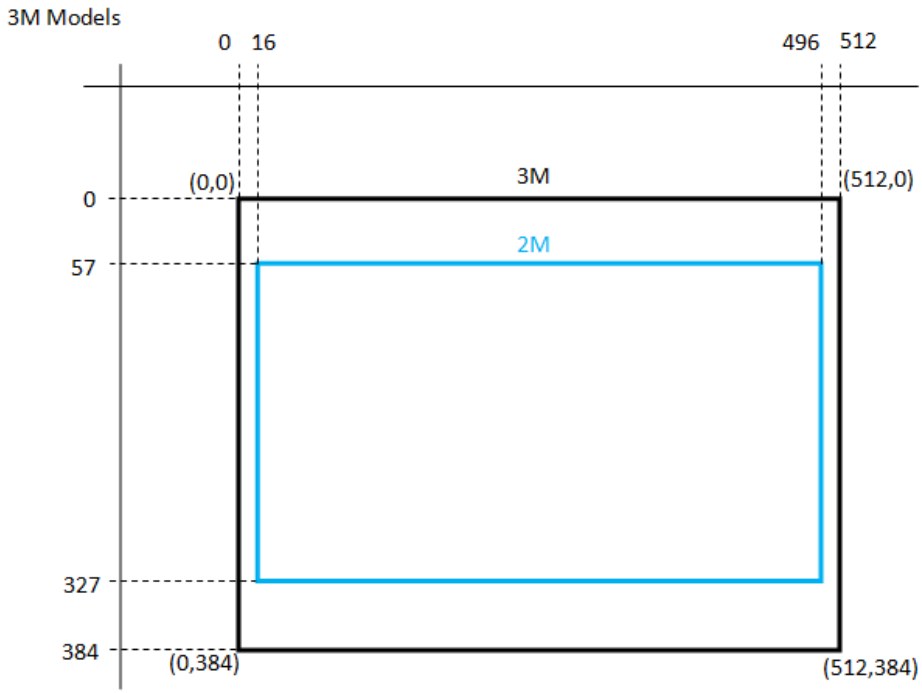

3M Models
0
16
496
512
(0,0)
3M
(512,0)
2M
0
57
327
384
(0,384)
(512,384)

Fig. 2

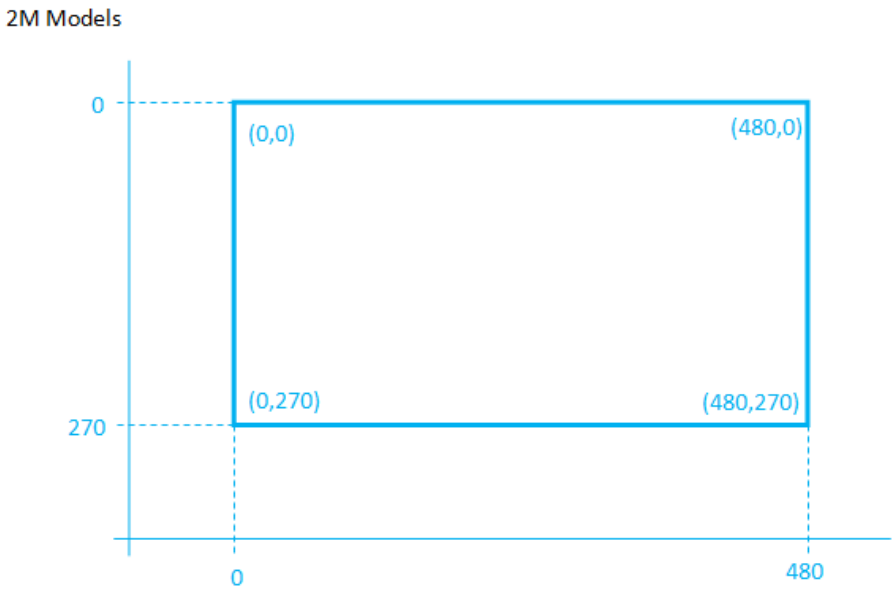


Fig. 3

I/O

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)	1. Number of inputs. Read only.

Input.I#

Description: Parameters for hardware input(s).

Configuration file: /etc/sysconfig/inputs.conf

[Input.I#]*

Parameter name	Default value	Valid values	Description
Name	Hardware specific	A string	1. The name of the input. This parameter is read only.
Trig	closed	open, closed	Determines when to trigger.

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

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.

Output.O#

Description: Parameters for hardware output(s).

Configuration file: /etc/sysconfig/outputs.conf

[Output.O#]

Parameter name	Default value	Valid values	Description
Name	Hardware specific	A string	The name of the output. Read only
Active	open	open, closed	The active state of the output.

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

Event

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]
Source	AbandonedObject	AbandonedObject IntrusionDetection CameraSabotage WrongDirection LoiteringDetection ObjectCounting ObjectRemoval StoppedVehicle FaceRecognition FaceDetection LicensePlateRecognition	Video analytics selected behavior
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:

1. 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, 15 means triggered by Video Analytics 1, 16 means triggered by Video Analytics 2.
2. Event 16 (Video Analytics 2) is unavailable in (R2 series)/(R3 series)

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

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.

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.

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.

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		Enable/disable upload image
Type	N		
Protocol	PTZ		
Function			1: preset 2: sequence 3: autopan 4: cruise
FunctionLine			Depends on PTZ function
DwellTime			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.

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.

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.

[Event.E#.Actions.A9] *

Parameter name	Default value	Valid values	Description
Enabled	no		
Type	N		
Protocol	HW		
Output	2		

Event servers

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.

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.

Time

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

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

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.

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.

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).

Properties.Audio

Configuration file: /etc/sysconfig/properties.conf

[Properties.Audio]

Parameter name	Default value	Valid values	Description
Audio	(U2 series) : yes	yes, no	1. The product has audio support. 2. The parameter is read only
Format	g711,g726	A string	The supported formats separated by commas, e.g. g711,g726.

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.

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, clockwise,counterclockwise,clockwise_mirror,clockwise_flip`. For products not supporting image rotation the value is 0. DNN Network Fisheye Camera(U2 series)
Resolution		A string	The supported resolutions separated by commas. E.g. quadvga, vga, qvga, cif, qcif.
Format	Mjpeg,-H.264,-H.265	A string	The supported image format. E.g. mjpeg

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.

PTZ

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.

PTZ.Limit

Configuration file: /etc/dynamic/ptz.conf

[PTZ.Limit.L0]

Parameter name	Default value	Valid values	Description
Mintilt	0	(U2 series): -20…10	Lower limit for tilt position
Maxtilt	90	(U2 series): 80 … 100 If image flip 170… 190	Upper limit for tilt position

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.

PTZ.OSD for T, U series

Configuration file: /etc/dynamic/ptz.conf

[PTZ.Home]

Parameter name	Default value	Valid values	Description
NorthPos	0		

Autopan(PTZ Camera exclusive)

Autopan.A#

Description: Contain parameters to create PTZ autopan Configuration file: /etc/ sysconfig /auto-pan.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.
ZoomPos			Zoom position. This parameter is read only.

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

Cruise (PTZ Camera exclusive)

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

Guard Tour (PTZ Camera exclusive)

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

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.

Audio

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 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

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	(R2 series)/ (R3 series)/ (U2 series): alaw ulaw 16000 24000 32000 40000 aac_128000 L16_128000 L16_256000 L16_384000 L16_768000	The output bit rate (bits per second) from the encoder. G711 Standard ulaw , alaw (64000) G726 Standard 16000, 24000, 32000, 40000
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).

Recording

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

DDNS

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

Frame skip - for P/Q/R/T/U Series

Frame skip

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	/ (Q series)/(R2 series)/(R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 (U2 series): NTSC (60) 60 PAL (50) 50	/ (Q series)/(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	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=25fps PAL (50): TV system=50fps

H264	/ (Q series)/(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 60 PAL (50) 50	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	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

H264_2	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	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

H264_3	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	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

H264_4	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	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

H.265	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50

H.265_2	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50

H.265_3	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50

H.265_4	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 30 NTSC (60) 60 PAL (25) 25 PAL (50) 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 30 PAL(25) 25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50	(R2 series)/ (R3 series)/ (U2 series): NTSC (30) 1 … 30 NTSC (60) 1 … 60 PAL (25) 1 … 25 PAL (50) 1 … 50 H.265 180 Fisheye Bullet IP Camera (T2 series): NTSC(30) 1…30 PAL(25) 1…25 (U2 series): NTSC (60) 1 … 60 PAL (50) 1 … 50

Motion

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	no	Enable/ disable Motion detection window
Left	(Q series): 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 (R2 series)/(R3 series)/ (U2 series): 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	(Q series): 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 (R2 series)/(R3 series)/ (U2 series): 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	(Q series): 6, when #=0 to 4 11, when # =5 to 9 (R2 series)/(R3 series)/ (U2 series): 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis
Bottom	/ (Q series): 9, when #=0 to 4 14, when # =5 to 9 (R2 series)/(R3 series)/ (U2 series): 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.

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	(R2 series)/(R3 series)/(U2 series): 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
Block	w40,h30,0000000000_0000000000…		

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	/ (Q series): 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 (R2 series)/ (R3 series)/ (U2 series): 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	/ (Q series): 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 (R2 series)/ (R3 series)/ (U2 series): 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	/ (Q series): 6, when #=0 to 4 11, when # =5 to 9 / (U2 series): 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis

Bottom	/ (Q series): 9, when #=0 to 4 14, when # =5 to 9 (R2 series)/ (R3 series)/ (U2 series): 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. Motion1.M0.

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	/ (Q series): 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 (R2 series)/(R3 series)/ (U2 series): 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	/ (Q series): 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 // (U2 series): 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	/ (Q series): 6, when #=0 to 4 11, when # =5 to 9 (R2 series)/(R3 series)/ (U2 series): 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis

Bottom	/ (Q series): 9, when #=0 to 4 14, when # =5 to 9 (R2 series)/(R3 series)/ (U2 series): 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. Motion2.M0.

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	/ (Q series): 5, when #=0,5; 10, when #=1,6; 15, when #=2,7; 20, when #=3,8; 25, when #=4,9 (R2 series)/ (R3 series)/ (U2 series): 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	(Q series): 8, when #=0,5; 13, when #=1,6; 18, when #=2,7; 23, when #=3,8; 28, when #=4,9 (R2 series)/ (R3 series)/ (U2 series): 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	(Q series): 6, when #=0 to 4 11, when # =5 to 9 (R2 series)/ (R3 series)/ (U2 series): 8, when #=0 to 4 13, when # =5 to 9	0 … 29	Motion detection window top axis

Bottom	(Q series): 9, when #=0 to 4 14, when # =5 to 9 (R2 series)/ (R3 series)/ (U2 series): 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. Motion3.M0.

Tampering

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	

Network Failure Detection

Network Failure Detection

Description: Network Failure Detection allows to ping another IP device in the network within a pre-determined 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 to ping another network IP address.

IR

IR Mode

Description: Set different mode of IR

Configuration file: /etc/sysconfig/ir.conf

[IR]

Parameter name	Default value	Valid values	Description
Mode	(U2 series): auto H.265 180 Fisheye Bullet IP Camera(T2 series): auto (R2 Series)/ (R3 Series)/ (Q series)/ (U2 series): lightsensor	/ (Q series): auto, manualon, manualoff, lightsensor, lighton, lightoff, smart (R2 Series)/ (R3 Series)/ (U2 series): Auto Night Day Light sensor Light on Light off smart	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
Active	on	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): on, off	Set IR mode, on or off, when alarm is triggered.
Threshold.DayMode	(R2 series)/ (R3 series)/ (U2 series): 7	(R2 series)/ (R3 series)/ (U2 series): 0 … 10	

Threshold.NightMode	(R2 series)/ (R3 series)/ (U2 series): 3	(R2 series)/ (R3 series)/ / (U2 series): 0 … 10	
LightCompensation	off	(R2 series)/ (R3 series)/ (U2 series): on, off	Eliminates the white out effect and saturation on close objects, producing a clear and recognizable image
ICRLEDHeater	off	(U2 series): On, off	

Profile

Profile.Normal

Description: Setup the desired image parameters for specific environments with different time schedules.

Configuration file: /etc/sysconfig/profile.conf

[Normal]

Parameter name	Default value	Valid values	Description
Current	Normal		
ImageSource.I0.Sensor.Exposure	auto		
ImageSource.I0.Sensor.Exposure.Piris.Irisvalue	3600		
ImageSource.I0.Sensor.Exposure.Piris.MinShutterSpeed	8		
ImageSource.I0.Sensor.Exposure.MaxShutterGain	3		

ImageSource.I0.Sensor.Exposure.ManualPreset.Shutter	200
ImageSource.I0.Sensor.Exposure.ManualPreset.AGCGain	0
ImageSource.I0.Sensor.Exposure.ManualPreset.Iris	6
ImageSource.I0.Sensor.WhiteBalance	auto
ImageSource.I0.Sensor.WhiteBalance.Rgain	57
ImageSource.I0.Sensor.WhiteBalance.Bgain	54
ImageSource.I0.Sensor.Backlight	on
ImageSource.I0.Sensor.Brightness	128
ImageSource.I0.Sensor.Sharpness	4
ImageSource.I0.Sensor.Flip	off
ImageSource.I0.Sensor.Freeze	off
ImageSource.I0.Sensor.Expcomp	8
ImageSource.I0.Sensor.Contrast	64
ImageSource.I0.Sensor.ColorLevel	64
ImageSource.I0.Sensor.Hue	128
ImageSource.I0.Sensor..Digitalzoom	1(off)
ImageSource.I0.Sensor.SpeedByZoom	off
ImageSource.I0.Sensor.2DNR	On
ImageSource.I0.Sensor.3DNR	low
ImageSource.I0.Sensor.Inverse	Off
ImageSource.I0.Sensor.AutoCalibration	off
ImageSource.I0.Sensor.AutoDefog	off
ImageSource.I0.Sensor.Wdr	off
ImageSource.I0.Sensor.ShutterWdr	on
ImageSource.I0.Sensor.Stabilizer	off
ImageSource.I0.Sensor.Stabilizer.AutoCalibration	off
ImageSource.I0.Sensor.ICR	auto

ImageSource.I0.Sensor.NoiseReduction	spq
ImageSource.I0.Sensor.SPQGammaNR	off
ImageSource.I0.Sensor.SPQCBCRNR	off
IR.Mode	lightsensor
IR.Threshold.DayMode	7
IR.Threshold.NightMode	3
IR.LightCompensation	off
IR.ICRTriggerAF	on
IR.ICRLEDHeater	off

Profile.P#

[Profile, P#]

Parameter name	Default value	Valid Values	Description
Name		A string	
Enabled	no		
Schedule	S0		
ImageSource.I0.Sensor.Exposure	auto		
ImageSource.I0.Sensor.Exposure.Piris.Irisvalue	3600		
ImageSource.I0.Sensor.Exposure.Piris.MinShutterSpeed	8		
ImageSource.I0.Sensor.Exposure.MaxShutterGain	3		
ImageSource.I0.Sensor.Exposure.ManualPreset.Shutter	200		
ImageSource.I0.Sensor.Exposure.ManualPreset.AGCGain	0		
ImageSource.I0.Sensor.Exposure.ManualPreset.Iris	6		
ImageSource.I0.Sensor.WhiteBalance	auto		

ImageSource.I0.Sensor.WhiteBalance.Rgain	57
ImageSource.I0.Sensor.WhiteBalance.Bgain	54
ImageSource.I0.Sensor.Backlight	on
ImageSource.I0.Sensor.Brightness	128
ImageSource.I0.Sensor.Sharpness	4
ImageSource.I0.Sensor.Flip	off
ImageSource.I0.Sensor.Freeze	off
ImageSource.I0.Sensor.Expcomp	8
ImageSource.I0.Sensor.Contrast	64
ImageSource.I0.Sensor.ColorLevel	64
ImageSource.I0.Sensor.Hue	128
ImageSource.I0.Sensor..Digitalzoom	1(off)
ImageSource.I0.Sensor.SpeedByZoom	off
ImageSource.I0.Sensor.2DNR	On
ImageSource.I0.Sensor.3DNR	low
ImageSource.I0.Sensor.Inverse	Off
ImageSource.I0.Sensor.AutoCalibration	off
ImageSource.I0.Sensor.AutoDefog	off
ImageSource.I0.Sensor.Wdr	off
ImageSource.I0.Sensor.ShutterWdr	on
ImageSource.I0.Sensor.Stabilizer	off
ImageSource.I0.Sensor.Stabilizer.AutoCalibration	off
ImageSource.I0.Sensor.ICR	auto
ImageSource.I0.Sensor.NoiseReduction	spq
ImageSource.I0.Sensor.SPQGammaNR	off
ImageSource.I0.Sensor.SPQCBCRNR	off
IR.Mode	lightsensor
IR.Threshold.DayMode	7

IR.Threshold.NightMode	3
IR.LightCompensation	off
IR.ICRTriggerAF	on
IR.ICRLEDHeater	off

- Note: the # is replaced with a group number starting from 0 to 9, e.g. Profile.P1.

RS-485 Control

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	/ (Q series)/ (R2 series)/ (R3 series)/ (U2 series): 0	(R2 series)/ (R3 series)/ (U2 series): 0, 1 / (Q series): 0-1 [RS485 only]	Enable/disable RS-485 control

Mode	(Q series)/ (R2 series)/ (R3 series (U2 series): 0	(Q series): 0-7 [RS485 only] (R2 series)/ (R3 series)/ (U2 series)/ (U2 series): 0-6[RS485 only]	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
ID Number	(Q series)/ (R2 series)/ (R3 series)/ (U2 series: 1	(Q series)/ (R2 series)/(R3 series)/ (U2 series): 1…254	
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.)

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 1. The value of Byte1 to Byte20 could be either representing with “0x” or not. For example, 0x2F or 2F

Storage Management

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: 1. The capacity of stored data exceeds the preconfigured capacity percentage (Cleanuplevel) of the memory card. 2. The time data stored in memory card is larger than a specified number of days (CleanupMaxAge)
CleanupMaxAge	1	1 … 999 (Unit: day)	
CleanupPolicyActive	no	no, yes	
RecordingFileSize	60		

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: 3. The capacity of stored data exceeds the preconfigured capacity percentage (Cleanuplevel) of the memory card. 4. The time data stored in memory card is larger than a specified number of days (CleanupMaxAge)
CleanupMaxAge	1	1 … 999 (Unit: day)	
CleanupPolicyActive	no	no, yes	
RecordingFileSize	60		

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.

Recording source

Description: The recording source for the NAS and SD card

Configuration file: /etc/sysconfig/storage.conf

[Storage]

Parameter name	Default value	Valid values	Description
RecordingSource	/ (Q series): h264 (R2 Series)/ (R3 Series)/H.265 IP Camera(T2 Series)/ (U2 series): stream1	/ (Q series): h264, h264_2, h264_3, h264_4, mjpeg (R2 Series)/ (R3 Series)/ (U2 series): Stream1 Stream2	Recording source for the NAS and SD Card
FileNameFormat	0		

Fisheye Setting

Fisheye Location

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

Configuration file: /etc/sysconfig/fisheye.conf

[Fisheye.F0]

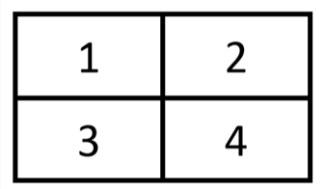
Parameter name	Default value	Valid values	Description
Correction (Dewarping Mode)	(U2 series): Front End	(U2 series): Front End Back End	1. Change mounting type according to ceiling mount or wall mount for fisheye camera to have correct dewarping mode(source). 2. After choosing the dewarping mode, user can then change the resolution to desired value. 3. Wall.Angle is only available when Location is set to “wall mount”. User can adjust the horizontal level of image to calibrate unlevel installation, either 1 or 10 degrees each time when user clicks the button.(e.g. If the desired value is Counterclockwise 30 degrees, then user should click three times on 10 degrees button at “Counterclockwise” side)
Location	(U2 series): Ceiling Mount	(U2 series): Ceiling Mount Wall Mount	
Wall.Angle	(U2 series): 0	(U2 series): Counterclockwise: 1、10(degree) Clockwise: 1、10(degree)	

Fisheye.F0

Description: Description of all the function related to fisheye camera.

[Fisheye.F0]

Parameter name	Default value	Valid values	Description
Stream		Stream1 Stream2	

Region	1 to 4	Define the number of ePTZ window. The number of single ePTZ is 1. the quad view(4ePTZ) region numbers are top-left(1), top-right(2), bottom-left(3), bottom-right(4) 
Move	home up down left right upleft upright downleft downright	Moves the device 5 degrees in the specific direction.
Pan	-180.0 to 180.0	Pans the device relative to the (0, 0)position
Tilt	-10.0 to 190.0	Tilts the device relative to the (0, 0)position
Zoom	0 to 9999	Zoom the device n steps
Rpan	-360.0 to 360.0	Pans the device n degrees relative to the current position
Rtilt	-360.0 to 360.0	Tilts the device n degrees relative to the current position
Rzoom	-9999 to 9999	Zoom the device n steps relative to the current position; Positive values mean zoom in, and negative values mean zoom out.

Zoomratio	1 to 10	Continuous pan/tilt motion. Positive values mean right (pan) and up (tilt), negative values mean left (pan) and down (tilt). "0,0" means stop.
continuouspantiltmove	-100 to 100, -100 to 100	Continuous pan/tilt motion. Positive values mean right (pan) and up (tilt), negative values mean left (pan) and down (tilt). "0,0" means stop.
continuouszoommove	-100 to 100	Continuous zoom motion. Positive values mean zoom in and negative values mean zoom out. Higher value gives higher speed.(Motorized models exclusive) "0" means stop.

Schedule

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	(Q series)/(R2 series)/ (R3 series)/(U2 series): 24:00	00:00 … 168:00	Time interval for event detection.

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

Video Analytics - for U series

MaxObjectSize & MinObjectSize

Description: The group is for setting detection object size of video analytics.

Configuration file: /etc/sysconfig/videoanalytics.conf

[ObjectSize]

Parameter name	Default value	Valid values	Description
MaxObjectSize	(U2 series): SM: 100,100,1080,1080	(U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	<Note> 1. The shorter size of the max object size should be longer than any side of the min object size 2. (X,Y) indicates the starting coordinates of MaxObjectSize 3. X+W/Y+H must be smaller than defined value
MinObjectSize	(U2 series): 1300,100,135,135 DNN Network IR PTZ(U2 series): 1300,100,137,137	(U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	

Exclude Zone

Description: The group is for adding/deleting exclude window.

Configuration file: /etc/sysconfig/videoanalytics.conf

[ExcludeZone.E#]

Parameter name	Default value	Valid values	Description
Enabled	no	Yes, no	Set zones in which objects will be ignored.

Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	
Name	Exclude 1…8		This parameter is read only

- Note: The # is replaced with a group number starting from 0 to 7

Abandoned Object

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Abandoned Object Zone Z#]

Parameter Name	Default Value	Valid Value	Description
Enabled	No	Yes, no	
Pos		(U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	
DelayBeforeAlarm	30	20…1800	

- Note: The # is replaced with a group number starting from 0 to 7

Intrusion Detection

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[VideoAnalytics.IntrusionDetection.I0.Zone.Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	
Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	
Direction	all	Up Upperright, Right Lowerright Down Lowerleft Left Upperleft All	

- Note: The # is replaced with a group number starting from 0 to 7

Camera Sabotage

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Camera Sabotage C0]

Parameter name	Default value	Valid values	Description
Sensitivity	50	1…100	
DwellTime	5	1…1000	
DelayBeforeAlarm	5	0…60	

Wrong Direction

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Wrong Direction Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	
Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		

DwellTime	5	1…1000
Direction	all	Up Upperright, Right Lowerright Down Lowerleft Left Upperleft All

- Note: The # is replaced with a group number starting from 0 to 7

Loitering Detection

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Loitering Detection Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	
Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		

DwellTime	5	1…1000
DelayBeforeAlarm	(U2 series): 10 (U2 series): 30	1…1800

- Note: The # is replaced with a group number starting from 0 to 7

Object Counting

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Object Counting Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, No	
Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 Line: X1,Y1,X2,Y2 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	

Direction	all	Up Upperright, Right Lowerright Down Lowerleft Left Upperleft All
Alarm At	(U2 series): 1	(U2 series): 1…1000
Reset Counter	(U2 series): no	(U2 series): Yes, no

- Note: The # is replaced with a group number starting from 0 to 7

Object Removal

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Object Removal Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	

Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	
DelayBeforeAlarm	10	1…1800	

- Note: The # is replaced with a group number starting from 0 to 7

Stopped Vehicle

Description: The group is for adding/deleting stopped vehicle window.

Configuration file: /etc/sysconfig/videoanalytics.conf

[Stopped Vehicle Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	

Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	
DelayBeforeAlarm	30	20…1800	

- Note: The # is replaced with a group number starting from 0 to 7

Face Detection

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

Configuration file: /etc/sysconfig/videoanalytics.conf

[Face Detection Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	

Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	

- Note: The # is replaced with a group number starting from 0 to 7

Face Recognition

Description: The group is for adding/deleting face recognition window.

Configuration file: /etc/sysconfig/videoanalytics.conf [Face Recognition Threshold]

Parameter name	Default value	Valid values	Description
Recognition.Threshold	70	1…100	

[Face Recognition Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	

Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	
Group		A string	

- Note: The # is replaced with a group number starting from 0 to 7

License Plate Recognition

Description: The group is for adding/deleting face recognition window.

Configuration file: /etc/sysconfig/videoanalytics.conf [License Plate Recognition Threshold]

Parameter name	Default value	Valid values	Description
Recognition.Threshold	70	1…100	
Recognition.Region	tw		

[License Plate Recognition Zone Z#]

Parameter name	Default value	Valid values	Description
Enabled	No	Yes, no	

Pos		Quadrilateral: X1,Y1,X2,Y2,X3,Y3,X4,Y4 Pentagon: X1,Y1,X2,Y2,X3,Y3,X4,Y4,X5,Y5 (U2 series): SM/V8: X:0…3839 Y:0…2159 W:0…3839 H:0…2159	The position of each user-defined zone.
Name	Zone1…8		
DwellTime	5	1…1000	
Group		A string	

- Note: The # is replaced with a group number starting from 0 to 7

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BeyondHumanVision

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