

INTERNATIONAL STANDARD

Information technology – UPnP Device Architecture –
Part 5-11: Digital Security Camera Device Control Protocol –
Digital Security Camera Settings Service

ISO/IEC 29341-5-11:2008

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INFORMATION TECHNOLOGY – UPNP DEVICE ARCHITECTURE –

Part 5-11: Digital Security Camera Device Control Protocol – Digital Security Camera Settings Service

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ISO/IEC 29341-5-11 was prepared by UPnP Implementers Corporation and adopted, under the PAS procedure, by joint technical committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

The list of all currently available parts of the ISO/IEC 29341 series, under the general title *Universal plug and play (UPnP) architecture*, can be found on the IEC web site.

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

ORIGINAL UPnP DOCUMENTS (informative)

Reference may be made in this document to original UPnP documents. These references are retained in order to maintain consistency between the specifications as published by ISO/IEC and by UPnP Implementers Corporation. The following table indicates the original UPnP document titles and the corresponding part of ISO/IEC 29341:

UPnP Document Title	ISO/IEC 29341 Part
UPnP Device Architecture 1.0	ISO/IEC 29341-1
UPnP Basic:1 Device	ISO/IEC 29341-2
UPnP AV Architecture:1	ISO/IEC 29341-3-1
UPnP MediaRenderer:1 Device	ISO/IEC 29341-3-2
UPnP MediaServer:1 Device	ISO/IEC 29341-3-3
UPnP AVTransport:1 Service	ISO/IEC 29341-3-10
UPnP ConnectionManager:1 Service	ISO/IEC 29341-3-11
UPnP ContentDirectory:1 Service	ISO/IEC 29341-3-12
UPnP RenderingControl:1 Service	ISO/IEC 29341-3-13
UPnP MediaRenderer:2 Device	ISO/IEC 29341-4-2
UPnP MediaServer:2 Device	ISO/IEC 29341-4-3
UPnP AV Datastructure Template:1	ISO/IEC 29341-4-4
UPnP AVTransport:2 Service	ISO/IEC 29341-4-10
UPnP ConnectionManager:2 Service	ISO/IEC 29341-4-11
UPnP ContentDirectory:2 Service	ISO/IEC 29341-4-12
UPnP RenderingControl:2 Service	ISO/IEC 29341-4-13
UPnP ScheduledRecording:1	ISO/IEC 29341-4-14
UPnP DigitalSecurityCamera:1 Device	ISO/IEC 29341-5-1
UPnP DigitalSecurityCameraMotionImage:1 Service	ISO/IEC 29341-5-10
UPnP DigitalSecurityCameraSettings:1 Service	ISO/IEC 29341-5-11
UPnP DigitalSecurityCameraStillImage:1 Service	ISO/IEC 29341-5-12
UPnP HVAC_System:1 Device	ISO/IEC 29341-6-1
UPnP HVAC_ZoneThermostat:1 Device	ISO/IEC 29341-6-2
UPnP ControlValve:1 Service	ISO/IEC 29341-6-10
UPnP HVAC_FanOperatingMode:1 Service	ISO/IEC 29341-6-11
UPnP FanSpeed:1 Service	ISO/IEC 29341-6-12
UPnP HouseStatus:1 Service	ISO/IEC 29341-6-13
UPnP HVAC_SetpointSchedule:1 Service	ISO/IEC 29341-6-14
UPnP TemperatureSensor:1 Service	ISO/IEC 29341-6-15
UPnP TemperatureSetpoint:1 Service	ISO/IEC 29341-6-16
UPnP HVAC_UserOperatingMode:1 Service	ISO/IEC 29341-6-17
UPnP BinaryLight:1 Device	ISO/IEC 29341-7-1
UPnP DimmableLight:1 Device	ISO/IEC 29341-7-2
UPnP Dimming:1 Service	ISO/IEC 29341-7-10
UPnP SwitchPower:1 Service	ISO/IEC 29341-7-11
UPnP InternetGatewayDevice:1 Device	ISO/IEC 29341-8-1
UPnP LANDevice:1 Device	ISO/IEC 29341-8-2
UPnP WANDevice:1 Device	ISO/IEC 29341-8-3
UPnP WANConnectionDevice:1 Device	ISO/IEC 29341-8-4
UPnP WLANAccessPointDevice:1 Device	ISO/IEC 29341-8-5
UPnP LANHostConfigManagement:1 Service	ISO/IEC 29341-8-10
UPnP Layer3Forwarding:1 Service	ISO/IEC 29341-8-11
UPnP LinkAuthentication:1 Service	ISO/IEC 29341-8-12
UPnP RadiusClient:1 Service	ISO/IEC 29341-8-13
UPnP WANCableLinkConfig:1 Service	ISO/IEC 29341-8-14
UPnP WANCommonInterfaceConfig:1 Service	ISO/IEC 29341-8-15
UPnP WANDSLLinkConfig:1 Service	ISO/IEC 29341-8-16
UPnP WANEthernetLinkConfig:1 Service	ISO/IEC 29341-8-17
UPnP WANIPConnection:1 Service	ISO/IEC 29341-8-18
UPnP WANPOTSLinkConfig:1 Service	ISO/IEC 29341-8-19
UPnP WANPPPoEConnection:1 Service	ISO/IEC 29341-8-20
UPnP WLANConfiguration:1 Service	ISO/IEC 29341-8-21
UPnP Printer:1 Device	ISO/IEC 29341-9-1
UPnP Scanner:1.0 Device	ISO/IEC 29341-9-2
UPnP ExternalActivity:1 Service	ISO/IEC 29341-9-10
UPnP Feeder:1.0 Service	ISO/IEC 29341-9-11
UPnP PrintBasic:1 Service	ISO/IEC 29341-9-12
UPnP Scan:1 Service	ISO/IEC 29341-9-13
UPnP QoS Architecture:1.0	ISO/IEC 29341-10-1
UPnP QoSDevice:1 Service	ISO/IEC 29341-10-10
UPnP QoSManager:1 Service	ISO/IEC 29341-10-11
UPnP QoSPolicyHolder:1 Service	ISO/IEC 29341-10-12
UPnP QoS Architecture:2	ISO/IEC 29341-11-1
UPnP QOS v2 Schema Files	ISO/IEC 29341-11-2

UPnP Document Title	ISO/IEC 29341 Part
UPnP QosDevice:2 Service	ISO/IEC 29341-11-10
UPnP QosManager:2 Service	ISO/IEC 29341-11-11
UPnP QosPolicyHolder:2 Service	ISO/IEC 29341-11-12
UPnP RemoteUIClientDevice:1 Device	ISO/IEC 29341-12-1
UPnP RemoteUIServerDevice:1 Device	ISO/IEC 29341-12-2
UPnP RemoteUIClient:1 Service	ISO/IEC 29341-12-10
UPnP RemoteUIServer:1 Service	ISO/IEC 29341-12-11
UPnP DeviceSecurity:1 Service	ISO/IEC 29341-13-10
UPnP SecurityConsole:1 Service	ISO/IEC 29341-13-11

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1. Overview and Scope

This service definition is compliant with the UPnP Device Architecture version *1.0*.

This service provides *control* of the basic setting of the actual image generating part of the security camera. Security Camera Settings are global to the device and will affect the Security Camera Still and Motion Image services contained within the Security Camera device.

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2. Service Modeling Definitions

2.1. ServiceType

A service that is compliant with this template is identified with the following service type: **urn:schemas-upnp-org:service: DigitalSecurityCameraSettings:1**.

2.2. State Variables

Table 1: State Variables

Variable Name	Req. or Opt. ¹	Data Type	Allowed Value	Default Value	Eng. Units
<u>AutomaticWhiteBalance</u>	<u>O</u>	<u>boolean</u>	<u>1,0</u>	<u>1</u>	
<u>FixedWhiteBalance</u>	<u>R</u>	<u>ui4</u>	<u>[0..1]</u>	<u>3000</u>	<u>K</u>
<u>AvailableRotations</u>	<u>O</u>	<u>string</u>			
<u>DefaultRotation</u>	<u>O</u>	<u>string</u>			
<u>Brightness</u>	<u>R</u>	<u>ui1</u>	<u>0..100</u>	<u>50</u>	<u>%</u>
<u>ColorSaturation</u>	<u>R</u>	<u>ui1</u>	<u>0..100</u>	<u>50</u>	<u>%</u>
<i>Non-standard state variables implemented by an UPnP vendor go here.</i>	<u>X</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>

¹ R = Required, O = Optional, X = Non-standard. EC 29341-5-11:2008

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2.2.1. AutomaticWhiteBalance

White Balance describes what the eye perceives as white. This differs with ambient light. For instance an object does not have the same color if it is placed in a room lit by light bulbs which gives a rather red light as it would if the object was placed outdoors in bright sunlight (rather blue). The human eye automatically compensates for this difference in perceived color. Cameras must in a similar manner compensate for ambient light to avoid objects being reproduced with incorrect colors.

If automatic is ON white balance should be handled automatically by the camera.

If no automatic white balance is available in the device fixed white balance value shall be used.

2.2.2. FixedWhiteBalance

Fixed White balance is used in environments of known or constant light environments. The unit used is the temperature of the light in Kelvin.

2.2.3. AvailableRotations

The rotation in degrees of the image calculated from what is considered normal upright positioning (0) of the camera.

The value of this string should be a comma delimited list of all supported rotations.

The list order should be the lowest compression level first.

Example: 0, 90, 180, 270

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