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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.

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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
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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
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UPnP WANCommonInterfaceConfig:1 Service	ISO/IEC 29341-8-15
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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
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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 type enables control over the transport of audio and video streams. The service type defines a 'common' model for A/V transport control suitable for a generic user interface. It can be used to control a wide variety of disc, tape and solid-state based media devices such as CD players, VCRs and MP3 players. A minimal implementation of this service can be used to control tuners.

The service type is related to the ConnectionManager service type, which describes A/V connection setup procedures, and the ContentDirectory service, which offers meta-information about the resource stored on the media. AVTransport also offers an action to retrieve any meta data embedded in the resource itself.

This service type does not offer *scheduled* recording.

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2. Service Modeling Definitions

2.1. ServiceType

The following service type identifies a service that is compliant with this template:

urn:schemas-upnp-org:service:*AVTransport:1*

2.2. State Variables

Table 1: State Variables

Variable Name	Req. or Opt.[1]	Data Type	Allowed Value	Default Value	Eng. Units
TransportState	*R*	*string*	*"STOPPED"* *"PLAYING"* see Table 1.1		
TransportStatus	*R*	*string*	*"OK"*, *"ERROR_OCCURRED"* *vendor-extensible*		
PlaybackStorageMedium	*R*	*string*	see Table 1.2		
RecordStorageMedium	*R*	*string*	see Table 1.2		
PossiblePlaybackStorageMedia	*R*	*string*	CSV[2] (string)		
PossibleRecordStorageMedia	*R*	*string*	CSV (string)		
CurrentPlayMode	*R*	*string*	*"NORMAL"* see Table 1.3	*"NORMAL"*	
TransportPlaySpeed	*R*	*string*	*"1"*	*"1"*	
RecordMediumWriteStatus	*R*	*string*	see Table 1.4		
CurrentRecordQualityMode	*R*	*string*	see Table 1.5		
PossibleRecordQualityModes	*R*	*string*	CSV (string)		
NumberOfTracks	*R*	*ui4*	*Min = 0* see Table 1.6		
CurrentTrack	*R*	*ui4*	*Min = 0* *Step = 1* see Table 1.7		
CurrentTrackDuration	*R*	*string*			
CurrentMediaDuration	*R*	*string*			
CurrentTrackMetaData	*R*	*string*			
CurrentTrackURI	*R*	*string*			
AVTransportURI	*R*	*string*			
AVTransportURIMetaData	*R*	*string*			
NextAVTransportURI	*R*	*string*			
NextAVTransportURIMetaData	*R*	*string*			
RelativeTimePosition	*R*	*string*			
AbsoluteTimePosition	*R*	*string*			
RelativeCounterPosition	*R*	*i4*			

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Variable Name	Req. or Opt.[1]	Data Type	Allowed Value	Default Value	Eng. Units
AbsoluteCounterPosition	*R*	*i4*			
CurrentTransportActions	*O*	*string*	CSV (string)		
LastChange	*R*	*string*			
A_ARG_TYPE_SeekMode	*R*	*string*	*"TRACK_NR"* see Table 1.8	*n/a*	
A_ARG_TYPE_SeekTarget	*R*	*string*		*n/a*	
A_ARG_TYPE_InstanceID	*R*	*ui4*		*n/a*	

[1] R = Required, O = Optional, X = Non-standard.

[2] CSV stands for Comma-Separated Value list. The type between brackets denotes the UPnP data type used for the elements inside the list. CSV is defined more formally in the ContentDirectory service template.

Table 1.1: allowedValueList for *TransportState*

Value	Req. or Opt.
"STOPPED"	*R*
"PLAYING"	*R*
"TRANSITIONING"	*O*
"PAUSED_PLAYBACK"	*O*
"PAUSED_RECORDING"	*O*
"RECORDING"	*O*
"NO_MEDIA_PRESENT"	*O*

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Table 1.2: allowedValueList for *PlaybackStorageMedium*

Value	Req. or Opt.
"UNKNOWN"	*O*
"DV"	*O*
"MINI-DV"	*O*
"VHS"	*O*
"W-VHS"	*O*
"S-VHS"	*O*
"D-VHS"	*O*
"VHSC"	*O*
"VIDEO8"	*O*
"HI8"	*O*
"CD-ROM"	*O*
"CD-DA"	*O*
"CD-R"	*O*
"CD-RW"	*O*
"VIDEO-CD"	*O*
"SACD"	*O*
"MD-AUDIO"	*O*
"MD-PICTURE"	*O*
"DVD-ROM"	*O*
"DVD-VIDEO"	*O*
"DVD-R"	*O*
"DVD+RW"	*O*
"DVD-RW"	*O*
"DVD-RAM"	*O*
"DVD-AUDIO"	*O*
"DAT"	*O*
"LD"	*O*
"HDD"	*O*
"MICRO-MV"	*O*
"NETWORK"	*O*
"NONE"	*O*

Withdrawn
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