

Appendix A. Video Device Class Codes

A.1. Video Interface Class Code

Table A- 1 Video Interface Class Code

Video Interface Class Code	Value
CC_VIDEO	0x0E

A.2. Video Interface Subclass Codes

Table A- 2 Video Interface Subclass Codes

Video Subclass Code	Value
SC_UNDEFINED	0x00
SC_VIDEOCONTROL	0x01
SC_VIDESTREAMING	0x02
SC_VIDEO_INTERFACE_COLLECTION	0x03

A.3. Video Interface Protocol Codes

Table A- 3 Video Interface Protocol Codes

Video Protocol Code	Value
PC_PROTOCOL_UNDEFINED	0x00
PC_PROTOCOL_15	0x01

A.4. Video Class-Specific Descriptor Types

Table A- 4 Video Class-Specific Descriptor Types

Descriptor Type	Value
CS_UNDEFINED	0x20
CS_DEVICE	0x21
CS_CONFIGURATION	0x22
CS_STRING	0x23
CS_INTERFACE	0x24
CS_ENDPOINT	0x25

A.5. Video Class-Specific VC Interface Descriptor Subtypes**Table A- 5 Video Class-Specific VC Interface Descriptor Subtypes**

Descriptor Subtype	Value
VC_DESCRIPTOR_UNDEFINED	0x00
VC_HEADER	0x01
VC_INPUT_TERMINAL	0x02
VC_OUTPUT_TERMINAL	0x03
VC_SELECTOR_UNIT	0x04
VC_PROCESSING_UNIT	0x05
VC_EXTENSION_UNIT	0x06
VC_ENCODING_UNIT	0x07

A.6. Video Class-Specific VS Interface Descriptor Subtypes**Table A- 6 Video Class-Specific VS Interface Descriptor Subtypes**

Descriptor Subtype	Value
VS_UNDEFINED	0x00
VS_INPUT_HEADER	0x01
VS_OUTPUT_HEADER	0x02
VS_STILL_IMAGE_FRAME	0x03
VS_FORMAT_UNCOMPRESSED	0x04
VS_FRAME_UNCOMPRESSED	0x05
VS_FORMAT_MJPEG	0x06
VS_FRAME_MJPEG	0x07
<i>Reserved</i>	0x08
<i>Reserved</i>	0x09
VS_FORMAT_MPEG2TS	0x0A
<i>Reserved</i>	0x0B
VS_FORMAT_DV	0x0C
VS_COLORFORMAT	0x0D
<i>Reserved</i>	0x0E
<i>Reserved</i>	0x0F
VS_FORMAT_FRAME_BASED	0x10
VS_FRAME_FRAME_BASED	0x11
VS_FORMAT_STREAM_BASED	0x12
VS_FORMAT_H264	0x13
VS_FRAME_H264	0x14
VS_FORMAT_H264_SIMULCAST	0x15

VS_FORMAT_VP8	0x16
VS_FRAME_VP8	0x17
VS_FORMAT_VP8_SIMULCAST	0x18

A.7. Video Class-Specific Endpoint Descriptor Subtypes

Table A- 7 Video Class-Specific Endpoint Descriptor Subtypes

Descriptor Subtype	Value
EP_UNDEFINED	0x00
EP_GENERAL	0x01
EP_ENDPOINT	0x02
EP_INTERRUPT	0x03

A.8. Video Class-Specific Request Codes

Table A- 8 Video Class-Specific Request Codes

Class-Specific Request Code	Value
RC_UNDEFINED	0x00
SET_CUR	0x01
SET_CUR_ALL	0x11
GET_CUR	0x81
GET_MIN	0x82
GET_MAX	0x83
GET_RES	0x84
GET_LEN	0x85
GET_INFO	0x86
GET_DEF	0x87
GET_CUR_ALL	0x91
GET_MIN_ALL	0x92
GET_MAX_ALL	0x93
GET_RES_ALL	0x94
GET_DEF_ALL	0x97

A.9. Control Selector Codes

A.9.1. VideoControl Interface Control Selectors

Table A- 9 VideoControl Interface Control Selectors

Control Selector	Value
VC_CONTROL_UNDEFINED	0x00
VC_VIDEO_POWER_MODE_CONTROL	0x01
VC_REQUEST_ERROR_CODE_CONTROL	0x02
<i>Reserved</i>	0x03

A.9.2. Terminal Control Selectors

Table A- 10 Terminal Control Selectors

Control Selector	Value
TE_CONTROL_UNDEFINED	0x00

A.9.3. Selector Unit Control Selectors

Table A- 11 Selector Unit Control Selectors

Control Selector	Value
SU_CONTROL_UNDEFINED	0x00
SU_INPUT_SELECT_CONTROL	0x01

A.9.4. Camera Terminal Control Selectors

Table A- 12 Camera Terminal Control Selectors

Control Selector	Value
CT_CONTROL_UNDEFINED	0x00
CT_SCANNING_MODE_CONTROL	0x01
CT_AE_MODE_CONTROL	0x02
CT_AE_PRIORITY_CONTROL	0x03
CT_EXPOSURE_TIME_ABSOLUTE_CONTROL	0x04
CT_EXPOSURE_TIME_RELATIVE_CONTROL	0x05
CT_FOCUS_ABSOLUTE_CONTROL	0x06
CT_FOCUS_RELATIVE_CONTROL	0x07
CT_FOCUS_AUTO_CONTROL	0x08
CT_IRIS_ABSOLUTE_CONTROL	0x09
CT_IRIS_RELATIVE_CONTROL	0x0A
CT_ZOOM_ABSOLUTE_CONTROL	0x0B
CT_ZOOM_RELATIVE_CONTROL	0x0C
CT_PANTILT_ABSOLUTE_CONTROL	0x0D
CT_PANTILT_RELATIVE_CONTROL	0x0E
CT_ROLL_ABSOLUTE_CONTROL	0x0F

CT_ROLL_RELATIVE_CONTROL	0x10
CT_PRIVACY_CONTROL	0x11
CT_FOCUS_SIMPLE_CONTROL	0x12
CT_WINDOW_CONTROL	0x13
CT_REGION_OF_INTEREST_CONTROL	0x14

A.9.5. Processing Unit Control Selectors

Table A- 13 Processing Unit Control Selectors

Control Selector	Value
PU_CONTROL_UNDEFINED	0x00
PU_BACKLIGHT_COMPENSATION_CONTROL	0x01
PU_BRIGHTNESS_CONTROL	0x02
PU_CONTRAST_CONTROL	0x03
PU_GAIN_CONTROL	0x04
PU_POWER_LINE_FREQUENCY_CONTROL	0x05
PU_HUE_CONTROL	0x06
PU_SATURATION_CONTROL	0x07
PU_SHARPNESS_CONTROL	0x08
PU_GAMMA_CONTROL	0x09
PU_WHITE_BALANCE_TEMPERATURE_CONTROL	0x0A
PU_WHITE_BALANCE_TEMPERATURE_AUTO_CONTROL	0x0B
PU_WHITE_BALANCE_COMPONENT_CONTROL	0x0C
PU_WHITE_BALANCE_COMPONENT_AUTO_CONTROL	0x0D
PU_DIGITAL_MULTIPLIER_CONTROL	0x0E
PU_DIGITAL_MULTIPLIER_LIMIT_CONTROL	0x0F
PU_HUE_AUTO_CONTROL	0x10
PU_ANALOG_VIDEO_STANDARD_CONTROL	0x11
PU_ANALOG_LOCK_STATUS_CONTROL	0x12
PU_CONTRAST_AUTO_CONTROL	0x13

A.9.6. Encoding Unit Control Selectors

Table A- 14 Encoding Unit Control Selectors

Control Selector	VALUE
EU_CONTROL_UNDEFINED	0x00
EU_SELECT_LAYER_CONTROL	0x01
EU_PROFILE_TOOLSET_CONTROL	0x02
EU_VIDEO_RESOLUTION_CONTROL	0x03
EU_MIN_FRAME_INTERVAL_CONTROL	0x04
EU_SLICE_MODE_CONTROL	0x05
EU_RATE_CONTROL_MODE_CONTROL	0x06

EU_AVERAGE_BITRATE_CONTROL	0x07
EU_CPB_SIZE_CONTROL	0x08
EU_PEAK_BIT_RATE_CONTROL	0x09
EU_QUANTIZATION_PARAMS_CONTROL	0x0A
EU_SYNC_REF_FRAME_CONTROL	0x0B
EU_LTR_BUFFER_CONTROL	0x0C
EU_LTR_PICTURE_CONTROL	0x0D
EU_LTR_VALIDATION_CONTROL	0x0E
EU_LEVEL_IDC_LIMIT_CONTROL	0x0F
EU_SEI_PAYLOADTYPE_CONTROL	0x10
EU_QP_RANGE_CONTROL	0x11
EU_PRIORITY_CONTROL	0x12
EU_START_OR_STOP_LAYER_CONTROL	0x13
EU_ERROR_RESILIENCY_CONTROL	0x14

A.9.7. Extension Unit Control Selectors

Table A- 15 Extension Unit Control Selectors

Control Selector	Value
XU_CONTROL_UNDEFINED	0x00

A.9.8. VideoStreaming Interface Control Selectors

Table A- 16 VideoStreaming Interface Control Selectors

Control Selector	Value
VS_CONTROL_UNDEFINED	0x00
VS_PROBE_CONTROL	0x01
VS_COMMIT_CONTROL	0x02
VS_STILL_PROBE_CONTROL	0x03
VS_STILL_COMMIT_CONTROL	0x04
VS_STILL_IMAGE_TRIGGER_CONTROL	0x05
VS_STREAM_ERROR_CODE_CONTROL	0x06
VS_GENERATE_KEY_FRAME_CONTROL	0x07
VS_UPDATE_FRAME_SEGMENT_CONTROL	0x08
VS_SYNCH_DELAY_CONTROL	0x09

Appendix B. Terminal Types

The following is a list of possible Terminal types. This list is non-exhaustive and could be expanded in the future.

B.1. USB Terminal Types

These Terminal types describe Terminals that handle signals carried over the USB, through isochronous or bulk pipes. These Terminal types are valid for both Input and Output Terminals.

Table B- 1 USB Terminal Types

Terminal Type	Code	I/O	Description
TT_VENDOR_SPECIFIC	0x0100	I/O	A Terminal dealing with a signal carried over a vendor-specific interface. The vendor-specific interface descriptor must contain a field that references the Terminal.
TT_STREAMING	0x0101	I/O	A Terminal dealing with a signal carried over an endpoint in a VideoStreaming interface. The VideoStreaming interface descriptor points to the associated Terminal through the bTerminalLink field.

B.2. Input Terminal Types

These Terminal Types describe Terminals that are designed to capture video. They either are physically part of the video function or can be assumed to be connected to it in normal operation. These Terminal Types are valid only for Input Terminals.

Table B- 2 Input Terminal Types

Terminal Type	Code	I/O	Description
ITT_VENDOR_SPECIFIC	0x0200	I	Vendor-Specific Input Terminal.
ITT_CAMERA	0x0201	I	Camera sensor. To be used only in Camera Terminal descriptors.
ITT_MEDIA_TRANSPORT_INPUT	0x0202	I	Sequential media. To be

			used only in Media Transport Terminal Descriptors.
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B.3. Output Terminal Types

These Terminal types describe Terminals that are designed to render video. They are either physically part of the video function or can be assumed to be connected to it in normal operation. These Terminal types are only valid for Output Terminals.

Table B- 3 Output Terminal Types

Terminal Type	Code	I/O	Description
OTT_VENDOR_SPECIFIC	0x0300	O	Vendor-Specific Output Terminal.
OTT_DISPLAY	0x0301	O	Generic display (LCD, CRT, etc.).
OTT_MEDIA_TRANSPORT_OUTPUT	0x0302	O	Sequential media . To be used only in Media Transport Terminal Descriptors.

B.4. External Terminal Types

These Terminal types describe external resources and connections that do not fit under the categories of Input or Output Terminals because they do not necessarily translate video signals to or from the user of the computer. Most of them may be either Input or Output Terminals.

Table B- 4 External Terminal Types

Terminal type	Code	I/O	Description
EXTERNAL_VENDOR_SPECIFIC	0x0400	I/O	Vendor-Specific External Terminal.
COMPOSITE_CONNECTOR	0x0401	I/O	Composite video connector.
SVIDEO_CONNECTOR	0x0402	I/O	S-video connector.
COMPONENT_CONNECTOR	0x0403	I/O	Component video connector.