

# **Dell SDK for Monitors**

## **Application Programming Interface Guide**

for SDK version 1.4

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# Introduction

This document describes the APIs for supported Dell UltraSharp monitors on Linux(x86), OSX and Windows platforms. These APIs are to be used for remote display management and control from a Host PC to supported Dell UltraSharp monitors via a USB connection. A USB 3.0 A to B cable should be used for the connection between the host and the display.

The following monitors are supported:

1. UP2516D
2. UP2716D
3. UP3017
4. UP3218K

The API described in this document corresponds to SDK version 1.4.

## API Return Codes

All APIs return a MONITOR\_CODE as described below:

### Return

MONITOR_CODE	Code describing the result of the API call
0	Success
1	Timeout
2	Parameters Error
3	Connection error with monitor
4	Communications error with monitor
5	Wrong state for API call
6	API not supported by monitor
-1	Other Failure

# Monitor Management

## GetAvailableMonitors

---

Returns the number of supported monitor(s)

### API

MONITOR\_CODE GetAvailableMonitors(BYTE \*pbCount)

#### Params

byMonitors[]      Array for return values

#### Return

pbCount      Number of supported monitors connected

## ConnectMonitor

---

Connect to monitor and start session

### API

MONITOR\_CODE ConnectMonitor(BYTE iID)

#### Params

iID      Index of monitor as returned by GetAvailableMonitors to connect to.  
Index starts at 0 for the first monitor.

## DisconnectMonitor

---

Disconnect to monitor and end session

### API

MONITOR\_CODE DisconnectMonitor(void)

#### Params

-

## SetAssetTag

---

Set the asset tag of the monitor.

### API

MONITOR\_CODE SetAssetTag(BYTE \*pbyAssetTag)

#### Params

\*pbyAssetTag      Pointer to asset tag ID string (max 10 chars)

## GetAssetTag

---

Returns the monitor asset tag. Asset Tag will be empty until set by SetAssetTag.

**API**

MONITOR\_CODE GetAssetTag(BYTE \*pbyAssetTag)

**Params**

\*pbyAssetTag      Pointer to return asset tag ID string

**Return**

pbyAssetTag      Asset tag ID string (max 10 chars)

## GetMonitorName

---

Returns the monitor name

**API**

MONITOR\_CODE GetMonitorName(BYTE \*pbyMonitorName)

**Params**

\*pbyMonitorName      Pointer to return monitor name

**Return**

pbyMonitorName      Monitor name string (max 10 chars)

## GetMonitorSerialNumber

---

Returns the monitor serial number

**API**

MONITOR\_CODE GetMonitorSerialNumber(BYTE \*pbySerialNumber)

**Params**

\*pbySerialNumber      Pointer to return monitor serial number

**Return**

pbySerialNumber      Monitor serial number string (max 12 chars)

## GetBacklightHours

---

Returns the monitor backlight hours

**API**

MONITOR\_CODE GetBacklightHours(SWORD16 \*ps16Val)

**Params**

\*ps16Val      Pointer to return monitor backlight hours

**Return**

ps16Val      Monitor backlight hours

# Power Management

## GetPowerState

---

Returns the current power state of the monitor

### API

MONITOR\_CODE GetPowerState(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return power state

#### Return

pu8Val	Power State
0	Off
1	On
2	Standby

## SetPowerState

---

Set the monitor on or standby

### API

MONITOR\_CODE SetPowerState(UBYTE u8Val)

#### Params

u8Val	Power state to set
0	Off
1	On
2	Standby

## GetPowerLED

---

Returns the power LED setting of the monitor

### API

MONITOR\_CODE GetPowerLED(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return power LED setting

#### Return

pu8Val	Power LED Setting
0	Off during Active
1	On during Active

## SetPowerLED

---

Set the power LED setting

### API

MONITOR\_CODE SetPowerLED(UBYTE u8Val)

**Params**

u8Val	Power LED Setting 0 Off during Active 1 On during Active
-------	--

## GetPowerUSB

---

Returns the power USB setting of the monitor

**API**

MONITOR\_CODE GetPowerUSB(UBYTE \*pu8Val)

**Params**

*pu8Val	Pointer to return power USB setting
---------	-------------------------------------

**Return**

pu8Val	Power USB Setting 0 Off during Standby 1 On during Standby
--------	--

## SetPowerUSB

---

Set the power USB setting

**API**

MONITOR\_CODE SetPowerUSB(UBYTE u8Val)

**Params**

u8Val	Power USB Setting 0 Off during Standby 1 On during Standby
-------	--

## Reset Power

---

Reset power to the monitor

**API**

MONITOR\_CODE ResetPower(void)

**Params**

-

# Image Management

## GetBrightness

---

Returns the brightness level of the monitor

### API

MONITOR\_CODE GetBrightness(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return brightness value

#### Return

pu8Val                    Brightness value  
                          Integer value 0 (dark) to 100 (bright)  
                          Default 75  
                          Values in increments of 1

## SetBrightness

---

Set the brightness level of the monitor

### API

MONITOR\_CODE SetBrightness(UBYTE u8Val)

#### Params

u8Val                    Brightness value  
                          Integer value 0 (dark) to 100 (bright)  
                          Default 75  
                          Values in increments of 1

## GetContrast

---

Returns the contrast level of the monitor

### API

MONITOR\_CODE GetContrast(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return contrast value

#### Return

pu8Val                    Contrast value  
                          Integer value 0 (minimal) to 100 (maximum)  
                          Default 75  
                          Values in increments of 1

## SetContrast

---

Set the contrast level of the monitor.

*NOTE: Uniformity Compensation must be turned off for this to work.*

**API**

MONITOR\_CODE SetContrast(UBYTE u8Val)

**Params**

u8Val	Contrast value Integer value 0 (minimal) to 100 (maximum) Default 75 Values in increments of 1
-------	---

## GetDynamicContrast

---

Returns the dynamic contrast setting. Applicable for Movies and Gaming.

*NOTE: Only works in Color Preset Game or Movie.*

**API**

MONITOR\_CODE GetDynamicContrast(UBYTE \*pu8Val)

**Params**

*pu8Val	Pointer to return dynamic contrast value
---------	--

**Return**

pu8Val	Dynamic Contrast 0 Off 1 On
--------	-----------------------------------

## SetDynamicContrast

---

Turns on/off the dynamic contrast setting. Applicable for Movies and Gaming.

*NOTE: Only works in Color Preset Game or Movie.*

**API**

MONITOR\_CODE SetDynamicContrast(UBYTE u8Val)

**Params**

u8Val	Dynamic Contrast 0 Off 1 On
-------	-----------------------------------

## GetAspectRatio

---

Returns the aspect ratio

**API**

MONITOR\_CODE GetAspectRatio(UBYTE \*pu8Val)

**Params**

*pu8Val	Pointer to return aspect ratio
---------	--------------------------------

**Return**

pu8Val	Aspect Ratio 0 Wide 16:9
--------	-----------------------------

1	Auto Resize
2	4:3
3	1:1

## SetAspectRatio

---

Sets the aspect ratio

### API

MONITOR\_CODE SetAspectRatio(UBYTE u8Val)

### Params

u8Val	Aspect Ratio
0	Wide 16:9
1	Auto Resize
2	4:3
3	1:1

## GetSharpness

---

Returns the sharpness level

### API

MONITOR\_CODE GetSharpness(UBYTE \*pu8Val)

### Params

*pu8Val	Pointer to return sharpness value
---------	-----------------------------------

### Return

pu8Val	Sharpness value Integer value 0 to 100 Default 50 Values in increments of 10
--------	---

## SetSharpness

---

Sets the sharpness level

### API

MONITOR\_CODE SetSharpness(UBYTE u8Val)

### Params

u8Val	Sharpness value Integer value 0 to 100 Default 50 Values in increments of 10
-------	---

## GetResponseTime

---

Returns the response time

### API

MONITOR\_CODE GetResponseTime(UBYTE \*pu8Val)

**Params**  
\*pu8Val                    Pointer to return response time value

**Return**  
pu8Val                    Response Time  
0                        Normal  
1                        Fast

## SetResponseTime

---

Sets the response time

**API**  
MONITOR\_CODE SetResponseTime(UBYTE u8Val)

**Params**  
u8Val                    Response Time  
0                        Normal  
1                        Fast

# Color Management

## GetSaturation

---

Returns the color saturation level

*NOTE: Only works in Color Preset Game or Movie.*

### API

MONITOR\_CODE GetSaturation(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return color saturation level

#### Return

pu8Val                    Color Saturation level  
                          Integer value 0 to 100  
                          Default 50  
                          Values in increments of 1

## SetSaturation

---

Sets the color saturation level

*NOTE: Only works in Color Preset Game or Movie.*

### API

MONITOR\_CODE SetSaturation(UBYTE u8Val)

#### Params

u8Val                    Color Saturation level  
                          Integer value 0 to 100  
                          Default 50  
                          Values in increments of 1

## GetHue

---

Returns the hue level

*NOTE: Only works in Color Preset Game or Movie.*

### API

MONITOR\_CODE GetHue(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return hue level

#### Return

pu8Val                    Color Saturation level  
                          Integer value 0 to 100  
                          Default 50  
                          Values in increments of 1

## SetHue

---

Sets the hue level

*NOTE: Only works in Color Preset Game or Movie.*

### API

MONITOR\_CODE SetHue(UBYTE u8Val)

#### Params

u8Val	Hue level Integer value 0 to 100 Default 50 Values in increments of 1
-------	--

## GetColorTempCaps

---

Returns the supported color temperatures of the monitor

*NOTE: Only works in Color Preset Color Temp.*

### API

MONITOR\_CODE GetColorTempCaps(UWORD32 \*pu32Val)

#### Params

*pu32Val	Pointer to return color temperature capabilities
----------	--

#### Return

pu32Val	Bitwise representation of color temperature capabilities
0x00000001	5000K
0x00000002	5700K
0x00000004	6500K
0x00000008	7500K
0x00000010	9300K
0x00000020	10000K

For example:

0x00000013 would indicate 5000K, 5700K and 9300K supported

## GetColorTemp

---

Returns the current color temperature

*NOTE: Only works in Color Preset Color Temp.*

### API

MONITOR\_CODE GetColorTemp(UWORD32 \*pu32Val)

#### Params

*pu32Val	Pointer to return color temperature
----------	-------------------------------------

#### Return

pu32Val	Color temperature 0x00000001 5000K
---------	---------------------------------------

0x00000002	5700K
0x00000004	6500K
0x00000008	7500K
0x00000010	9300K
0x00000020	10000K

## SetColorTemp

---

Sets the color temperature

*NOTE: Only works in Color Preset Color Temp.*

### API

MONITOR\_CODE SetColorTemp(UWORD32 u32Val)

#### Params

u32Val	Color temperature
0x00000001	5000K
0x00000002	5700K
0x00000004	6500K
0x00000008	7500K
0x00000010	9300K
0x00000020	10000K

## GetColorSpaceCaps

---

Returns the supported color spaces of the monitor

*NOTE: Only works in Color Preset Color Space.*

### API

MONITOR\_CODE GetColorSpaceCaps(UWORD32 \*pu32Val)

#### Params

\*pu32Val                  Pointer to return color space capabilities

#### Return

pu32Val	Bitwise representation of supported color spaces
0x00000001	Adobe RGB
0x00000002	sRGB
0x00000004	Rec 709
0x00000008	DCI-P3
0x00000010	CAL 1
0x00000020	CAL 2

For example:

0x00000013 would indicate Adobe RGB, sRGB and CAL 1 supported

## GetColorSpaceState

---

Returns the current color space state

*NOTE: Only works in Color Preset Color Space.*

### API

MONITOR\_CODE GetColorSpaceState(UWORD32 \*pu32Val)

**Params**

\*pu32Val                    Pointer to return color space state

**Return**

pu32Val	Color space
	0x00000001    Adobe RGB
	0x00000002    sRGB
	0x00000004    Rec 709
	0x00000008    DCI-P3
	0x00000010    CAL 1
	0x00000020    CAL 2

## SetColorSpaceState

---

Sets the color space state

*NOTE: Only works in Color Preset Color Space.*

**API**

MONITOR\_CODE SetColorSpaceState(UWORD32 u32Val)

**Params**

u32Val	Color space
	0x00000001    Adobe RGB
	0x00000002    sRGB
	0x00000004    Rec 709
	0x00000008    DCI-P3
	0x00000010    CAL 1
	0x00000020    CAL 2

## GetInputColorFormat

---

Returns the input color format

**API**

MONITOR\_CODE GetInputColorFormat(UBYTE \*pu8Val)

**Params**

\*pu8Val                    Pointer to return response time value

**Return**

pu8Val	Input Color Format
0	RGB
1	YPbPr

## SetInputColorFormat

---

Sets the input color format

**API**

MONITOR\_CODE SetInputColorFormat(UBYTE u8Val)

**Params**

u8Val	Input Color Format
0	RGB
1	YPbPr

## GetColorPresetCaps

---

Returns the available color presets

### API

MONITOR\_CODE GetColorPresetCaps(UWORD32 \*pu32Val)

### Params

\*pu32Val                    Pointer to return color space capabilities

### Return

pu32Val	Bitwise representation of supported color presets
	0x00000001 Standard
	0x00000002 Multimedia
	0x00000004 Movie
	0x00000008 Game
	0x00000010 Paper
	0x00000020 Color Temp.
	0x00000040 Color Space
	0x00000080 Custom Color

For example:

0x00000013 would indicate Standard, Multimedia and Paper presets available

## GetColorPreset

---

Returns the current color preset

### API

MONITOR\_CODE GetColorPreset(UWORD32 \*pu32Val)

### Params

\*pu32Val                    Pointer to return color preset

### Return

pu32Val	Color preset
	0x00000001 Standard
	0x00000002 Multimedia
	0x00000004 Movie
	0x00000008 Game
	0x00000010 Paper
	0x00000020 Color Temp.
	0x00000040 Color Space
	0x00000080 Custom Color

## SetColorPreset

---

Sets the color preset

### API

MONITOR\_CODE SetColorPreset(UWORD32 u32Val)

**Params**

u32Val	Color preset 0x00000001 Standard 0x00000002 Multimedia 0x00000004 Movie 0x00000008 Game 0x00000010 Paper 0x00000020 Color Temp. 0x00000040 Color Space 0x00000080 Custom Color
--------	--

## GetCustomColor

---

Returns the current custom color

*NOTE: Only works in Color Preset Custom Color.*

**API**

MONITOR\_CODE GetCustomColor(UBYTE u8Val,  
                          UBYTE \*pu8ValR, UBYTE \*pu8ValG, UBYTE \*pu8ValB,  
                          UBYTE \*pu8ValC, UBYTE \*pu8ValM, UBYTE \*pu8ValY)

**Params**

u8Val	Custom color type to return values
*pu8ValR	Pointer to return R value
*pu8ValG	Pointer to return G value
*pu8ValB	Pointer to return B value
*pu8ValC	Pointer to return C value
*pu8ValM	Pointer to return M value
*pu8ValY	Pointer to return Y value

**Return**

u8Val	Custom color type 0 Gain 1 Offset 2 Hue 3 Saturation
pu8ValR	R value, 0 to 100
pu8ValG	G value, 0 to 100
pu8ValB	B value, 0 to 100
pu8ValC	C value, 0 to 100 (Only valid for custom color types Hue and Saturation)
pu8ValM	M value, 0 to 100 (Only valid for custom color types Hue and Saturation)
pu8ValY	Y value, 0 to 100 (Only valid for custom color types Hue and Saturation)

## SetColorPreset

---

Sets the custom color

*NOTE: Only works in Color Preset Custom Color.*

#### API

```
MONITOR_CODE SetCustomColor (UBYTE u8Val,  
    UBYTE u8ValR, UBYTE u8ValG, UBYTE u8ValB,  
    UBYTE u8ValC, UBYTE u8ValM, UBYTE u8ValY)
```

#### Params

u8Val	Custom color type 0 Gain 1 Offset 2 Hue 3 Saturation
u8ValR	R value, 0 to 100
u8ValG	G value, 0 to 100
u8ValB	B value, 0 to 100
u8ValC	C value, 0 to 100 (Only valid for custom color types Hue and Saturation)
u8ValM	M value, 0 to 100 (Only valid for custom color types Hue and Saturation)
u8ValY	Y value, 0 to 100 (Only valid for custom color types Hue and Saturation)

## GetGammaMode

---

Returns the gamma mode

#### API

```
MONITOR_CODE GetGammaMode(UBYTE *pu8Val)
```

#### Params

*pu8Val	Pointer to return gamma mode
---------	------------------------------

#### Return

pu8Val	Gamma Mode 0 PC 1 MAC
--------	-----------------------------

#### Note

Not supported on UP3218K

## SetGammaMode

---

Sets the gamma mode

#### API

```
MONITOR_CODE SetGammaMode(UBYTE u8Val)
```

#### Params

u8Val	Gamma Mode 0 PC 1 MAC
-------	-----------------------------

### Note

Not supported on UP3218K

## GetUniformityCompensation

---

Returns the uniformity compensation setting

### API

MONITOR\_CODE GetUniformityCompensation(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return uniformity compensation setting

#### Return

pu8Val	Uniformity Compensation
0	Off
2	On

## SetUniformityCompensation

---

Sets the uniformity compensation

### API

MONITOR\_CODE SetUniformityCompensation(UBYTE u8Val)

#### Params

u8Val	Uniformity Compensation
0	Off
2	On

## ResetColor

---

Reset all color settings to default

### API

MONITOR\_CODE ResetColor(void)

#### Params

-

# LUT Management

## GetCalibrationHours

---

Returns the calibration hours of CAL1 or CAL2 since last SetLUT.

*NOTE: Only works in Color Preset Color Space CAL1 or CAL2.*

### API

MONITOR\_CODE GetCalibrationHours(SWORD16 \*ps16Val)

#### Params

\*ps16Val                    Pointer to return monitor calibration hours

#### Return

ps16Val                    Monitor calibration hours

## GetCalBrightness

---

Get the brightness level of CAL1 or CAL2.

*NOTE: Only works in Color Preset Color Space CAL1 or CAL2.*

### API

MONITOR\_CODE GetCalBrightness(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return CAL brightness value

#### Return

pu8Val                    CAL brightness value  
Integer value 0 (dark) to 100 (bright)  
Values in increments of 1

## SetCalBrightness

---

Set the brightness level of CAL1 or CAL2.

*NOTE: Only works in Color Preset Color Space CAL1 or CAL2.*

### API

MONITOR\_CODE SetCalBrightness(UBYTE u8Val)

#### Params

u8Val                    CAL brightness value  
Integer value 0 (dark) to 100 (bright)  
Values in increments of 1

## SetColorControl

---

Enables or disables color engine for native color.

*NOTE: Only works in Color Preset Color Space CAL1 or CAL2.*

#### API

MONITOR\_CODE SetColorControl(UBYTE u8Val)

#### Params

u8Val	0	Disable
	1	Enable

## SetLUT

---

Setup the LUT (Look Up Tables) for CAL1 or CAL2.

*NOTE: Only works in Color Preset Color Space CAL1 or CAL2.*

#### API

MONITOR\_CODE SetLUT(UWORD16 arrPreGamma[3][1025],  
                  UWORD16 arrPostGamma[3][1025],  
                  UWORD16 arrColorMatrix[9])

#### Params

arrPreGamma	Array with 1025 16-bit color values for RGB channels, where [0][1025] for Red channel, [1][1025] for Green channel and [2][1025] for Blue channel
arrPostGamma	Array with 1025 16-bit color values for RGB channels, where [0][1025] for Red channel, [1][1025] for Green channel and [2][1025] for Blue channel
arrColorMatrix	2's complement values of the 3x3 16-bit color matrix, in the order from a <sub>1</sub> to a <sub>9</sub>  $R_{out} = (1+a_1)R_{in} + a_2G_{in} + a_3B_{in}$ $G_{out} = a_4R_{in} + (1+a_5)G_{in} + a_6B_{in}$ $B_{out} = a_7R_{in} + a_8G_{in} + (1+a_9)B_{in}$

#### Note

The SetLUT API has been deprecated since SDK 1.4. Please use SetLUT2 instead.

## SetLUT2

---

Setup the LUT (Look Up Tables) for CAL1 or CAL2.

*NOTE: Only works in Color Preset Color Space CAL1 or CAL2.*

#### API

MONITOR\_CODE SetLUT2 (UWORD16 arrGammaLen,  
                  UWORD16 \*arrPreGamma,  
                  UWORD16 \*arrPostGamma,  
                  UWORD16 arrColorMatrix[9])

#### Params

arrGammaLen	Buffer length for arrPreGamma and arrPostGamma
-------------	--

*arrPreGamma	Array with arrGammaLen-size 16-bit color values for RGB channels, where [0][arrGammaLen] for Red channel, [1][arrGammaLen] for Green channel and [2][arrGammaLen] for Blue channel
*arrPostGamma	Array with arrGammaLen-size 16-bit color values for RGB channels, where [0][arrGammaLen] for Red channel, [1][arrGammaLen] for Green channel and [2][arrGammaLen] for Blue channel
arrColorMatrix	2's complement values of the 3x3 16-bit color matrix, in the order from a <sub>1</sub> to a <sub>9</sub>  $R_{out} = (1+a_1)R_{in} + a_2G_{in} + a_3B_{in}$ $G_{out} = a_4R_{in} + (1+a_5)G_{in} + a_6B_{in}$ $B_{out} = a_7R_{in} + a_8G_{in} + (1+a_9)B_{in}$

# Video Input Management

## GetAutoSelect

---

Returns the input source auto select setting

### API

MONITOR\_CODE GetAutoSelect(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return auto select setting

#### Return

pu8Val	Auto Select
0	Off
1	On

## SetAutoSelect

---

Turns on/off input source auto select

### API

MONITOR\_CODE SetAutoSelect(UBYTE u8Val)

#### Params

u8Val	Auto Select
0	Off
1	On

## GetVideoInputCaps

---

Returns the available video inputs

### API

MONITOR\_CODE GetVideoInputCaps(UWORD32 \*pu32Val)

#### Params

\*pu32Val                    Pointer to return available video inputs

#### Return

pu32Val	Bitwise representation of available video inputs
0x00000001	HDMI1
0x00000002	HDMI2
0x00000004	HDMI3
0x00000008	DP1
0x00000010	DP2
0x00000020	DP3
0x00000040	VGA1
0x00000080	VGA2
0x00000100	DVI1
0x00000200	DVI2

For example:  
0x00000149 would indicate HDMI1, DP1, VGA1 and DVI1 available

## GetVideoInput

---

Returns the current video input source

### API

MONITOR\_CODE GetVideoInput(UWORD32 \*pu32Val)

### Params

\*pu32Val                    Pointer to return video input source

### Return

pu32Val	Video Input Source
	0x00000001    HDMI1
	0x00000002    HDMI2
	0x00000004    HDMI3
	0x00000008    DP1
	0x00000010    DP2
	0x00000020    DP3
	0x00000040    VGA1
	0x00000080    VGA2
	0x00000100    DVI1
	0x00000200    DVI2

## SetVideoInput

---

Sets the video input source

### API

MONITOR\_CODE SetVideoInput(UWORD32 u32Val)

### Params

u32Val	Video Input Source
	0x00000001    HDMI1
	0x00000002    HDMI2
	0x00000004    HDMI3
	0x00000008    DP1
	0x00000010    DP2
	0x00000020    DP3
	0x00000040    VGA1
	0x00000080    VGA2
	0x00000100    DVI1
	0x00000200    DVI2

# PIP/PBP Management

## GetPxPMode

---

Returns the current PIP/PBP mode

### API

MONITOR\_CODE GetPxPMode(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return PIP/PBP mode

#### Return

pu8Val	PIP/PBP Mode
0	Off
1	PIP Small
2	PIP Large
3	PBP Aspect Ratio
4	PBP Fill

### Note

Not supported on UP3218K

## SetPxPMode

---

Sets the PIP/PBP mode

### API

MONITOR\_CODE SetPxPMode(UBYTE u8Val)

#### Params

u8Val	PIP/PBP Mode
0	Off
1	PIP Small
2	PIP Large
3	PBP Aspect Ratio
4	PBP Fill

### Note

Not supported on UP3218K

## GetPxPSubInput

---

Returns the current PxP sub video input source

### API

MONITOR\_CODE GetPxPSubInput(UWORD32 \*pu32Val)

#### Params

\*pu32Val                    Pointer to return PxP sub video input source

**Return**

pu32Val

	Video Input Source
0x00000001	HDMI1
0x00000002	HDMI2
0x00000004	HDMI3
0x00000008	DP1
0x00000010	DP2
0x00000020	DP3
0x00000040	VGA1
0x00000080	VGA2
0x00000100	DVI1
0x00000200	DVI2

**Note**

Not supported on UP3218K

## SetPxPSubInput

---

Sets the PxP sub video input source

**API**

MONITOR\_CODE SetPxPSubInput(UWORD32 u32Val)

**Params**

u32Val

	Video Input Source
0x00000001	HDMI1
0x00000002	HDMI2
0x00000004	HDMI3
0x00000008	DP1
0x00000010	DP2
0x00000020	DP3
0x00000040	VGA1
0x00000080	VGA2
0x00000100	DVI1
0x00000200	DVI2

**Note**

Not supported on UP3218K

## GetPxPLocation

---

Returns the current PIP/PBP location

**API**

MONITOR\_CODE GetPxPLocation(UBYTE \*pu8Val)

**Params**

\*pu8Val

Pointer to return PIP/PBP location

**Return**

pu8Val

	PIP/PBP Location
0	Top-Right
1	Top-Left
2	Bottom-Right

3      Bottom-Left

**Note**

Not supported on UP3218K

## SetPxPLocation

---

Sets the PIP/PBP location

**API**

MONITOR\_CODE SetPxPLocation(UBYTE u8Val)

**Params**

u8Val	PIP/PBP Location
0	Top-Right
1	Top-Left
2	Bottom-Right
3	Bottom-Left

**Note**

Not supported on UP3218K

# OSD

## GetOSDTransparency

---

Get the OSD Transparency

### API

MONITOR\_CODE GetOSDTransparency(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return OSD Transparency value

#### Return

pu8Val                    OSD Transparency  
Integer value 0 (opaque) to 100 (transparent)  
Default 20  
Values in increments of 20

## SetOSDTransparency

---

Set the OSD Transparency

### API

MONITOR\_CODE SetOSDTransparency(UBYTE u8Val)

#### Params

u8Val                    OSD Transparency  
Integer value 0 (opaque) to 100 (transparent)  
Default 20  
Values in increments of 20

## GetOSDLanguage

---

Get the OSD Language

### API

MONITOR\_CODE GetOSDLanguage(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return OSD Language value

#### Return

pu8Val                    OSD Language  
0      English  
1      Espanol  
2      Francais  
3      Deutsch  
4      Portugues (Brasil)  
5      Русский  
6      简体中文

## SetOSDLanguage

---

Set the OSD Language

### API

MONITOR\_CODE SetOSDLanguage(UBYTE u8Val)

#### Params

u8Val	OSD Language
0	English
1	Espanol
2	Francais
3	Deutsch
4	Português (Brasil)
5	Русский
6	简体中文
7	日本語

## GetOSDRotation

---

Get the OSD Rotation

### API

MONITOR\_CODE GetOSDRotation(UBYTE \*pu8Val)

#### Params

*pu8Val	Pointer to return OSD Rotation value
---------	--------------------------------------

#### Return

pu8Val	OSD Rotation
0	0 degree
1	90 degrees
2	270 degrees

## SetOSDRotation

---

Set the OSD Rotations

### API

MONITOR\_CODE SetOSDRotation(UBYTE u8Val)

#### Params

u8Val	OSD Rotation
0	0 degree
1	90 degrees
2	270 degrees

## GetOSDTimer

---

Get the OSD Timer

**API**

MONITOR\_CODE GetOSDTimer(UBYTE \*pu8Val)

**Params**

\*pu8Val                    Pointer to return OSD Timer value

**Return**

pu8Val                    OSD Timer  
                          Integer value 5 to 60 seconds  
                          Default 20 seconds  
                          Values in increments of 1

## SetOSDTimer

---

Set the OSD Timer

**API**

MONITOR\_CODE SetOSDTimer(UBYTE u8Val)

**Params**

u8Val                    OSD Timer  
                          Integer value 5 to 60 seconds  
                          Default 20 seconds  
                          Values in increments of 1

## GetOSDButtonLock

---

Get the OSD Timer

**API**

MONITOR\_CODE GetOSDButtonLock(UBYTE \*pu8Val)

**Params**

\*pu8Val                    Pointer to return OSD Timer value

**Return**

pu8Val                    OSD Button Lock  
                          0      Unlock  
                          1      Lock

## SetOSDButtonLock

---

Set the OSD Timer

**API**

MONITOR\_CODE SetOSDButtonLock(UBYTE u8Val)

**Params**

u8Val                    OSD Button Lock  
                          0      Unlock  
                          1      Lock

## GetButtonSound

---

Returns if the button sound is on or off

### API

MONITOR\_CODE GetButtonSound(UBYTE \*pu8Val)

#### Params

\*pu8Val                    Pointer to return Button Sound value

#### Return

pu8Val                    Button Sound  
0       Off  
1       On

#### Note

Not supported on UP3218K

## SetButtonSound

---

Set the button sound on or off

### API

MONITOR\_CODE SetButtonSound(UBYTE u8Val)

#### Params

u8Val                    Button Sound  
0       Off  
1       On

#### Note

Not supported on UP3218K

## ResetOSD

---

Reset OSD to default settings

### API

MONITOR\_CODE ResetOSD(void)

#### Params

-

# System Management

## GetVersionFirmware

---

Returns the firmware version of the monitor

### API

MONITOR\_CODE GetVersionFirmware(BYTE \*ps16Val)

#### Params

\*pbyFirmwareVersion      Pointer to firmware version for return

#### Return

pbyFirmwareVersion      Version string (max 10 chars)

## GetVersionSDK

---

Returns the SDK version

### API

MONITOR\_CODE GetVersionSDK(SWORD16 \*ps16Val)

#### Params

\*pbyVersion      Pointer to firmware version for return

#### Return

ps16Val      Version value where MSB = major version and LSB = minor version.  
Eg) 0x0100 will mean Version 1.0

## GetMST

---

Returns if the MST is on or off

### API

MONITOR\_CODE GetMST(UBYTE \*pu8Val)

#### Params

\*pu8Val      Pointer to return MST value

#### Return

pu8Val      MST value  
0      Off  
1      On

#### Note

Not supported on UP3218K

## SetMST

---

Turns on / off the MST

### API

MONITOR\_CODE SetMST(UBYTE u8Val)

#### Params

u8Val	MST value to set
0	Off
1	On

#### Note

Not supported on UP3218K

## GetLCDConditioning

---

Returns if the LCD Conditioning is enabled or disabled

### API

MONITOR\_CODE GetLCDConditioning(UBYTE \*pu8Val)

#### Params

*pu8Val	Pointer to return LCD Conditioning value
---------	--

#### Return

pu8Val	LCD Conditioning
0	Disabled
1	Enabled

## SetLCDConditioning

---

Enable / Disable the LCD Conditioning

### API

MONITOR\_CODE SetLCDConditioning (UBYTE u8Val)

#### Params

u8Val	LCD Conditioning value to set
0	Disable
1	Enable

## FactoryReset

---

Reset to factory settings

**API**

MONITOR\_CODE FactoryReset(void)

**Params**

-

## SetDebugLevel

---

Set the level of debug for the SDK

**API**

MONITOR\_CODE SetDebugLevel(UBYTE u8Val)

**Params**

u8Val	Debug Level
0	Turn off debug
1	Errors
2	Warnings
3	Debug
4	Trace