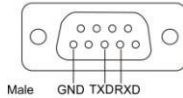


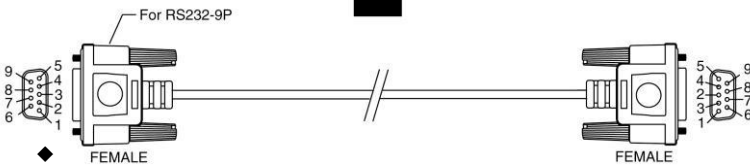


Dell™ C5517H RS232 Protocol Document

RS232 Projector Pin Assignment (Facing Monitor)



RS232 Serial Communication Cable Pin Assignment (Facing Cable)



Pin Assignments

RS232	PIN DESCRIPTION	RS232
1		
2	TXD	2
3	RXD	3
4		
5	GROUND	5
6		
7	Not Used	7
8	Not Used	8
9		

Note 1: The RS232 cable is not provided by Dell.

RS232 Protocol Communication Settings

Connection Settings	Value
Baud Rate	9600 bps
Data Bits	8 bits
Parity	None
Stop Bits	1 bit
Flow control	None

Command Types

To adjust the OSD settings.

Control Command Syntax (From PC to Monitor)

[H0][H1][Len][R/W][Cmd][Data0]...[DataN][Chk]

[H0] = 0x37

[H1] = 0x51

[Len] = Length

[R/W] = Read/Write

Read = 0xEB

Write = 0xEA

[Cmd] = Command

[Data0]...[DataN] = Data0~N

[Chk] = Check Sum

Reply Command Syntax (From Monitor to PC)

[H2][H3][Len][Reply][RC][Cmd][Data0]...[DataN][Chk]

[H2] = 0x6F

[H3] = 0x37

[Len] = Length

[Reply] = Reply (0x02)

[RC] = Result Code

0 = Success

1 = Timeout

2 = Parameters Error

3 = Not connected

4 = Other Failure

[Cmd] = Command

[Data0]...[DataN] = Data0~N

[Chk] = Check Sum

Example: Get Monitor Name (Maximum 10 characters)

[From PC to Monitor] = 37, 51, 02, EB, 01, 8E

[From Monitor to PC] = 6F, 37, 0F, 02, 00, 01, 44, 65, 6C, 6C, 20, 43, 35, 35, 31, 37, 48, 00, 58

Checksum calculation

Xor byte by byte from first byte to the end of the command data stream.

Control Commands List

Command Description	Command						Reply							
	Header_0 (BYTE)	Header_1 (BYTE)	Length (BYTE)	R/W (BYTE)	Command (BYTE)	[Data0 DataN] [Checksum] [BYTE(n+1)] (BYTE)	Header_0 (BYTE)	Header_1 (BYTE)	Length (BYTE)	ReplyCode (BYTE)	ResultCode (BYTE)	Command (BYTE)	[Data0 DataN] [Checksum] [BYTE(n+1)] (BYTE)	Param / Return / Comments
/* MONITOR MANAGEMENT */														
GetMonitorName	0x37	0x51	0x02	0xEB	0x01	CHK	0x6F	0x37	0x0F	0x02	[RC]	0x01	[Data0]...[DataN]_CHK	ASCII string
GetMonitorSerialNumber	0x37	0x51	0x02	0xEB	0x02	CHK	0x6F	0x37	0x10	0x02	[RC]	0x02	[Data0]...[DataN]_CHK	ASCII string
GetBacklightHours	0x37	0x51	0x02	0xEB	0x04	CHK	0x6F	0x37	0x05	0x02	[RC]	0x04	[Data0]...[DataN]_CHK	Monitor Backlight Hours (WORD) 0 - 65535
/* POWER MANAGEMENT */														
GetPowerState	0x37	0x51	0x02	0xEB	0x20	CHK	0x6F	0x37	0x04	0x02	[RC]	0x20	[Data0]_CHK	Power State (BYTE) 0 - off 1 - on
GetPowerState	0x37	0x51	0x03	0xEA	0x20	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x20	CHK	CHK
GetPowerLED	0x37	0x51	0x02	0xEB	0x21	CHK	0x6F	0x37	0x04	0x02	[RC]	0x21	[Data0]_CHK	Power LED Setting (BYTE) 0 - off during Active 1 - on during Active
GetPowerLED	0x37	0x51	0x03	0xEA	0x21	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x21	CHK	CHK
GetPowerUSB	0x37	0x51	0x02	0xEB	0x22	CHK	0x6F	0x37	0x04	0x02	[RC]	0x22	[Data0]_CHK	Power USB Setting (BYTE) 0 - off during Standby 1 - on during Standby
GetPowerUSB	0x37	0x51	0x03	0xEA	0x22	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x22	CHK	CHK
ResetPower	0x37	0x51	0x02	0xEA	0x2F	CHK	0x6F	0x37	0x03	0x02	[RC]	0x2F	CHK	NONE
/* IMAGE ADJUSTMENT */														
GetBrightness	0x37	0x51	0x02	0xEB	0x30	CHK	0x6F	0x37	0x04	0x02	[RC]	0x30	[Data0]_CHK	Brightness (BYTE) 0 - 100 values in increments of 1
SetBrightness	0x37	0x51	0x03	0xEA	0x30	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x30	CHK	CHK
GetContrast	0x37	0x51	0x02	0xEB	0x31	CHK	0x6F	0x37	0x04	0x02	[RC]	0x31	[Data0]_CHK	Contrast (BYTE) 0 - 100 values in increments of 1
SetContrast	0x37	0x51	0x03	0xEA	0x31	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x31	CHK	CHK
GetAspectRatio	0x37	0x51	0x02	0xEB	0x33	CHK	0x6F	0x37	0x04	0x02	[RC]	0x33	[Data0]_CHK	Aspect Ratio (BYTE) 0 - 16:9 1 - 4:3 2 - 4:3 3 - 16:9
SetAspectRatio	0x37	0x51	0x03	0xEA	0x33	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x33	CHK	CHK
GetSharpness	0x37	0x51	0x02	0xEB	0x34	CHK	0x6F	0x37	0x04	0x02	[RC]	0x34	[Data0]_CHK	Sharpness (BYTE) 0 - 100 values in increments of 10
SetSharpness	0x37	0x51	0x03	0xEA	0x34	[Data0]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x34	CHK	CHK
/* COLOR MANAGEMENT */														

GetColorTempCaps	0x37	0x51	0x02	0x0B	0x42	CHK	0x6F	0x37	0x07	0x02	[RC]	0x42	[Data]...[Data] a3]_CHK	Bitwise representation of color temperatures (DWORD) 0x00000001 - 5500K 0x00000002 - 5700K 0x00000004 - 6500K 0x00000008 - 7500K 0x00000010 - F300K 0x00000020 - 5000K
SetColorTemp	0x37	0x51	0x02	0x0B	0x43	CHK	0x6F	0x37	0x07	0x02	[RC]	0x43	[Data]...[Data] a3]_CHK	CHK
SetOutputColorFormat	0x37	0x51	0x02	0x0B	0x46	CHK	0x6F	0x37	0x04	0x02	[RC]	0x46	[Data]_CHK	Input Color Format (BYTE) 0 - RGB 1 - YCbCr
GetSetupColorFormat	0x37	0x51	0x03	0x0A	0x46	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x46	CHK	NONE
SetColorPresetCaps	0x37	0x51	0x02	0x0B	0x47	CHK	0x6F	0x37	0x07	0x02	[RC]	0x47	[Data]...[Data] a3]_CHK	Bitwise representation of color presets 0x00000001 - Standard 0x00000002 - Multimedia 0x00000008 - Color Temp 0x00000080 - Custom Color
GetColorPreset	0x37	0x51	0x02	0x0B	0x48	CHK	0x6F	0x37	0x07	0x02	[RC]	0x48	[Data]...[Data] a3]_CHK	CHK
SetColorPreset	0x37	0x51	0x06	0x0A	0x48	[Data]...[Data] a3]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x48	CHK	NONE
GetCustomColor	0x37	0x51	0x03	0x0B	0x49	CHK	0x6F	0x37	0x06	0x02	[RC]	0x49	[Data]...[Data] a2]_CHK	Custom color type (BYTE) 0 - Gain 1 - Value (BYTE) - 0 - 100 6 - Value (BYTE) - 0 - 100 7 - Value (BYTE) - 0 - 100
SetCustomColor	0x37	0x51	0x06	0x0A	0x49	[Data]...[Data] a3]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x49	CHK	NONE
ResetColor	0x37	0x51	0x02	0x0A	0x4F	CHK	0x6F	0x37	0x03	0x02	[RC]	0x4F	CHK	NONE
/* VIDEO INPUT MANAGEMENT */														
GetAutoSelect	0x37	0x51	0x02	0x0B	0x60	CHK	0x6F	0x37	0x04	0x02	[RC]	0x60	[Data]_CHK	Auto Select (BYTE) 0 - off 1 - on
SetAutoSelect	0x37	0x51	0x03	0x0A	0x60	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x60	CHK	NONE
GetVideoInputCaps	0x37	0x51	0x02	0x0B	0x61	CHK	0x6F	0x37	0x07	0x02	[RC]	0x61	[Data]...[Data] a3]_CHK	Bitwise representation of video inputs (DWORD)
GetVideoInput	0x37	0x51	0x02	0x0B	0x62	CHK	0x6F	0x37	0x07	0x02	[RC]	0x62	[Data]...[Data] a3]_CHK	0x00000001 - HDMI1 0x00000002 - HDMI2 0x00000008 - DP1 0x00000040 - VGA1
SetVideoInput	0x37	0x51	0x06	0x0A	0x62	[Data]...[Data] a3]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x62	CHK	NONE
/* OSD MANAGEMENT */														
GetOSDTransparency	0x37	0x51	0x03	0x0A	0x80	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x80	CHK	OSD Transparency (BYTE) 0 - 100 values in increments of 20
SetOSDTransparency	0x37	0x51	0x02	0x0B	0x80	CHK	0x6F	0x37	0x04	0x02	[RC]	0x80	[Data]_CHK	NONE
GetOSDLanguage	0x37	0x51	0x03	0x0A	0x81	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x81	CHK	OSD Language (BYTE) 0 - English 1 - Español 2 - Français 3 - Deutsch 4 - Português (Brasil) 6 - 简体中文 7 - 日本語
SetOSDLanguage	0x37	0x51	0x02	0x0B	0x81	CHK	0x6F	0x37	0x04	0x02	[RC]	0x81	[Data]_CHK	NONE
GetOSDTimer	0x37	0x51	0x03	0x0A	0x83	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x83	CHK	OSD Timer (BYTE) 0 - 60 seconds values in increments of 1
SetOSDTimer	0x37	0x51	0x02	0x0B	0x83	CHK	0x6F	0x37	0x04	0x02	[RC]	0x83	[Data]_CHK	NONE
GetOSDButtonLock	0x37	0x51	0x03	0x0A	0x84	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0x84	CHK	OSD Button Lock (BYTE) 0 - Unlocked 1 - Locked
SetOSDButtonLock	0x37	0x51	0x02	0x0B	0x84	CHK	0x6F	0x37	0x04	0x02	[RC]	0x84	[Data]_CHK	NONE
ResetOSD	0x37	0x51	0x02	0x0A	0x8F	CHK	0x6F	0x37	0x03	0x02	[RC]	0x8F	CHK	NONE
/* SYSTEM MANAGEMENT */														
GetVersionFirmware	0x37	0x51	0x02	0x0B	0xA0	CHK	0x6F	0x37	0x0A	0x02	[RC]	0xA0	[Data]...[Data] a6]_CHK	ASCII string
GetDOCC	0x37	0x51	0x02	0x0B	0xA2	CHK	0x6F	0x37	0x04	0x02	[RC]	0xA2	[Data]_CHK	DOCC (BYTE) 0 - Disabled 1 - Enabled
SetDOCC	0x37	0x51	0x03	0x0A	0xA2	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0xA2	CHK	NONE
GetLCDConditioning	0x37	0x51	0x02	0x0B	0xA3	CHK	0x6F	0x37	0x04	0x02	[RC]	0xA3	[Data]_CHK	LCD Conditioning (BYTE) 0 - Disabled 1 - Enabled
SetLCDConditioning	0x37	0x51	0x03	0x0A	0xA3	[Data]_CHK	0x6F	0x37	0x03	0x02	[RC]	0xA3	CHK	NONE
FactoryReset	0x37	0x51	0x02	0x0A	0xAF	CHK	0x6F	0x37	0x03	0x02	[RC]	0xAF	CHK	NONE

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