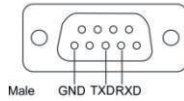


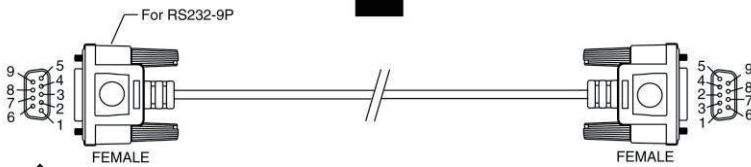


Dell P5524Q RS232 Protocol Document

- **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

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

0x00 = Success

0x01 = Timeout

0x02 = Parameters Error

0x03 = Not connected

0xFF = Other Failure

[Cmd] = Command

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

[CHK] = Check Sum

Example: Get Monitor Name

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

[From Monitor to PC] = 6F, 37, 0E, 02, 00, 01, 44, 65, 6C, 6C, 20, 43, 35, 35, 31, 39, 51, 4E

Checksum calculation

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

Control Commands List

APIs (Examples)	Param / Return / Comments	Command										Reply																															
		HEA	HEA_D_0	HEA_D_1	LEN	CM	DD	D1	D2	D3	D4	D5	D6	CHK	HEA	HEA_D_0	HEA_D_1	LEN	Res	Err	CM	G	DD	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	CHK			
PI MONITOR MANAGEMENT *F																																											
GetMonitorName (PS1242)	AG31 string	37	15	02	18	05								EE	FF	37	0E	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
GetMonitorInfo (DDRAW/DP12)	AG31 string	88	FF	37	0E	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetMonitorInfo (DDRAW/DP12)	AG31 string	88	FF	37	0E	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetMonitorInfo (DDRAW/DP12)	AG31 string	88	FF	37	0E	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
PI POWER MANAGEMENT *F																																											
GetPowerState (GDI 1.0)	Power State (BYTE)	37	15	03	8B	20								AF	FF	37	04	03	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerState - off	1: off	37	15	03	8A	20	00							AF	FF	37	03	03	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerState - on	1: standby	37	15	03	EA	20	01							AE	FF	37	03	05	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerID (GDI 1.0)	Power ID Setting (BYTE)	37	15	02	8B	21								AE	FF	37	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
GetPowerID - off during active	1: off during active	37	15	02	8A	21	00							AE	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerID - on during active	1: on during active	37	15	02	8A	21	01							AD	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerID (GDI 1.0)	Power ID Setting (BYTE)	37	15	02	8B	22								AD	FF	37	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerID - off during standby	1: off during standby	37	15	02	1A	22	00							AD	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerID - on during standby	1: on during standby	37	15	02	1A	22	01							AC	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetPowerID (GDI 1.0)	Power ID Setting (BYTE)	37	15	02	1B	22								AC	FF	37	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
PI WAVE ADJUSTMENT *F																																											
GetBrightness (DP 100)	Brightness (BYTE)	37	15	03	8B	30								BF	FF	37	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetBrightness - 75	1: 100	37	15	03	1A	30	A8							BF	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetBrightness - 100	1: gain in increments of 1	37	15	03	1A	30	64							DB	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetBrightness - 0	1: gain in increments of 1	37	15	03	1A	30	00							BE	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetContrast (DP 100)	Contrast (BYTE)	37	15	02	8B	31								BE	FF	37	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetContrast - 75	1: 100	37	15	02	8A	31	A8							FS	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetContrast - 100	1: gain in increments of 1	37	15	02	1A	31	A4							DA	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetContrast - 0	1: gain in increments of 1	37	15	02	1A	31	00							BE	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetGamma (DP 100)	Gamma (BYTE)	37	15	02	8B	32								BC	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetGamma - 100	1: 100	37	15	02	1A	32	00							8C	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetGamma - 0	1: gain in increments of 10	37	15	02	1A	32	64							88	FF	37	04	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetGamma - 100	1: gain in increments of 10	37	15	02	1A	32	00							88	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetColorTemp (PS1242)	Relative representation of color temperatures	37	15	02	1B	42								C0	FF	37	07	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetColorTemp - 5000K	5000K	37	15	02	1B	42	00	00	00	00	00	00	00	C8	FF	37	02	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetColorTemp - 5000K	50000000 - 10000	37	15	02	1B	43	00	00	00	00	00	00	00	C8	FF	37	02	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetColorTemp - 5000K	50000000 - 60000	37	15	02	1B	43	00	00	00	00	00	00	00	C0	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetColorTemp - 7000K	50000000 - 70000	37	15	02	1B	43	00	00	00	00	00	00	00	C1	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
GetColorTemp - 9000K	50000000 - 90000	37	15	02	1B	43	00	00	00	00	00	00	00	09	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetColorTemp - 10000K	50000000 - 100000	37	15	02	1B	43	00	00	00	00	00	00	00	E9	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetColorControl (GDI 1.0) - 1: RGB	Color Control Format (BYTE)	37	15	03	8A	46								89	FF	37	03	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
GetColorControlFormat - RGB	1: RGB	37	15	03	8A	46	00							89	FF	37	03	02	00	00	00	00	00																				

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