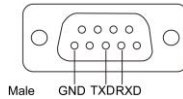


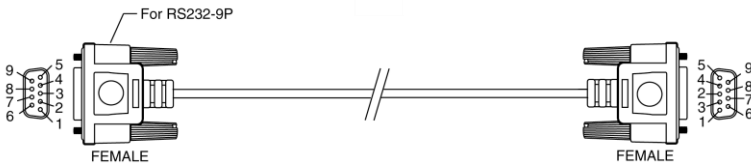


Dell S718QL/S518WL RS232 Protocol Document

- RS232 Projector Pin Assignment (Facing Projector)



- RS232 Serial Communication Cable Pin Assignment (Facing Cable)



◆ Pin Assignments

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

 **Note 1:** The RS232 (pin2-3 swap) cable is not provided by Dell.

- RS232 Protocol
Communication Settings

Connection Settings	Value
Baud Rate	19200 bps
Data Bits	8 bits
Parity	None
Stop Bits	1 bit
Flow control	None

Command Types

To display the OSD menu and adjust the settings.

Control Command Syntax (From PC to Projector)

[H][AC][SoP][CRC][ID][SoM][COMMAND]
[H][AC][SoP][CRC][ID][SoM][COMMAND][Value]

Example: Power On Command (Send Low Byte Firstly)

Enter the following code:

0xbe, 0xef, 0x10, 0x05, 0x00, 0xc6, 0xff, 0x11, 0x11, 0x01, 0x00, 0x01

Header [H] ==> Fixed, "be (Low Byte), ef (High Byte)"

Address Code [AC] ==> Fixed, "10"

Size of Payload [SoP] ==> Byte size from MsgID to Command Code, "05 (Low Byte), 00 (High Byte)" or Byte size from MsgID to Value, "06 (Low Byte), 00 (High Byte)".

CRC16 [CRC] ==> CRC value, "c6 (Low Byte), ff (High Byte)"

MsgID [ID] ==> Fixed, "11 11"

MsgSize [SoM] ==> Byte size of Command Code, "01 (Low Byte), 00 (High Byte)" or Byte size of Command Code and Value, "02 (Low Byte), 00 (High Byte)"

Command Code [COMMAND] ==> "Power On" Command, "01"

Projector Response Message Table

Byte0 value:

0x00: Success

0x01: Invalid Command (on the control command list but no valid)

0x02: Error Command (includes CRC error and unknown commands)

Projector Response System Status

Byte0, Byte1, Byte2

Byte0: 0x00 (Success)

Byte1: 0xff (the Command Code of System Status)

Byte2: Return status

Ex: When the projector is in standby mode, the return status will be 0x01.

Projector Response Operating Hour

Byte0, Byte1, Byte2, Byte3

Byte0: 0x00 (Success)

Byte1: 0x2f (the Command Code of Operating Hour)

Byte2: LSB (Hex)

Byte3: MSB (Hex)

Ex: 800 (3x256 + 2x16 = 800) hours --> 0x00, 0x2f, 0x20, 0x03

Firmware Version Response

Byte0, Byte1, Byte2, Byte3...Byte7

Byte0: 0x00 (Success)

Byte1: 0x30 (the Command Code of Firmware Version)

Byte2...Byte7

Firmware version: 6 Bytes ASCII Code: "M0RXXX"

XXX: 000-999

Ex: Version M0R001 → "M0R001" → 0x4d, 0x30, 0x52, 0x30, 0x30, 0x31

(Success, the Command Code of FW Version, 6 Bytes ASCII Code: "M0RXXX")

Control Commands List

Command Description	Header (WORD)	Address Code (BYTE)	Size Of The Payload (WORD)	CRC16 For The Entire Packet (WORD)	Msg ID (WORD)	Msg Size (WORD)	Command Code (BYTE)	Value (BYTE)	Comment
Aspect Ratio (Original/4.3/16.9/16:10)	0xfeb6	0x10	0x0005	0x7e08	0x1111	0x0001	0x17		Toggle
Aspect Ratio Read	0xfeb6	0x10	0x0005	0xbf43	0x1111	0x0001	0x32		Feedback: 0x00: Original(1:1) 0x01: 4:3 0x02: 16:9 0x03: 16:10
Auto Keystone Read	0xfeb6	0x10	0x0005	0xffd2	0x1111	0x0001	0x31		S518WL only 0x00: No (Off) 0x01: Yes (On)
Auto Keystone Write	0xfeb6	0x10	0x0006	0x1b28	0x1111	0x0002	0x29	0x00~0x01	S518WL only 0x00: No (Off) 0x01: Yes (On)
Auto Source Off	0xfeb6	0x10	0x0005	0xfe1b	0x1111	0x0001	0x2d		
Auto Source On	0xfeb6	0x10	0x0005	0x3fdb	0x1111	0x0001	0x2c		
Brightness Read	0xfeb6	0x10	0x0005	0xbe10	0x1111	0x0001	0x36		Range (0x00~0x64)
Brightness Write	0xfeb6	0x10	0x0006	0x1ae1	0x1111	0x0002	0x35	0x00~0x64	Range (0x00~0x64)
Change Password	0xfeb6	0x10	0x000d	0x99fa	0x1111	0x0009	0x57	0x30~0x39 0x41~0x5a	4byte: Original Password 4byte: New Password
Closed Captions	0xfeb6	0x10	0x0006	0x7e2a	0x1111	0x0002	0x6f	0x00~0x04	S518WL only 0x00: Off 0x01: CC1 0x02: CC2 0x03: CC3 0x04: CC4 0x01: Auto
Color Space Read	0xfeb6	0x10	0x0005	0x3e35	0x1111	0x0001	0x44		0x02: RGB 0x03: YUV 0x01: Auto
Color Space Write	0xfeb6	0x10	0x0006	0x9b07	0x1111	0x0002	0x43	0x01~0x03	0x02: RGB 0x03: YUV 0x01: Low
Color Temperature Read	0xfeb6	0x10	0x0005	0xbe15	0x1111	0x0001	0x3a		0x02: Mid 0x03: High 0x04: Custom
Color Temperature Write	0xfeb6	0x10	0x0006	0x1ae4	0x1111	0x0002	0x39	0x01~0x04	0x01: Low 0x02: Mid 0x03: High 0x04: Custom
Contrast Read	0xfeb6	0x10	0x0005	0x3fd4	0x1111	0x0001	0x38		Range (0x00~0x64)
Contrast Write	0xfeb6	0x10	0x0006	0x9b20	0x1111	0x0002	0x37	0x00~0x64	Range (0x00~0x64)
Current Language Read	0xfeb6	0x10	0x0005	0xbe32	0x1111	0x0001	0x4e		0x01: English 0x02: German 0x03: French 0x04: Italian (S518WL only) 0x05: Spanish 0x07: Swedish (S518WL only) 0x08: Dutch (S518WL only) 0x09: Iberian Portuguese (S518WL only) 0x0a: Japanese 0x0b: T_Chinese (S518WL only) 0x0c: S_Chinese 0x0d: Korean (S518WL only) 0x0e: Russian (S518WL only) 0x0f: Arabic (S518WL only) 0x10: Turkish (S518WL only) 0x12: Indonesia (S518WL only)
Current Language Write	0xfeb6	0x10	0x0006	0x1ac3	0x1111	0x0002	0x4d	0x01~0x12	0x01: English 0x02: German 0x03: French 0x04: Italian (S518WL only) 0x05: Spanish 0x07: Swedish (S518WL only)

								only) 0x08: Dutch (S518WL only) 0x09: Iberian Portuguese (S518WL only) 0x0a: Japanese 0x0b: T_Chinese (S518WL only) 0x0c: S_Chinese 0x0d: Korean (S518WL only) 0x0e: Russian (S518WL only) 0x0f: Arabic (S518WL only) 0x10: Turkish (S518WL only) 0x12: Indonesia (S518WL only) 0x00: No Source 0x01: VGA-A (S518WL only) 0x03: HDMI 0x05: Composite Video (S518WL only) 0x0c: HDMI-2 0x0d: HDMI-3 (S718QL only) 0x0f: USB Video 0x10: USB Mucis 0x11: USB Photo 0x12: USB Document 0x13: USB Setting 0x14: Network
Current Source	0xfbe	0x10	0x0005	0xbfbc	0x1111	0x0001	0x26	
Down	0xfbe	0x10	0x0005	0x3fc5	0x1111	0x0001	0x04	
Enter	0xfbe	0x10	0x0005	0x3ff6	0x1111	0x0001	0x40	
Exit Lockup	0xfbe	0x10	0x0005	0xffeb	0x1111	0x0001	0x6d	
Factory Reset	0xfbe	0x10	0x0005	0xbe1a	0x1111	0x0001	0x2e	
Firmware Version	0xfbe	0x10	0x0005	0x3e12	0x1111	0x0001	0x30	
Freeze	0xfbe	0x10	0x0005	0xbfbc	0x1111	0x0001	0x0e	
Get Hide State	0xfbe	0x10	0x0005	0xfe2d	0x1111	0x0001	0x65	0x00: Unhide 0x01: Hide
Get Mute State	0xfbe	0x10	0x0005	0xffee	0x1111	0x0001	0x61	0x00: Mute Off 0x01: Mute On
H. Frequency	0xfbe	0x10	0x0005	0xfe3c	0x1111	0x0001	0x59	S518WL only (KHz)
H. Position Read	0xfbe	0x10	0x0005	0xbf11	0x1111	0x0001	0x4a	S518WL only Range (0x00~0x64)
H. Position Write	0xfbe	0x10	0x0006	0x1b00	0x1111	0x0002	0x49	0x00~0x64 S518WL only Range (0x00~0x64)
H. Sync Polarity	0xfbe	0x10	0x0005	0x7ffd	0x1111	0x0001	0x5b	S518WL only 1: Negative 2: Positive
Hide	0xfbe	0x10	0x0005	0x7e02	0x1111	0x0001	0x0f	
Key Pad Lock Off	0xfbe	0x10	0x0005	0xffdd	0x1111	0x0001	0x25	
Key Pad Lock On	0xfbe	0x10	0x0005	0x3e1d	0x1111	0x0001	0x24	
Left	0xfbe	0x10	0x0005	0xfe05	0x1111	0x0001	0x05	
Menu	0xfbe	0x10	0x0005	0xbf7c	0x1111	0x0001	0x02	
Mute Off	0xfbe	0x10	0x0005	0x7e3e	0x1111	0x0001	0x5f	
Mute On	0xfbe	0x10	0x0005	0xffc3	0x1111	0x0001	0xd0	
Operating Hour	0xfbe	0x10	0x0005	0x7fda	0x1111	0x0001	0x2f	
Operating hours	0xfbe	0x10	0x0005	0x3e65	0x1111	0x0001	0x84	Hours (2 byte)
OSD Transparency Read	0xfbe	0x10	0x0005	0x7fec	0x1111	0x0001	0x67	Range (0x00~0x0f)
OSD Transparency Write	0xfbe	0x10	0x0006	0x5adc	0x1111	0x0002	0x66	0x00~0x0f Range (0x00~0x0f)
Password	0xfbe	0x10	0x0009	0xaaf9	0x1111	0x0005	0x56	0x30~0x39 0x41~0x5a 4byte: Original Password
Password Delete	0xfbe	0x10	0x0005	0xbfa4	0x1111	0x0002	0x86	
Password Off	0xfbe	0x10	0x0005	0xffa5	0x1111	0x0002	0x85	
Power Off	0xfbe	0x10	0x0005	0x3e0c	0x1111	0x0001	0x18	
Power On	0xfbe	0x10	0x0005	0xffc6	0x1111	0x0001	0x01	See Note 2
Power Saving	0xfbe	0x10	0x0006	0xfe66	0x1111	0x0002	0x81	0x00~0x78 0x00, 0x05, 0x0a, 0x0f, 0x14, 0x19, 0x1e, 0x23, 0x28, 0x2d, 0x32, 0x37, 0x3c, 0x41, 0x46, 0x4b, 0x50, 0x55, 0x5a, 0x5f, 0x64, 0x69, 0x6e, 0x73, 0x78

Power Saving Status	0xfbe	0x10	0x0005	0xbfa1	0x1111	0x0002	0x8a		0x00, 0x05, 0x0a, 0x0f, 0x14, 0x19, 0x1e, 0x23, 0x28, 0x2d, 0x32, 0x37, 0x3c, 0x41, 0x46, 0x4b, 0x50, 0x55, 0x5a, 0x5f, 0x64, 0x69, 0x6e, 0x73, 0x78
Power-Mode Read	0xfbe	0x10	0x0005	0x7fa7	0x1111	0x0001	0x83		0x00: Eco 0x01: Normal
Power-Mode-ECO	0xfbe	0x10	0x0005	0xbfd9	0x1111	0x0001	0x2a		
Power-Mode-Normal	0xfbe	0x10	0x0005	0x7e19	0x1111	0x0001	0x2b		
Projector Mode Read	0xfbe	0x10	0x0005	0x3fd1	0x1111	0x0001	0x34	0x01~0x04	0x01: Front 0x02: Front, Ceiling 0x03: Rear 0x04: Rear, Ceiling
Projector Mode Write	0xfbe	0x10	0x0006	0x9ae3	0x1111	0x0002	0x33	0x01~0x04	0x01: Front 0x02: Front, Ceiling 0x03: Rear 0x04: Rear, Ceiling
Right	0xfbe	0x10	0x0005	0xbe04	0x1111	0x0001	0x06		
R-sync	0xfbe	0x10	0x0005	0x7fc4	0x1111	0x0001	0x07		
Saturation Read	0xfbe	0x10	0x0005	0x3e17	0x1111	0x0001	0x3c		Range (0x00~0x64)
Saturation Write	0xfbe	0x10	0x0006	0x9b25	0x1111	0x0002	0x3b	0x00~0x64	Range (0x00~0x64)
Sharpness Read	0xfbe	0x10	0x0005	0xbf66	0x1111	0x0001	0x3e		S518WL: Range (0x00~0x1f) S718QL: Range (0x00~0x0a)
Sharpness Write	0xfbe	0x10	0x0006	0x1b27	0x1111	0x0002	0x3d	S518WL:0x00 ~ 0x1f S718QL:0x00 ~ 0x0a	S518WL: Range (0x00~0x1f) S718QL: Range (0x00~0x0a)
Source Search	0xfbe	0x10	0x0005	0x3fc0	0x1111	0x0001	0x08		
Source-Composite	0xfbe	0x10	0x0005	0x7fdf	0x1111	0x0001	0x23		S518WL only
Source-HDMI1	0xfbe	0x10	0x0005	0x3e3a	0x1111	0x0001	0x50		
Source-HDMI2	0xfbe	0x10	0x0005	0xbee23	0x1111	0x0001	0x72		
Source-HDMI3	0xfbe	0x10	0x0005	0x7fe3	0x1111	0x0001	0x73		
Source-Network	0xfbe	0x10	0x0005	0xffb1	0x1111	0x0001	0x85		
Source-USB-Documnt	0xfbe	0x10	0x0005	0x7fb3	0x1111	0x0001	0xB3		
Source-USB-Music	0xfbe	0x10	0x0005	0xfe72	0x1111	0x0001	0xB1		
Source-USB-Photo	0xfbe	0x10	0x0005	0xbe73	0x1111	0x0001	0xB2		
Source-USB-Setting	0xfbe	0x10	0x0005	0x3e71	0x1111	0x0001	0xB4		
Source-USB-Video	0xfbe	0x10	0x0005	0x3fb2	0x1111	0x0001	0xB0		
Source-VGA Analog-A	0xfbe	0x10	0x0005	0xffcc	0x1111	0x0001	0x19		S518WL only
Speaker	0xfbe	0x10	0x0005	0x7e64	0x1111	0x0002	0x87		0x00: Off 0x01: On
Speaker Status	0xfbe	0x10	0x0005	0x3e60	0x1111	0x0001	0x88		0x00: Off 0x01: On
System Status	0xfbe	0x10	0x0005	0x7e46	0x1111	0x0001	0xff		0x01: Standby 0x02: Warm Up 0x03: Power On 0x04: Cooling 0x05: Power Saving
Temp Alert	0xfbe	0x10	0x0005	0xbe29	0x1111	0x0001	0x6a		0x00: Normal 0x01: Abnormal
Tint Read	0xfbe	0x10	0x0005	0xfe36	0x1111	0x0001	0x41		Range (0x00~0x64)
Tint Write	0xfbe	0x10	0x0006	0x9ae6	0x1111	0x0002	0x3f	0x00~0x64	Range (0x00~0x64)
Unfreeze	0xfbe	0x10	0x0005	0xbfef	0x1111	0x0001	0x62		
Unhide	0xfbe	0x10	0x0005	0x3fed	0x1111	0x0001	0x64		
Up	0xfbe	0x10	0x0005	0x7e07	0x1111	0x0001	0x03		
V. Frequency	0xfbe	0x10	0x0005	0xbe3d	0x1111	0x0001	0x5a		S518WL only (Hz)
V. Keystone Down	0xfbe	0x10	0x0005	0x3e09	0x1111	0x0001	0x14		Min. -30
V. Keystone Read	0xfbe	0x10	0x0005	0x3e18	0x1111	0x0001	0x18		
V. Keystone Up	0xfbe	0x10	0x0005	0x7fcb	0x1111	0x0001	0x23		Max. +30
V. Position Read	0xfbe	0x10	0x0005	0x3ff3	0x1111	0x0001	0x4c		S518WL only Range (0x05~0x00)
V. Position Write	0xfbe	0x10	0x0006	0x9ac1	0x1111	0x0002	0x4b	0xfb~0xff.0x00	S518WL only Range (0x05~0x00)
V. Sync Polarity	0xfbe	0x10	0x0005	0x3e3f	0x1111	0x0001	0x5c		S518WL only 1: Negative 2: Positive
Video Mode	0xfbe	0x10	0x0005	0x3fca	0x1111	0x0001	0x10		Toggle

Video Mode Read	0xefbe	0x10	0x0005	0xbe37	0x1111	0x0001	0x42		0x00: Presentation Mode 0x01: Bright Mode 0x02: Movie Mode 0x03: sRGB Mode 0x04: Custom Mode
Volume -	0xefbe	0x10	0x0005	0xbe01	0x1111	0x0001	0x0a		
Volume +	0xefbe	0x10	0x0005	0xfe00	0x1111	0x0001	0x09		
Volume Read	0xefbe	0x10	0x0005	0x7ff2	0x1111	0x0001	0x4f		Range (0x00-0x14)
Volume Write	0xefbe	0x10	0x0006	0xdb18	0x1111	0x0002	0x68	0x00-0x14	Range (0x00-0x14)
White Intensity Read	0xefbe	0x10	0x0005	0xbf4	0x1111	0x0001	0x46		Range (0x00-0x0a)
White Intensity Write	0xefbe	0x10	0x0006	0x1b05	0x1111	0x0002	0x45	0x00-0x0a	Range (0x00-0x0a)
Zoom In	0xefbe	0x10	0x0005	0x7fc1	0x1111	0x0001	0x0b		
Zoom Out	0xefbe	0x10	0x0005	0x3e03	0x1111	0x0001	0x0c		
Zoom Status	0xefbe	0x10	0x0005	0xffa0	0x1111	0x0001	0x89		Range (0x01-0x0a)



Note 2: After power on the projector, wait for 5 seconds before sending next command.

Note 3: The range will depend on VGA input resolution.

Note 4: If sending multiple commands, check that a response has been received from the projector before sending next command.

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