



SkyPanel X RDM Protocol Specification

TECHNICAL INFORMATION

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About this Document

For more details about the product, please refer to the ARRI website at:

[SkyPanel X product page](#)



Searchkeys: SkyPanel X, L1.0048487

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1 RDM PIDs

1.1 Manufacturer Identification

| PID | Parameter | Description |
|--------|-----------------|--|
| 0x20B9 | Manufacturer_ID | Manufacturer identification number (ARRI Lighting) |

1.2 RDM UID

The SkyPanel X RDM unique identifier (UID) consists of the manufacturer ID and serial number. The Manufacturer ID is **0x20B9**.

1.3 Model Identification

| PID | Parameter | Description |
|--------|-----------|--|
| 0x0301 | Model_ID | Model identification number (SkyPanel-X) |

1.4 Personality Identification

| PID | Parameter | Description |
|------|---------------------------|---------------------------------|
| 0x01 | Personality Description 1 | 01: Legacy CCT & RGBW 8 bit |
| 0x02 | Personality Description 1 | 02: Legacy CCT & RBW 16 bit |
| 0x03 | Personality Description 1 | 03: Ultimate 8 bit |
| 0x04 | Personality Description 1 | 04: Extended Ultimate 16 bit |
| 0x05 | Personality Description 1 | 05: Extended Bi Ultimate 16 bit |
| 0x06 | Personality Description 1 | 06: 8 Zone RGB 8 but |
| 0x07 | Personality Description 1 | 07: 16 Zone RGB 8 bit |
| 0x08 | Personality Description 1 | 08: 24 Zone RGB 8 bit |
| 0x09 | Personality Description 1 | 09: 8 Zone CCT & RGB 16 bit |
| 0x0A | Personality Description 1 | 10: 8 Zone CCT & RGBACL 16 bit |

Note: Number in hex > String, channel count

1.5 Network Management

| PID | Parameter | Description |
|--------|--------------------|-----------------------|
| 0x0001 | DISC_UNIQUE_BRANCH | (G) Search RDM device |
| 0x0002 | DISC_MUTE | (S) Mute RDM device |
| 0x0003 | DISC_UN_MUTE | (S) Unmute RDM device |

1.6 Status Collection

| PID | Parameter | Hex-Value | Description |
|--------|----------------|-----------|--|
| 0x0015 | COMMS_STATUS | | (G S) Collects the information about the integrity of the communication system |
| 0x0020 | QUEUED_MESSAGE | | (G) Retrieves queued messages or a status message if no message is in queue |
| 0x0030 | STATUS_MESSAGE | | (G) Retrieves current Warning/Error messages |

| PID | Parameter | Hex-Value | Description |
|--------|-----------------------|-----------|--|
| 0x0031 | STATUS_ID_DESCRIPTION | | (G) Retrieves description of each Warning/Error/Status message |
| | | 8003 | LED Driver Temperature |
| | | 8004 | Light Engine Temperature |
| | | 8005 | LED Supply Voltage Not Detected |
| | | 8006 | Calibration Fault |
| | | 8007 | PWM Values Invalid |
| | | 800a | Fan Speed Issue |
| | | 800c | NTC Temperature Sensor(s) Defect |
| | | 800f | LED Channel Fault |
| | | 8011 | DC Input Voltage |
| | | 8012 | LED Driver Not Found |
| | | 8014 | LiOS Update Failed |
| | | 8015 | Filesystem Not Found |
| | | 8017 | Fan Power Supply Not Detected |
| | | 8018 | Flash Drive Power Supply |
| | | 8019 | DMX Data Collision |
| | | 801c | Light Engine Not Found |
| | | 801f | Factory Default Values Not Found |
| | | 8021 | DMX Data Frame too short |
| | | 8030 | LED Driver Error |
| | | 8031 | LED Driver Watchdog Elapsed! |
| | | 8032 | Color Sensor Defect |
| | | 8033 | Color Sensor Calibration Lost |
| | | 8034 | Color Sensor Calculation Error |
| | | 8035 | Color Sensor Under/Over Exposed |
| | | 8036 | Protection Cap Attached |
| | | 8037 | Optics Recognition Failed |
| | | 8038 | Too many optics attached! |
| | | 8039 | CPU Temperature |
| | | 803a | DMX Signal Lost |
| | | 803b | Config Files Not Found |
| | | 803c | Drop Detected |
| | | 803d | DC Input Voltage Critical |
| | | 803e | Magnetometer or Accelerometer |
| | | 803f | Mainboard Temperature |
| | | 8040 | Flash Drive Not Found |
| | | 8041 | Flash Drive R/W Not Possible |
| | | 8042 | PSU Communication Lost |
| | | 8043 | PSU Temperature |
| | | 8044 | Sensor Missing |
| | | 8045 | High System Workload |
| 8046 | RTC | | |
| 8048 | CRM Module Not Found | | |
| 8049 | System Error | | |
| 804a | Optics Temperature | | |
| 804b | Optics Hardware Fault | | |

| PID | Parameter | Hex-Value | Description |
|--------|-----------------------|-----------|------------------------------------|
| 0x0031 | STATUS_ID_DESCRIPTION | 804c | Optics Motor blocked |
| | | 804d | Optics Firmware Fault |
| | | 804e | Fan Speed Issue |
| | | 804f | System Watchdog occurred |
| | | 8050 | Sync Signal incorrect |
| | | 8051 | Optics Calibration Issue |
| | | 8052 | Dim to zero |
| | | 8053 | DMX mode incompatible |
| | | 8054 | Humidity sensor missing |
| | | 8055 | Take over control active |
| | | 8056 | CP temperature high |
| | | 8057 | Array warning |
| | | 8058 | NTC temperature sensor deviation |
| 0x0032 | CLEAR_STATUS_ID | | (S) Clear the status message queue |

1.7 RDM Information

| PID | Parameter | Description |
|--------|-----------------------|--|
| 0x0050 | SUPPORTED_PARAMETERS | (G) Retrieves a list of all supported RDM commands |
| 0x0051 | PARAMETER_DESCRIPTION | (G) Retrieves a list of all non-standard RDM commands (manufacturer commands >= 0x8000) and their parameters |

1.8 Product Information

| PID | Parameter | Description |
|--------|-----------------------------|--|
| 0x0060 | DEVICE_INFO | (G) Retrieves a variety of information about the device that is normally required by a controller |
| 0x0070 | PRODUCT_DETAIL_ID_LIST | (G) Requests technology details for a device |
| 0x0080 | DEVICE_MODEL_DESCRIPTION | (G) Text description of up to 32 characters for the device model type |
| 0x0081 | MANUFACTURER_LABEL | (G) This parameter provides an ASCII text response with the manufacturer name for the device "ARRI Lighting" is the default name |
| 0x0082 | DEVICE_LABEL | (G S) Supports the setting a descriptive label for each device. It may be used for identifying a dimmer rack number or specifying the devices location |
| 0x0090 | FACTORY_DEFAULTS | (G S) Set the device to its factory defaults Get: Check if settings still in default state <input type="checkbox"/> 1 if default |
| 0x00C0 | SOFTWARE_VERSION_LABEL | (G) Retrieves software version string of main software |
| 0x00C1 | BOOT_SOFTWARE_VERSION_ID | (G) Retrieves primary boot software version |
| 0x00C2 | BOOT_SOFTWARE_VERSION_LABEL | (G) Retrieves details about primary bootloader |

1.9 DMX512 Setup

| PID | Parameter | Description |
|--------|-----------------------------|--|
| 0x00E0 | DMX_PERSONALITY | (G S) Retrieve or set DMX mode |
| 0x00E1 | DMX_PERSONALITY_DESCRIPTION | (G) Shows a description of a DMX-Mode, max 32 characters. Shows exactly the description used in ALSM |
| 0x00F0 | DMX_START_ADDRESS | (G S) Retrieve or set DMX address |
| 0x0120 | SLOT_INFO | (G) Retrieves the description from each DMX slot of the recent DMX mode |
| 0x0121 | SLOT_DESCRIPTION | (G) Retrieves the description with max. 32 characters for each DMX slot of the recent DMX mode |
| 0x0122 | DEFAULT_SLOT_VALUE | (G) Retrieves the default DMX value for each DMX slot of the recent DMX mode |

1.10 Sensors

| PID | Parameter | Description |
|--------|-------------------|---|
| 0x0200 | SENSOR_DEFINITION | (G) Retrieves the definition of a specific sensor |
| 0x0201 | SENSOR_VALUE | (G S) Retrieves or sets sensor data |

1.11 Dimmer Settings

| PID | Parameter | Description |
|--------|-------------------|---|
| 0x0343 | CURVE | (G S) Retrieve or set a dimmer curve Exponential = 1 Linear = 2 Logarithmic = 3 "S" Curve = 4 |
| 0x0344 | CURVE_DESCRIPTION | (G) Retrieves the description of a dimmer curve (0x0343 > CURVE) 1 > Exponential 2 > Linear 3 > Logarithmic 4 > "S" Curve |

1.12 Power / Lamp Settings

| PID | Parameter | Description |
|--------|---------------------|---|
| 0x0400 | DEVICE_HOURS | (G) Retrieves the number of hours of operation the device has been in use |
| 0x0401 | LAMP_HOURS | (G) Retrieves the number of lamp hours |
| 0x0403 | LAMP_STATE | (G) Retrieves the current operating state of the lamp |
| 0x0405 | DEVICE_POWER_CYCLES | (G) Retrieves the number of power cycles of a device |

1.13 Display Settings

| PID | Parameter | Description |
|--------|----------------|--|
| 0x0500 | DISPLAY_INVERT | (G S) Retrieve or change the display invert setting Off = 0 On = 1 Auto = 2 |
| 0x0501 | DISPLAY_LEVEL | (G S) Retrieve or change the display contrast 0...0xFF |

1.14 RDM Configuration

| PID | Parameter | Description |
|--------|-----------------|--|
| 0x0603 | REAL_TIME_CLOCK | (G) Retrieves the real time clock (Year, Month, Day, Hour, Minute) |

1.15 Control

| PID | Parameter | Description |
|--------|-----------------|--|
| 0x1000 | IDENTIFY_DEVICE | (G S) Identify device Off = 0 On = 1 |
| 0x1001 | RESET_DEVICE | (S) Reset device 0x01 for warm reset |

1.16 RDMnet Management

| PID | Parameter | Description |
|--------|----------------------------------|--|
| 0x0700 | LIST_INTERFACES | (G) Retrieves a packed list of network interface descriptors, representing the IPv4 network interfaces on the device |
| 0x0701 | INTERFACE_LABEL | (G) Retrieves the label for a network interface |
| 0x0702 | INTERFACE_HARDWARE_ADDRESS_TYPE1 | (G) Retrieves the EUI-48 (EU) hardware address of an interface |
| 0x0703 | IPV4_DHCP_MODE | (G S) Retrieve or set the Dynamic Host Configuration Protocol (DHCPv4) mode for an interface |
| 0x0704 | IPV4_ZEROCONF_MODE | (G S) Retrieve or set Zeroconf Mode (Link Local) |
| 0x0705 | IPV4_CURRENT_ADDRESS | (G S) Retrieve or set the current IPv4 address and netmask information for an interface |
| 0x0706 | IPV4_STATIC_ADDRESS | (G S) Retrieve or set static configuration of the IPv4 address and network mask on an interface |
| 0x0709 | INTERFACE_APPLY_CONFIGURATION | (S) Set/apply any changes of the interface configuration |
| 0x070A | IPV4_DEFAULT_ROUTE | (G S) Retrieve or set the default IPv4 route for a device |
| 0x070B | DNS_IPV4_NAME_SERVER | (G S) Retrieve or set the IPv4 DNS name servers for a device. Up to three IPv4 name servers may be configured |
| 0x070C | DNS_HOSTNAME | (G) Retrieves host name |
| 0x070D | DNS_DOMAIN_NAME | (G S) Retrieve or set domain name |

1.17 Manufacturer Commands

| PID | Parameter | Description |
|--------|-------------------------|--|
| 0x8003 | DMX_LOSS_BEHAVIOUR | (G S) Retrieve or set DMX signal lost behavior 1 = Hold last command 2 = Black out 3 = Hold 2 min and fade out |
| 0x8004 | DMX_MODE_SPEC | (G S) Retrieve or set DMX protocol version 1 = V4.5 (Orbiter only) 2 = V5.0 (Orbiter only) 3 = V6.0 |
| 0x8007 | TUNGSTEN_MODE | (G S) Retrieve or set tungsten mode 0 = Disable 1 = Enable |
| 0x8010 | RGBACL_COLOR_SPACE | (G S) Retrieve or set RGBW plasa mode 0 = Disable 1 = Enable |
| 0x8012 | HIGH_SPEED_MODE | (G S) Retrieve or set highspeed mode 0 = Disable 1 = Enable |
| 0x8013 | RDM_SERVICE | (G S) Retrieve or set RDM service (needed for host / client) 0 = Disable 1 = Enable |
| 0x8014 | CRMX_STATE | (G S) Retrieve or set CRMX module 0 = Disable 1 = Enable |
| 0x8015 | CRMX_LINK_STATE | (G) Retrieve link state / unlink WDMX module from any transmitter 0 = Unlinked 1 = Linked |
| 0x8019 | DMX_RDM_GATEWAY | (G S) Retrieve or set Art-Net gateway 0 = Disable 1 = Enable |
| 0x801A | DMX_VALID_FILTER | (G S) Retrieve or set DMX valid filter 0 = Disable 1 = Enable |
| 0x801C | DMX_LOSS_BEHAVIOUR_DESC | (G) Retrieves signal lost description, depends on "DMX LOSS BEHAVIOUR" 1 = Hold last command 2 = Black out 3 = Hold 2 min and fade out |
| 0x801D | DMX_MODE_SPEC_DESC | (G) Retrieves DMX mode specification description, depends on "DMX MODE SPEC." 1 = 4.5 (Orbiter only) 2 = 5.0 (Orbiter only) 3 = 6.0 |
| 0x801F | DMX_TRANSITION_TYPE | (G S) Retrieve or set DMX crossfader type 1 = Crossfading direct 2 = Crossfading through black 3 = Crossfading through white point 4 = Crossfading over white point 5 = Crossfading under white point |

| PID | Parameter | Description |
|--------|--------------------------|---|
| 0x8020 | DMX_TRANSITION_TYPE_DESC | (G) Retrieves DMX crossfader description, depends on "DMX TRANSITION TYPE" 1 = Crossfading direct 2 = Crossfading through black 3 = Crossfading through white point 4 = Crossfading over white point 5 = Crossfading under white point |
| 0x8021 | DMX_TERMINATION | (G S) Retrieve or set DMX line termination 0 = Disable 1 = Enable |
| 0x8026 | OPERATIONAL_MODE | (G S) Retrieve or set operational mode 1 = High CRI Vari Fan 2 = High Output 3 = Standard 4 = ARRI ALEXA Vari Fan 5 = ARRI ALEXA High Output 6 = ARRI ALEXA Standard |
| 0x8027 | OPERATIONAL_MODE_DESC | (G) Retrieves operational mode description 1 = High CRI Vari Fan 2 = High Output 3 = Standard 4 = ARRI ALEXA Vari Fan 5 = ARRI ALEXA High Output 6 = ARRI ALEXA Standard |
| 0x802C | BONJOUR_STATE | (G S) Retrieve or set Bonjour state (MDNS) 0 = Disable 1 = Enable |

1.18 RDM Manufacturer RDM Parameter

| PID | Parameter | Description |
|------|--------------------------------|--|
| 0x90 | E120 DS ARRI PARAMETER DESC | 1 byte (index/id) and 1...32 characters (description) |

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