4016 QUADPUCKTM<br>4-Channel DMX Driver Interface

## PRODUCT OVERVIEW

The 4016 QuadPuck DMX Driver Interface from LuxDrive offers the best in flexibility and compatibility for controlling LEDs. Up to (4) LuxDrive LED Power Modules* can be individually controlled using a standard USITT DMX/512/1990 controller, providing a simple, low cost solution for powering and controlling LEDs, all in one compact unit.

The QuadPuck DMX Driver Interface is available with a number of options and features, providing even greater flexibility, and is small enough to be easily incorporated in LED lighting units or placed in wall-mount boxes or remotely located units.

## FEATURES

```
\checkmark On-Board selectable DMX addressing
\checkmark One to four control channel capability
\checkmark Interchangeable BuckPuck capability*
\checkmark Channel activity indicators (LED)
\checkmark USITT DMX/512/1990 Compatible
\checkmark Simple RJ45 connections for DMX & power*
V DMX transmission error indicators
\checkmark Loop-through for DMX & power
\checkmark Selectable POST tests (Power-On-Self-Test)
\checkmark Optional terminal blocks for power & outputs
\checkmark Small size (4" }\times2.5" \times 1")
```


## Specifications

| Input Voltage | 8-32VDC |
| :--- | ---: |
| Input Current (Power) | Up to 4.5A* |
| Output Current (per CH.) | 140-1100 mA* |
| LED Count (Max.) | 72 Luxeon I LEDs* |
| Communication | DMX512 RS-485@250kbps |



## TYPICAL APPLICATIONS

$\checkmark$ Powering \& controlling Luxeon LED arrays
$\checkmark$ Area lighting \& control systems
$\checkmark$ Architectural lighting systems
$\checkmark$ Theatrical \& production lighting systems
$\checkmark$ RGB fixtures \& systems
$\checkmark$ Computer control interface
$\checkmark$ Accent lighting control
$\checkmark$ Landscape lighting control


4016 QUADPUCKTM<br>4-Channel DMXDriver Interface

## Specifications

| Electrical Specifications |  |
| :--- | ---: |
| Input Voltage | $8-32 \mathrm{VDC}$ |
| Input Current (control section) | $20-30 \mathrm{~mA}$ |
| Input Current (power section) | Up to $4.5 A^{*}$ |
| Output Current (perch.) | $140-1100 \mathrm{~mA}^{*}$ |
| Max. LED Count (total) | 72 LuxeonTM ILEDs* |
| Dimmer Type | PWM |
| Dimmer Steps | 256 |
| PWM Frequency | 600 Hz |
| PWM Jitter | $<100 \mathrm{~ns}$ |
| PWM Step Size | $6.4 \mu \mathrm{~s}$ |
| Data Termination |  |


| Mechanical Specifications |  |
| :--- | ---: |
| Size | $4.0^{\prime \prime} \times 2.5^{\prime \prime} \times 0.675^{\prime \prime}$ |
| Mounting | $(4) 0.156 "$ holes |
| Weight | $3.0 \mathrm{oz}(86 \mathrm{gm})$ |
| Communications |  |
| DMX512 | RS-485@250kbps |



## Connections



*     - See application guide for additional information.


## 4016 QUADPUCKTM 4-Channel DMXDriver Interface

Connections (continued...)

| Desig | Type | Name | Pin(s) | Name |
| :---: | :---: | :---: | :---: | :---: |
| J1, J2 | RJ45 | DMX512 signal | 1 | DMX+ |
|  |  |  | 2 | DMX- |
|  |  |  | 3,4,5 | Power (see JU1,2) |
|  |  |  | 6,7,8 | Ground |
| J4,J5 | Header or bare pads | DMX512 signal | 1 | DMX+ |
|  |  |  | 2 | DMX- |
|  |  |  | 3 | Ground |
| TB1, | Term. Block | Power, Ground | 1 | Ground |
| TB2, |  |  | 2 | Power |
| TB3, | Term. Block | LED array | 1 | LED+ |
| TB4, |  |  | 2 | LED- |
| TB5, |  |  |  |  |
| TB6, |  |  |  |  |

Jumpers

| Desig | Name |
| :--- | :--- |
| JU3 | Terminator DMX512 |
| JU1 | RJ45 Power pass-through for J1 |
| JU2 | RJ45 Power pass-through for J2 |

## Indicators

| Desig | Name |  |
| :--- | :--- | :--- |
| D5, D6 | Red <br> Green$\quad$ ERROR |  |
|  | POWER |  |

## Switches

| Desig | Name |
| :--- | :--- |
| PB1 | Reset switch |
| SW3 | 100s digit, DMX Address/Configuration parameter |
| SW2 | 10s digit, DMX Address/Configuration parameter |
| SW1 | 1s digit, DMX Address/Configuration parameter |

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## Configuration

The QuadPuck is configured with three BCD switches. Switches should only be changed with the power off, except in the case of the two test modes 90x and 99x where SW1 can be changed with power applied. Configuration parameters are loaded into memory only at power-on. Each time a configuration parameter is changed and power is reapplied, the error and power lights flash quicky three times to signify that the new parameters have been permanently stored within the device. Invalid switch settings cause the error indicator to flash twice slowly and then the device uses the internally stored last-used parameters. The factory device defaults are set to DMX address 1 (one), fade rate 3 (three) and no Power-On Self Test (POST).

| SW3 | SW2 | SW1 | Function |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 0 | No change. Address and config params default to stored value |  |  |  |  |
| 0 | 0 | 1 |  |  |  |  |  |
| through |  |  |  |  |  |  |  |
| 5 | 0 | 8 | Set DMX address |  |  |  |  |
| 6 | 0 | x | Set fade rate to x. $0=0 \mathrm{ff}, 9=$ slowest |  |  |  |  |
| 6 | 1 | x | Set Power-On Self Test (POST) parameters |  |  |  |  |
|  |  |  | $x \quad$ POST condition |  |  |  |  |
|  |  |  | 0 No POST |  |  |  |  |
|  |  |  | 1 test patten |  |  |  |  |
|  |  |  | 2 DMX signal check (flash Ch0 if no DMX detected) |  |  |  |  |
|  |  |  | 3 | test pattern + DMX signal check |  |  |  |
|  |  |  | 4-9 unused |  |  |  |  |
| 9 | 0 | x | Test fade rate, $\mathrm{x}=$ rate. $0=0 \mathrm{ff}, 9=$ slowest |  |  |  |  |
| 9 | 9 | x | Test light channels |  |  |  |  |
|  |  |  | x | Chan0 | Chan1 | Chan2 | Chan3 |
|  |  |  | 0 | off | off | off | off |
|  |  |  | 1 | on | off | off | off |
|  |  |  | 2 | off | on | off | off |
|  |  |  | 3 | off | off | on | off |
|  |  |  | 4 | off | off | off | on |
|  |  |  | 5 | on | on | on | on* |
|  |  |  | 6 | off | off | off | off |
|  |  |  | 7 | off | off | off | off |
| 9 | 9 | 8 | Pre-Programmed Demo - Slow fade between channels 0,1,2 |  |  |  |  |
| 9 | 9 | 9 | KiloColor Demo (Reserved) |  |  |  |  |

