

# **UMC-4**

**Universal Motor Controller**

## **U S E R   M A N U A L**

**Date: 9<sup>th</sup> February 2015**

- Wireless Zoom Unit WZU-3
- Controlled Lens Motor CLM-2
- Controlled Lens Motor CLM-3
- Controlled Lens Motor CLM-4
- Lens Data Encoder LDE-1
- Ultrasonic Distance Measure UDM-1

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Note: Use only one lens motor per lens axis.

Note: Up to three hand units can be connected to one UMC-4 in parallel to form a radio network.

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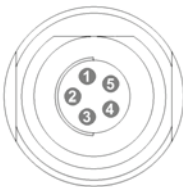
## Connector Pinouts

### Serial



|   |         |                       |
|---|---------|-----------------------|
| 1 | GND     | Ground                |
| 2 | +12V    | 12V output, max 200mA |
| 3 | TxD/Tx– | RS232/RS485 – RS422   |
| 4 | RxD/Rx+ | RS232/RS485 – RS422   |
| 5 | Tx+     | RS422 line            |
| 6 | Rx–     | RS422 line            |

## LCS



|   |        |                       |
|---|--------|-----------------------|
| 1 | GND    | Ground                |
| 2 | n.c.   |                       |
| 3 | CAN-L  | CAN bus               |
| 4 | CAN-H  | CAN bus               |
| 5 | +V-BAT | Battery supply output |

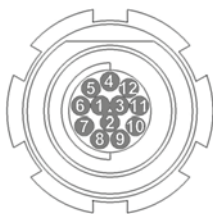
## CAM



|   |          |                                                                           |
|---|----------|---------------------------------------------------------------------------|
| 1 | GND      | Ground                                                                    |
| 2 | +V-BAT   | 9.5 V to 34 V DC IN                                                       |
| 3 | CAM-TYPE | Camera type sense, analog input                                           |
| 4 | Rx-      | RS422 line                                                                |
| 5 | RUN-SW1  | Opto switch1 connects to pin 13 @REC (max. 100 mA/50 V)                   |
| 6 | Tx+      | RS422 line                                                                |
| 7 | CAN-L    | CAN bus                                                                   |
| 8 | n.c.     |                                                                           |
| 9 | TALLY    | Tally, analog input, active high (default value: 1.25 V transition level) |

|    |                |                                                            |
|----|----------------|------------------------------------------------------------|
| 10 | D-CAM<br>TALLY | Tally, digital input, active low,                          |
| 11 | DAC-CAM        | REC analog output, active high (default value @REC: 3.3 V) |
| 12 | R/S            | ARRI R/S                                                   |
| 13 | RUN-SW2        | Opto switch 2 connects to pin 5 @REC (max. 100 mA/50 V)    |
| 14 | RxD/Rx+        | RS232/RS485 – RS422 together with pins 4, 6, 15            |
| 15 | TxD/Tx-        | RS232/RS485 – RS422 with pins 4, 6, 14                     |
| 16 | CAN-H          | CAN bus                                                    |

## FOCUS/IRIS/ZOOM



|    |           |                    |
|----|-----------|--------------------|
| 1  | GND       | Ground             |
| 2  | MTYPE-A   | Motor type sense   |
| 3  | MTYPE-B   | Motor type sense   |
| 4  | MTYPE-C   | Motor type sense   |
| 5  | +5V       | Encoder supply     |
| 6  | Encoder-A | Encoder input A    |
| 7  | Encoder-B | Encoder input B    |
| 8  | n.c.      |                    |
| 9  | n.c.      |                    |
| 10 | n.c.      |                    |
| 11 | Motor +   | Motor drive output |
| 12 | Motor –   | Motor drive output |

## RS IN



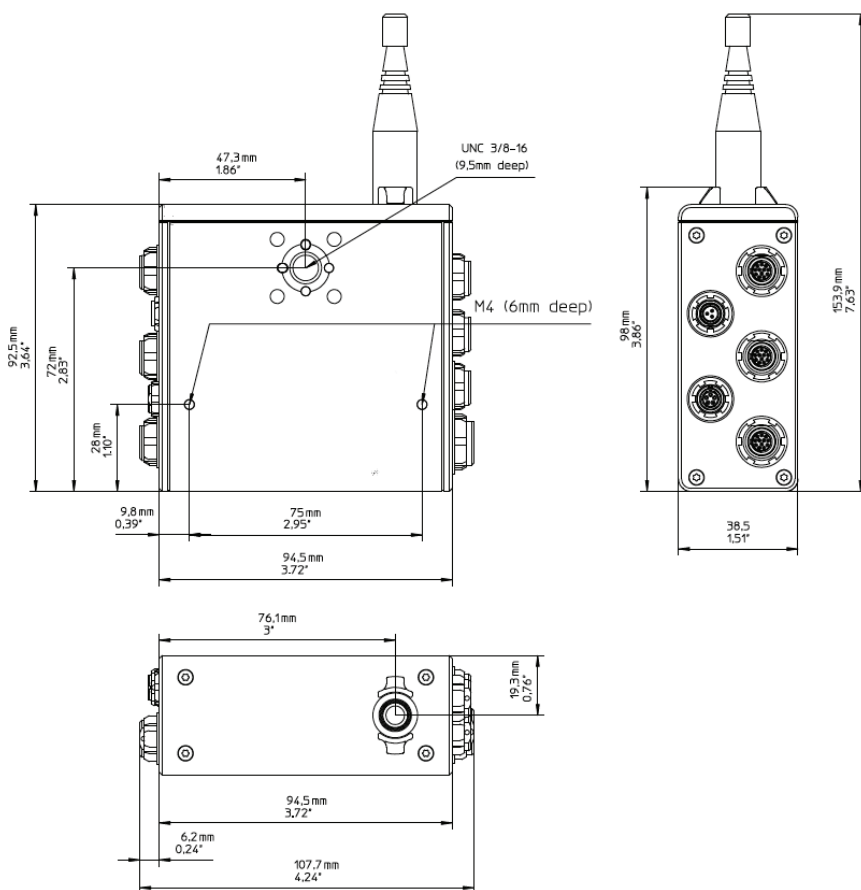
|   |        |                     |
|---|--------|---------------------|
| 1 | GND    | Ground              |
| 2 | +V-BAT | 9.5 V to 34 V DC IN |
| 3 | R/S    | ARRI R/S            |

## TC



|   |         |                 |
|---|---------|-----------------|
| 1 | GND     | Ground          |
| 2 | LTC-IN  | Timecode input  |
| 3 | n.c.    |                 |
| 4 | n.c.    |                 |
| 5 | LTC-OUT | Timecode output |

## Dimensions and Weight



Weight (including antenna): 428 g

## Electrical Data

|                        |                                                             |
|------------------------|-------------------------------------------------------------|
| Supply Voltage:        | 9.5 V to 34 V DC (full motor speed)                         |
| Current Consumption:   | 135 mA@12 V (radio on/ready)<br>70 mA@24 V (radio on/ready) |
| Operating Temperature: | -20 to +50 °C (-4 to +122 °F)                               |

## Radio System

The UMC-4 contains a radio unit that enables wireless lens control and lens data communication with a white coded radio module. A white ring at the base of the antenna mount point identifies it. It offers 8 channels to choose from:

| Channel | Frequency |
|---------|-----------|
| 0       | 2.410 GHZ |
| 1       | 2.415 GHZ |
| 2       | 2.430 GHZ |
| 3       | 2.435 GHZ |
| 4       | 2.450 GHZ |
| 5       | 2.455 GHZ |
| 6       | 2.470 GHZ |
| 7       | 2.475 GHZ |

White radio and legacy yellow radio cannot be mixed in the same radio network of camera and hand units. It is possible to use both systems in parallel within different radio networks.