



## ARDUINO PINOUT AFFECCATION

| Number | Affectation                                    | Familiy | SubFamily | Note                                  | IRQ   |
|--------|--|---------|-----------|---------------------------------------|-------|
| 0      | RX0  | COM     |           | Reserved for USB Port 1 communication |       |
| 1      | TX0  | COM     |           | Reserved for USB Port 1 communication |       |
| 2      |  | PWM     |           |                                       | IRQ 0 |
| 3      |  | PWM     |           |                                       | IRQ 1 |
| 4      |  | PWM     |           |                                       |       |
| 5      | 74HCT154 @0 (for Light BUS Xn & KEY MATRIX Xn) | PWM     | OUTPUT    |                                       |       |
| 6      | 74HCT154 @1 (for Light BUS Xn & KEY MATRIX Xn) | PWM     | OUTPUT    |                                       |       |
| 7      | 74HCT154 @2 (for Light BUS Xn & KEY MATRIX Xn) | PWM     | OUTPUT    |                                       |       |
| 8      | 74HCT154 @3 (for Light BUS Xn & KEY MATRIX Xn) | PWM     | OUTPUT    |                                       |       |
| 9      | Light BUS STROBE_                              | PWM     | OUTPUT    |                                       |       |
| 10     | Light BUS DATA                                 | PWM     | OUTPUT    |                                       |       |
| 11     | 74HCT138 @0 (for Light BUS Xn & KEY MATRIX Yn) | PWM     | OUTPUT    |                                       |       |
| 12     | 74HCT138 @1 (for Light BUS Xn & KEY MATRIX Yn) | PWM     | OUTPUT    |                                       |       |
| 13     | 74HCT138 @2 (for Light BUS Xn & KEY MATRIX Yn) | PWM     | OUTPUT    |                                       |       |
| 14     | TX3  | COM     |           |                                       |       |
| 15     | RX3  | COM     |           |                                       |       |
| 16     | TX2  | COM     |           |                                       |       |
| 17     | RX2  | COM     |           |                                       |       |
| 18     | TX1  | COM     |           |                                       | IRQ 5 |
| 19     | RX1  | COM     |           |                                       | IRQ 4 |
| 20     | SDA  | COM     |           |                                       | IRQ 3 |
| 21     | SCL  | COM     |           |                                       | IRQ 2 |
| 22     | DLR2416 - DATA0                                | DIGITAL | OUTPUT    |                                       |       |
| 23     | DLR2416 - DATA1                                | DIGITAL | OUTPUT    |                                       |       |
| 24     | KEY MATRIX Z7                                  | DIGITAL | INPUT     |                                       |       |
| 25     | DLR2416 - DATA2                                | DIGITAL | OUTPUT    |                                       |       |
| 26     | KEY MATRIX Z6                                  | DIGITAL | INPUT     |                                       |       |
| 27     | DLR2416 - DATA3                                | DIGITAL | OUTPUT    |                                       |       |
| 28     | KEY MATRIX Z5                                  | DIGITAL | INPUT     |                                       |       |
| 29     | DLR2416 - DATA4                                | DIGITAL | OUTPUT    |                                       |       |
| 30     | KEY MATRIX Z4                                  | DIGITAL | INPUT     |                                       |       |
| 31     | DLR2416 - DATA5                                | DIGITAL | OUTPUT    |                                       |       |
| 32     | KEY MATRIX Z3                                  | DIGITAL | INPUT     |                                       |       |
| 33     | DLR2416 - DATA6                                | DIGITAL | OUTPUT    |                                       |       |
| 34     | KEY MATRIX Z2                                  | DIGITAL | INPUT     |                                       |       |
| 35     | DLR2416 - WRITE                                | DIGITAL | OUTPUT    |                                       |       |
| 36     | KEY MATRIX Z1                                  | DIGITAL | INPUT     |                                       |       |
| 37     | DLR2416 - A1                                   | DIGITAL | OUTPUT    |                                       |       |
| 38     | KEY MATRIX Z0                                  | DIGITAL | INPUT     |                                       |       |
| 39     | DLR2416 - A0                                   | DIGITAL | OUTPUT    |                                       |       |
| 40     | SELECTOR @3                                    | DIGITAL | INPUT     |                                       |       |
| 41     | SELECTOR @0                                    | DIGITAL | INPUT     |                                       |       |
| 42     | SELECTOR @2                                    | DIGITAL | INPUT     |                                       |       |
| 43     | SELECTOR @1                                    | DIGITAL | INPUT     |                                       |       |
| 44     |  | PWM     |           |                                       |       |
| 45     |  | PWM     |           |                                       |       |
| 46     |  | PWM     |           |                                       |       |
| 47     |  | DIGITAL |           |                                       |       |
| 48     |  | DIGITAL |           |                                       |       |
| 49     |  | DIGITAL |           |                                       |       |
| 50     |  | SPI     | MISO      |                                       |       |
| 51     |  | SPI     | MOSI      |                                       |       |
| 52     |  | SPI     | SCK       |                                       |       |
| 53     |  | SPI     | SS        |                                       |       |
| A0     | LDG ELEV                                       |         |           |                                       |       |
| A1     | COCKPIT CLIM                                   |         |           |                                       |       |
| A2     | FWD CABIN CLIM                                 |         |           |                                       |       |
| A3     | AFT CABIN CLIM                                 |         |           |                                       |       |
| A4     | FWD CARGO CLIM                                 |         |           |                                       |       |
| A5     | AFT CARGO CLIM                                 |         |           |                                       |       |
| A6     |  |         |           |                                       |       |
| A7     |  |         |           |                                       |       |
| A8     |  |         |           |                                       |       |
| A9     |  |         |           |                                       |       |
| A10    |  |         |           |                                       |       |
| A11    |  |         |           |                                       |       |
| A12    |  |         |           |                                       |       |
| A13    |  |         |           |                                       |       |
| A14    |  |         |           |                                       |       |
| A15    |  |         |           |                                       |       |

## ARDUINO SHIELD Mapping

| HE 10 LED |          |              |
|-----------|----------|--------------|
| HE PIN    | FUNCTION | ARDUINO PIN  |
| 1         | X0       | 74HCT154 X0  |
| 2         | X1       | 74HCT154 X1  |
| 3         | X2       | 74HCT154 X2  |
| 4         | X3       | 74HCT154 X3  |
| 5         | X4       | 74HCT154 X4  |
| 6         | X5       | 74HCT154 X5  |
| 7         | X6       | 74HCT154 X6  |
| 8         | X7       | 74HCT154 X7  |
| 9         | X8       | 74HCT154 X8  |
| 10        | X9       | 74HCT154 X9  |
| 11        | X10      | 74HCT154 X10 |
| 12        | X11      | 74HCT154 X11 |
| 13        | X12      | 74HCT154 X12 |
| 14        | X13      | 74HCT154 X13 |
| 15        | X14      | 74HCT154 X14 |
| 16        | X15      | 74HCT154 X15 |
| 17        | Y0       | 74HCT138 Y0  |
| 18        | Y1       | 74HCT138 Y1  |
| 19        | Y2       | 74HCT138 Y2  |
| 20        | Y3       | 74HCT138 Y3  |
| 21        | Y4       | 74HCT138 Y4  |
| 22        | Y5       | 74HCT138 Y5  |
| 23        | Y6       | 74HCT138 Y6  |
| 24        | Y7       | 74HCT138 Y7  |
| 25        | DATA     | 10           |
| 26        | STROBE_  | 9            |

| HE 10 PB |          |               |
|----------|----------|---------------|
| HE PIN   | FUNCTION | ARDUINO PIN   |
| 1        | X11      | 74HCT154 - 11 |
| 2        | X0       | 74HCT154 - 00 |
| 3        | X12      | 74HCT154 - 12 |
| 4        | X1       | 74HCT154 - 01 |
| 5        | X13      | 74HCT154 - 13 |
| 6        | X2       | 74HCT154 - 02 |
| 7        | X14      | 74HCT154 - 14 |
| 8        | X3       | 74HCT154 - 03 |
| 9        | X15      | 74HCT154 - 15 |
| 10       | X4       | 74HCT154 - 04 |
| 11       | Z0       | 38            |
| 12       | X5       | 74HCT154 - 05 |
| 13       | Z1       | 36            |
| 14       | X6       | 74HCT154 - 06 |
| 15       | Z2       | 34            |
| 16       | X7       | 74HCT154 - 07 |
| 17       | Z3       | 32            |
| 18       | X8       | 74HCT154 - 08 |
| 19       | Z4       | 30            |
| 20       | X9       | 74HCT154 - 09 |
| 21       | Z5       | 28            |
| 22       | X10      | 74HCT154 - 10 |
| 23       | Z6       | 26            |
| 24       | SPARE    |               |
| 25       | Z7       | 24            |
| 26       | SPARE    |               |

| HE 10 DLR2416 U BAT |                          |             |
|---------------------|--------------------------|-------------|
| HE PIN              | FUNCTION                 | ARDUINO PIN |
| 1                   | DATA0                    | 22          |
| 2                   | DLR 2416 SELECT 0 (BAT1) | 74HCT154 X0 |
| 3                   | DATA1                    | 23          |
| 4                   | DLR 2416 SELECT 1 (BAT2) | 74HCT154 X2 |
| 5                   | DATA2                    | 25          |
| 6                   | +Vcc                     | 5Vdc        |
| 7                   | DATA3                    | 27          |
| 8                   | +Vcc                     | 5Vdc        |
| 9                   | DATA4                    | 29          |
| 10                  | GND                      | GND         |
| 11                  | DATA5                    | 31          |
| 12                  | GND                      | GND         |
| 13                  | DATA6                    | 33          |
| 14                  | A0                       | 39          |
| 15                  | WRITE                    | 35          |
| 16                  | A1                       | 37          |

| HE 10 DLR2416 ADIRS |                            |              |
|---------------------|----------------------------|--------------|
| HE PIN              | FUNCTION                   | ARDUINO PIN  |
| 1                   | DATA0                      | 22           |
| 2                   | +Vcc                       | 5Vdc         |
| 3                   | DATA1                      | 23           |
| 4                   | GND                        | GND          |
| 5                   | DATA2                      | 25           |
| 6                   | DLR 2416 SELECT 2 (ADIRS1) | 74HCT154 X4  |
| 7                   | DATA3                      | 27           |
| 8                   | DLR 2416 SELECT 3 (ADIRS2) | 74HCT154 X6  |
| 9                   | DATA4                      | 29           |
| 10                  | DLR 2416 SELECT 4 (ADIRS3) | 74HCT154 X8  |
| 11                  | DATA5                      | 31           |
| 12                  | DLR 2416 SELECT 5          | 74HCT154 X10 |
| 13                  | DATA6                      | 33           |
| 14                  | A0                         | 39           |
| 15                  | WRITE                      | 35           |
| 16                  | A1                         | 37           |

| HE 10 ANA 0 |                 |             |
|-------------|-----------------|-------------|
| HE PIN      | FUNCTION        | ARDUINO PIN |
| 1           |                 | A7          |
| 2           | Vcc             | 5V          |
| 3           |                 | A6          |
| 4           | Vcc             | 5V          |
| 5           | AFT CARGO CLIM  | A5          |
| 6           | Vcc             | 5V          |
| 7           | FWD CARGO CLIM  | A4          |
| 8           | Vcc             | 5V          |
| 9           | AFT CABIN CLIM  | A3          |
| 10          | GND             | GND         |
| 11          | FWD CABIN CLIM  | A2          |
| 12          | GND             | GND         |
| 13          | COCKPIT CLIM    | A1          |
| 14          | GND             | GND         |
| 15          | LDG ELEV SIGNAL | A0          |
| 16          | GND             | GND         |

| HE 10 ANA 1 |          |             |
|-------------|----------|-------------|
| HE PIN      | FUNCTION | ARDUINO PIN |
| 1           |          | A15         |
| 2           | Vcc      | 5V          |
| 3           |          | A14         |
| 4           | Vcc      | 5V          |
| 5           |          | A13         |
| 6           | Vcc      | 5V          |
| 7           |          | A12         |
| 8           | Vcc      | 5V          |
| 9           |          | A11         |
| 10          | GND      | GND         |
| 11          |          | A10         |
| 12          | GND      | GND         |
| 13          |          | A9          |
| 14          | GND      | GND         |
| 15          |          | A8          |
| 16          | GND      | GND         |

| HE 10 LIGHTS PANEL |                 |             |
|--------------------|-----------------|-------------|
| HE PIN             | FUNCTION        | ARDUINO PIN |
| 1                  | KEY MATRIX Z0   | 38          |
| 2                  | LDG ELEV SIGNAL |             |
| 3                  | KEY MATRIX Z1   | 36          |
| 4                  | GND             |             |
| 5                  | KEY MATRIX Z2   | 34          |
| 6                  | +Vcc 5V         |             |
| 7                  | KEY MATRIX Z3   | 32          |
| 8                  | SPARE           |             |
| 9                  | KEY MATRIX Z4   | 30          |
| 10                 | KEY MATRIX X0   |             |
| 11                 | KEY MATRIX Z5   | 28          |
| 12                 | KEY MATRIX X1   |             |
| 13                 | KEY MATRIX Z6   | 26          |
| 14                 | KEY MATRIX X12  |             |
| 15                 | KEY MATRIX Z7   | 24          |
| 16                 | KEY MATRIX X3   |             |

| HE 10 ADIRS SELECTORS |                    |             |
|-----------------------|--------------------|-------------|
| HE PIN                | FUNCTION           | ARDUINO PIN |
| 1                     | SELECTOR BUS @0    | 41          |
| 2                     | ADR1 MAIN SELECTOR | 74HCT154 X0 |
| 3                     | SELECTOR BUS @1    | 43          |
| 4                     | ADR3 MAIN SELECTOR | 74HCT154 X1 |
| 5                     | SELECTOR BUS @2    | 42          |
| 6                     | ADR2 MAIN SELECTOR | 74HCT154 X2 |
| 7                     | SELECTOR BUS @3    | 40          |
| 8                     | DATA SELECTOR      | 74HCT154 X3 |
| 9                     | SPARE              |             |
| 10                    | SYSTEM SELECTOR    | 74HCT154 X4 |