



Junction BOX for the 3rd Generation FreewayCam Family

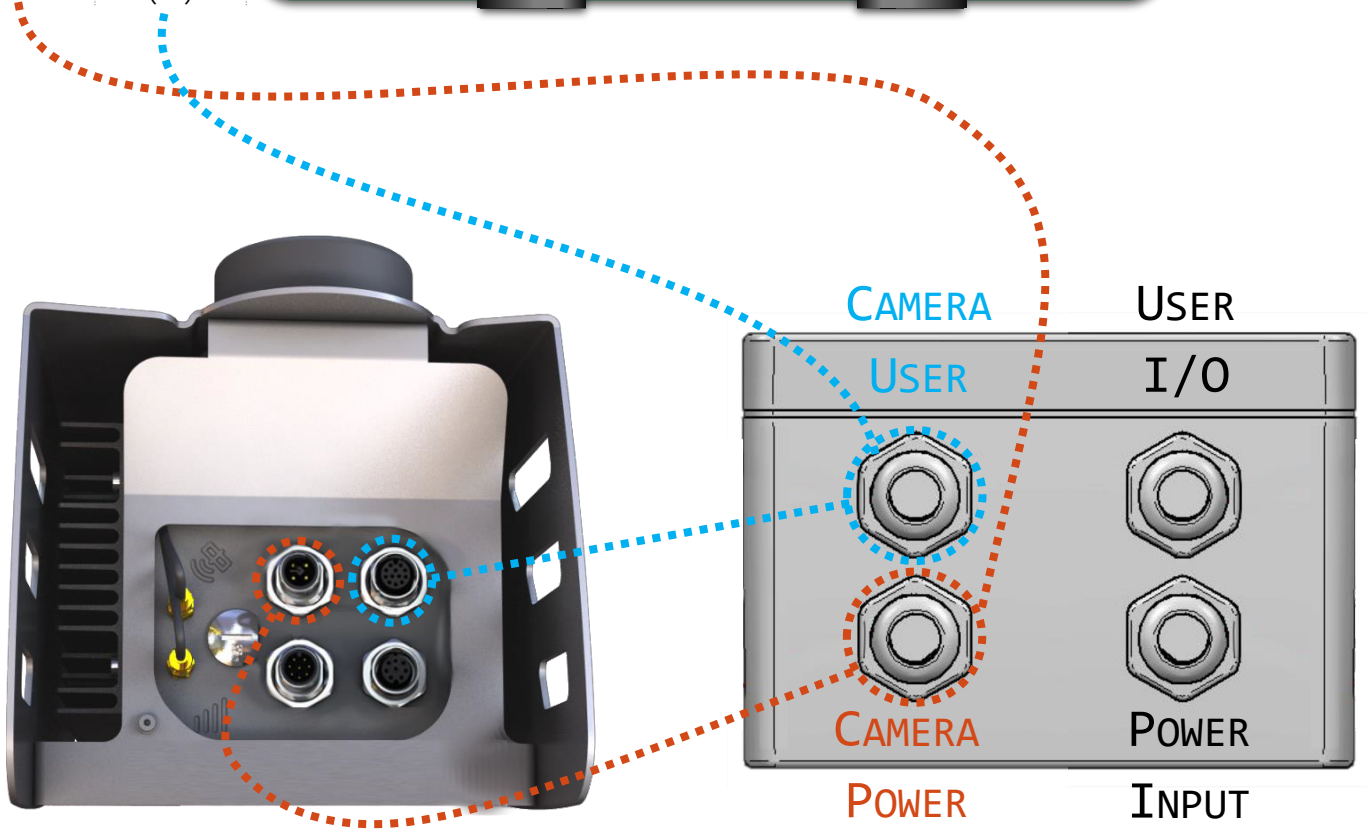


**This guide contains an overview of the hardware.
The description includes connections and electrical & mechanical data.**

A 12-PIN USER CABLE (M12 BINDER FEMALE CONNECTOR AT ONE END, AND A STRIPPED END ON THE OTHER) IS REQUIRED TO CONNECT THE CAMERA TO THE JUNCTION BOX. THIS I/O CABLE IS NOT INCLUDED BY DEFAULT WITH THE CAMERA. HOWEVER, YOU CAN PURCHASE IT DIRECTLY FROM ARH (PART #: COMBUY-OTH-0326).

CONNECTIONS

Camera Power Cable	Camera User Cable (12-pin)	Junction Box Camera side	Junction Box User Side	User Cable
RED (#1 AND #2)	-	1 - POWER OUTPUT +	1 - POWER INPUT +	24 V AC
BLACK (#3 AND #4)	-	2 - POWER OUTPUT -	2 - POWER INPUT -	24 V AC
-	BLUE (2)	3 - OPTO_OUT_G	3 - RELAY_NC	GP OUT #1 GND
-	BROWN (1)	4 - OPTO_OUT_S	4 - RELAY_NO	GP OUT #1 SIGNAL
-	GREEN (4)	5 - OPTO_IN_S	5 - RELAY_COM	GP IN #1 SIGNAL
-	WHITE (3)	6 - OPTO_IN_G	6 - OPTO_IN_S	GP IN #2 SIGNAL
-	NOT CONNECTED	7 - RS485 TERM.	7 - OPTO_IN_G	NOT CONNECTED
-	GRAY (8)	8 - SERIAL_RX	8 - SERIAL_RX	USER SERIAL RX
-	PURPLE (10)	9 - SERIAL_TX	9 - SERIAL_TX	USER SERIAL TX
-	RED/BLUE (12)	10 - SERIAL_GND	10 - SERIAL_GND	USER GND



MECHANICAL DATA

Input Power	24 – 28 V AC Overvoltage, overcurrent protection fuse (T 1.5A) Transient protection
Communication	Interface points for communication: RX, TX, GND Transient protection
Input	Optocoupler interface Can be configured by jumpers (see the marking on the PCB) 'Dry' or 'Contact' Dry: min. 5mA – max. 15mA (input resistance: 1kΩ)
Output	Galvanic isolated 1-pole relay output Optional 'Status LED' on the box: GREEN : relay ON RED : relay OFF COM, NO (Normal Open), NC (Normal Close) outputs 2A, 250 V AC / 24 V DC Min. 10 ⁵ switching cycles Max. voltage: 350 V AC, 100 V DC
On board status LEDs	Green — Power Red* — Relay ON Yellow — Optocoupler is active
* The junction box can be used for testing purposes as well. In case of correct wiring, after turning on the device, the relay will click and the red status led will light continuously until the trigger output is active.	
Box	Polycarbonate (IP65 rated) Cable outlets
Cable outlets	M16 cable glands (camera power, camera user, input power, user input / output)
Cable thickness	4.5 mm – 10 mm
Mechanical dimensions	120 mm × 80 mm (+ cable gland max 30 mm) × 85 mm
Temperature range	-40 °C – +80 °C