

Specification

DIMENSIONS

MoVI Pro	345 x 345 x 432mm (L*W*H)
Camera Cage	196 x 200 x 175mm (L*W*H)

MECHANICAL

Pan Range of Motion	±360° Continuous Rotation
Tilt Range of Motion	+165° to -90°
Roll Range of Motion	+/-60°
Max Tilt/Roll Rate	360°/s
Max Pan Rate	360°/s
Weight	2.65kg
Max Payload	6.80kg
Max Operating Speed*	100kph *Dependent on payload
Operating Temperatures	-20° to 50°C
Ingress Protection (IP)	IP52 (5) Dust Protected (2) Water spray @ <15°
Mounting System	Freefly Toad In The Hole (TITH) Quick Release

ELECTRONICS

Data Logging Rate	5, 10, and 25 Hz
Connections	Bluetooth Low Energy v4.2 and 2.4GHz Custom FHSS Radio
Max Pan Motor Torque	0.72 N m
Max Tilt/Roll Motor Torque	0.51 N m
Motor Type	Direct-drive 3 phase Brushless
Data Storage	microSD
Port Types	GCU ports - COM1, 12V, COM 2 TSU Ports - LTC Timecode In/Out, EXP, CANbus + Battery Voltage, CAM, 12-14V CAM, 12V AUX, F,I,Z, USB Type C

BATTERY SPECS

SL4 BATTERY

Nominal Battery Voltage	21.6V
Min - Max Battery Voltage	18 - 25.2V
Capacity (Ah)	4.1
Capacity (Wh)	86.4
Ambient Temperature	-20 °C to 50 °C
Battery Cell Temperature	10 °C to 50 °C
Charging Temp	0 °C to 50 °C
Weather	Moderate rain (~3 mm per minute)
Drop rating	1 meter
USB Power Delivery	60 Watts (Up to 3 A at the following voltages: 20, 15, 12, 9, 5)
Cell Chemistry	Lithium-Ion
Cell Type	SL4 : Lishen LR2170SF
Max Continuous Current (10 s)	SL4 : 13.5A
Max Peak Current (1 s)	SL4 : 20 A
Mass	SL4 : 600g

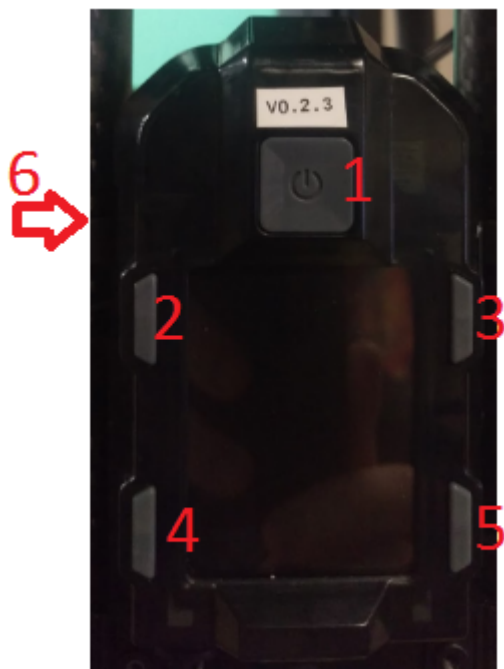
ORIGINAL MÖVI PRO BATTERY

Nominal Battery Voltage	22.2V
Max Battery Voltage	25.2V
Battery Size	1800 mAh
Cells	6 Cells
Max Battery Quantity	2 Battery
Min Battery Quantity	1 Battery
Max Peak Discharge Rate (Per Pack)	20-25A

For airline travel and shipping regulations, check the specifications battery under SuperLight Batteries in this Wiki.

GCU and TSU Layouts

Gimbal Control Unit (GCU)



GCU Layout:

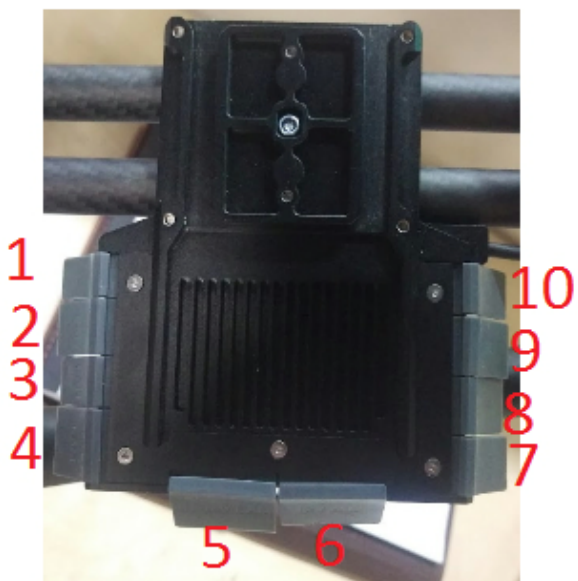
1. Power Button
 - * Push (ON)
 - * Hold (OFF)
2. Back Button
3. Forward Button
4. Select Option (-)
5. Select Option (+)
6. microSD Card Slot

GCU Connections:



1. COM 1
2. 12V
3. COM 2

TILT STAGE UNIT (TSU)



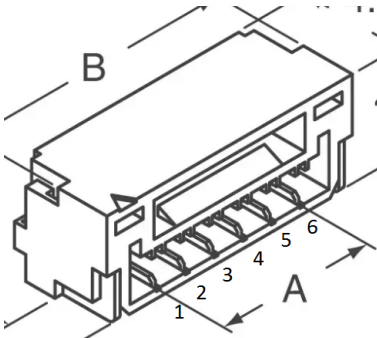
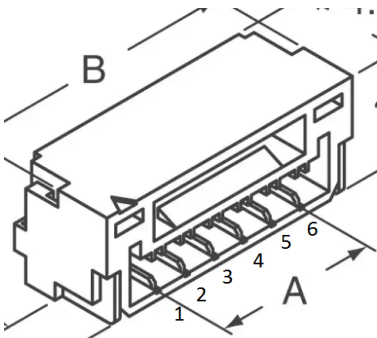
TSU CONNECTIONS

1. TC
2. EXP
3. CAN
4. CAM
5. 12-14V CAM
6. 12V AUX
7. Focus
8. Iris
9. Zoom
10. USB C DRP

CONNECTORS AND PINOUTS

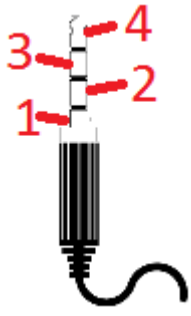
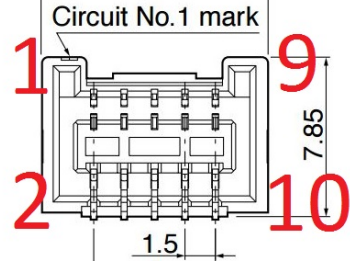
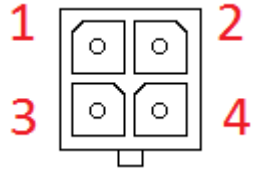
All connector pinouts are shown looking into the function side of the connectors on the GCU and TSU, unless stated otherwise.

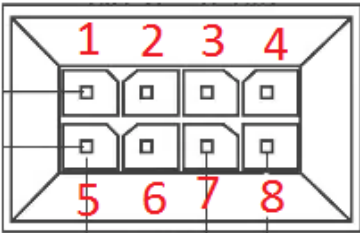
GIMBAL CONTROL UNIT:

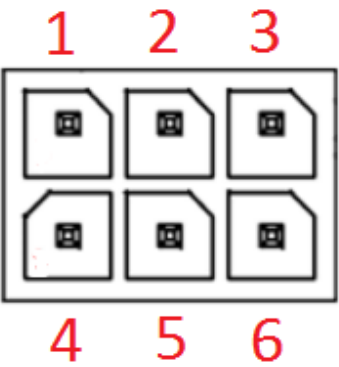
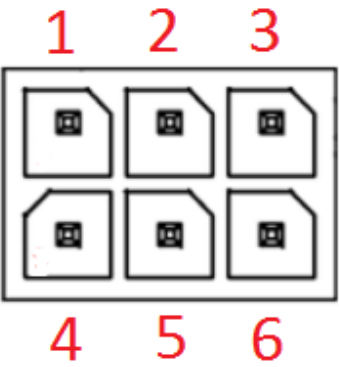
Connector	Type	Pin-Out
1. COM 1	JST GH 6-pin	 Insert Image of Pin-Out -from front (2D) 1 - GND 2 - +5V 3 - UARTn_TX 4 - UARTn_RX 5 - UARTn_CTS 6 - UARTn_RTS
2. 12V	Female P-TAP	 Insert Image of Pin-Out -from front (2D) + 12V PTAP V+ - 12V PTAP GND
3. COM 2	JST GH 6-pin	 Insert Image of Pin-Out -from front (2D)

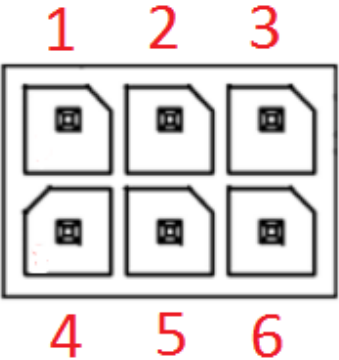
1 - GND	4 -
UARTn_RX	
2 - +5V	5 -
UARTn_CTS	
3 - UARTn_TX	6 -
UARTn_RTS	

TILT STAGE UNIT

Connector	Type	Pin-Out
1. TC (LTC Timecode)	3.5mm Jack	 Insert Image of Pin-Out (Shown from Function Side of the male 3.5mm Jack) 1 - (Base, Mic) - LTC IN 2 - (Ring, Gnd) - GND 3 - (Ring, Right) - SYNC IN 4 - (Tip, Left) - LTC OUT
2. EXP (Expansion)	JST ZPH 10 Pin	 Insert Image of Pin-Out 1 - GND 6 - Rx/D1/Rx+ 2 - +12V 7 - Tx/D2/Tx+ 3 - GND 8 - Rx/D2/Rx- 4 - +5V 9 - GPI/UART RX 5 - Tx/D1/Tx- 10 - GPO/UART TX
3. CAN (CANbus)	Molex MicroFit RA 4 Pin	 Insert Image of Pin-Out

		1 - GND 2 - +V Bat 3 - CAN H 4 - CAN L
4. CAM (Camera)	Molex MicroFit RA 8 Pin	 Insert Image of Pin-Out 1 - GND Power 2 - +5V Signal 3 - Rx D TX 4 - Tx D RX 5 - LANC 6 - LANC 7 - GPO/UART 8 - GPI/UART
5. 12-14V CAM (Camera Power)	Female P-TAP	 Insert Image of Pin-Out -from front (2D) + 14V PTAP V+ - 14V PTAP GND
6. 12V AUX (Auxiliary Power)	Female P-TAP	 Insert Image of Pin-Out -from front (2D)

		+ 12V PTAP V+ - 12V PTAP GND
7. F (Focus Motor)	Molex MicroFit RA 6 Pin	 Insert Image of Pin-Out 1 - Motor A 2 - Motor B Encoder A 3 - +5V Encoder B 4 - GND 5 - 6 -
8. I (Iris Motor)	Molex MicroFit RA 6 Pin	 Insert Image of Pin-Out 1 - Motor A 2 - Motor B Encoder A 3 - +5V Encoder B 4 - GND 5 - 6 -

9. Z (Zoom Motor)	Molex MicroFit RA 6 Pin	 Insert Image or Pin-Out 1 - Motor A 4 - GND 2 - Motor B 5 - Encoder A 3 - +5V 6 - Encoder B
10. USB Port	USB Type C DRP (Source and Sink 5V)	