

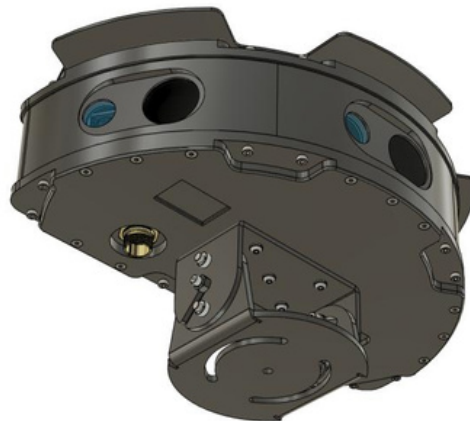
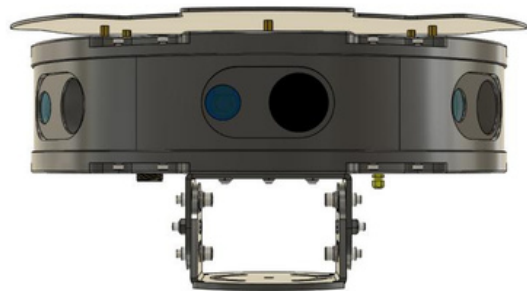
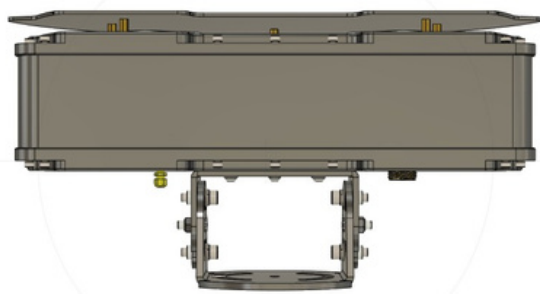
Falcon 180

IP67 180 deg Situational Awareness

Falcon 180 is a Multi Sensor Situational Awareness System. The system integrates 6 sensors, 3xLow Light (DAY) and 3x12 μ m LWIR which provide a real time 180° view on separate streams.

Falcon Provides single Ethernet interface with an optional daisy chain capability in order to lower cable length on the platform.

The system is designed to work in a harsh marine environment based on IP67 CNC Hard anodized sealed aluminum enclosure which is nitrogen purged.



Falcon 180 SITUATION AWARENESS

640x512 | 1280x1024 UNCOOLED LWIR SENSOR

RESOLUTION (PIXELS) 1280x1024 | 640x512 / 12 μm ,
LWIR LENS 13mm | 5.8mm, LENS FOCAL LENGTH 69° x 56 °
SPECTRAL BAND 7.5-13.5 μm, FRAME RATE 30Hz, SENSITIVITY (NEDT)
<50mK at F/1.0, GERMANIUM WINDOW

1920x1080 LOW LIGHT SENSOR

1920x1080 PIXELS, 30 FPS LENS FULL HD, START UP TIME 6 SEC,
SAPPHIRE WINDOW

FOV LOW LIGHT SENSOR

LENS 4mm DC DRIVE M12, **FOV (H) 84.6° (V) 45.9° (D) 100.0°**

EMBEDDED ETHERNET SWITCH

EMBEDDED INDUSTRIAL GIGA ETHERNET SWITCH

CONNECTION INTERFACE

HERMETIC STAINLESS STEEL D38999/23YD35PN **MIL.STD** ETHERNET (IP),
INPUT 8-32VDC

ENVIRONMENTAL

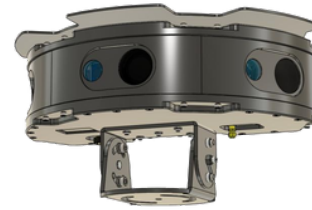
ANODIZED ALUMINUM, IP-67, OPERATING TEMP -40°C to +80°C,
NITROGEN PURGED
OPTIONAL HEATER OPERATION (start) <15°C (stop) >20°C

DIMENSIONS

(LWH, mm) 483x120x237, WEIGHT 15 kg
16KG (1280 include bracket + sun cover)

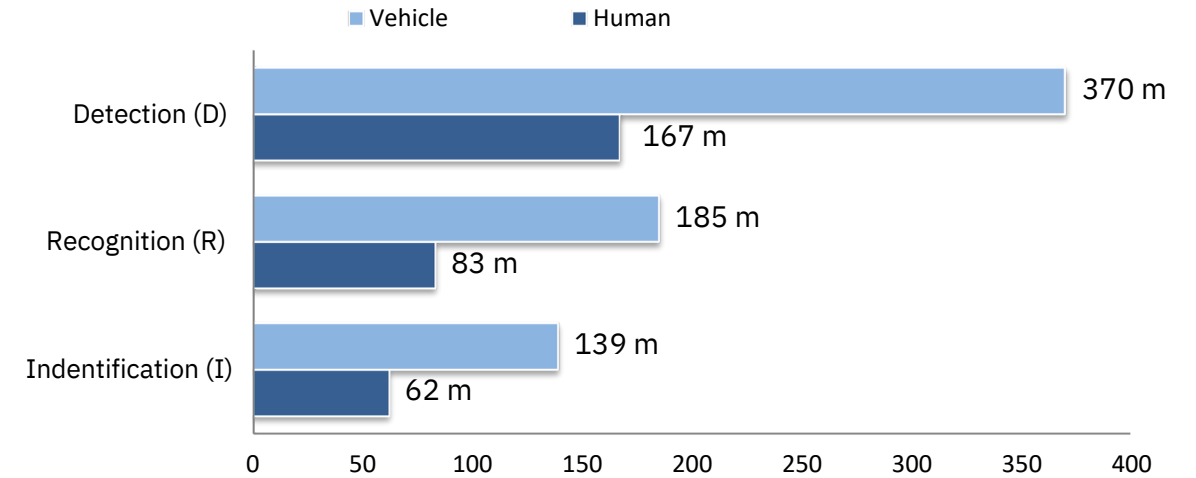
POWER CONSUMPTION

24V – 0.86A

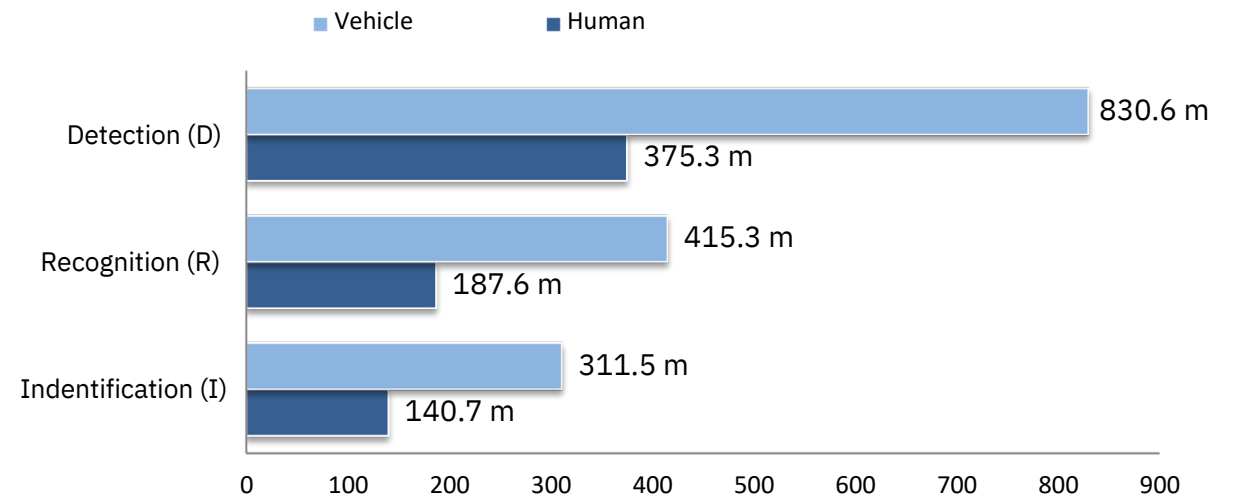


Falcon 180

Falcon 180 LWIR DRI (m)

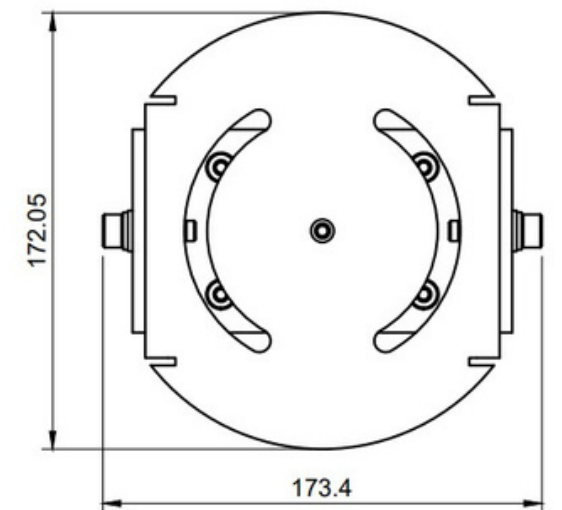
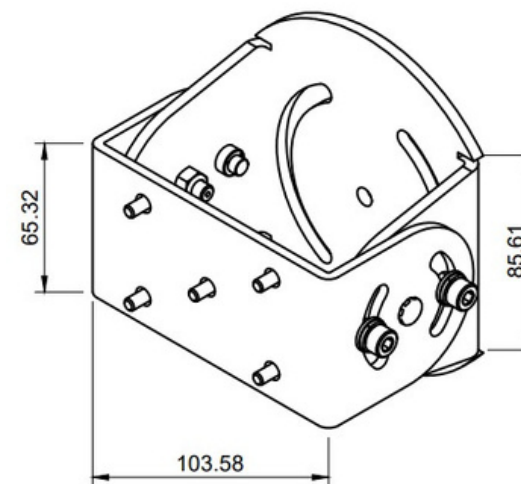
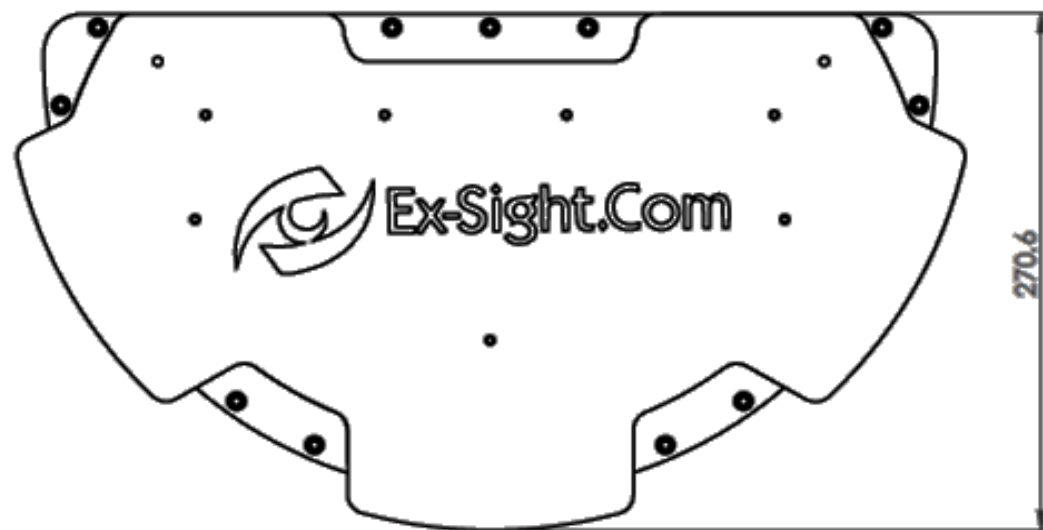
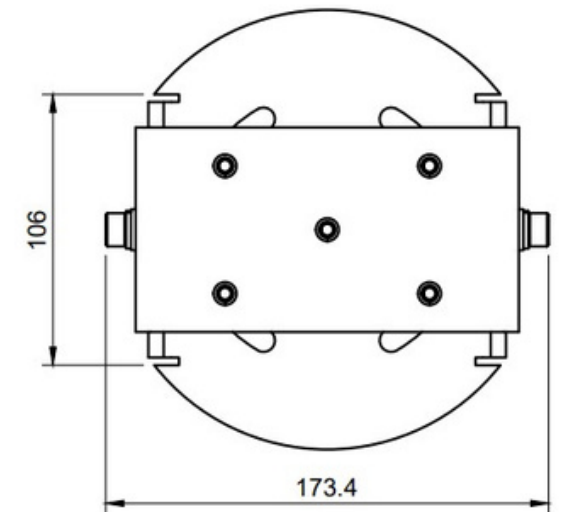
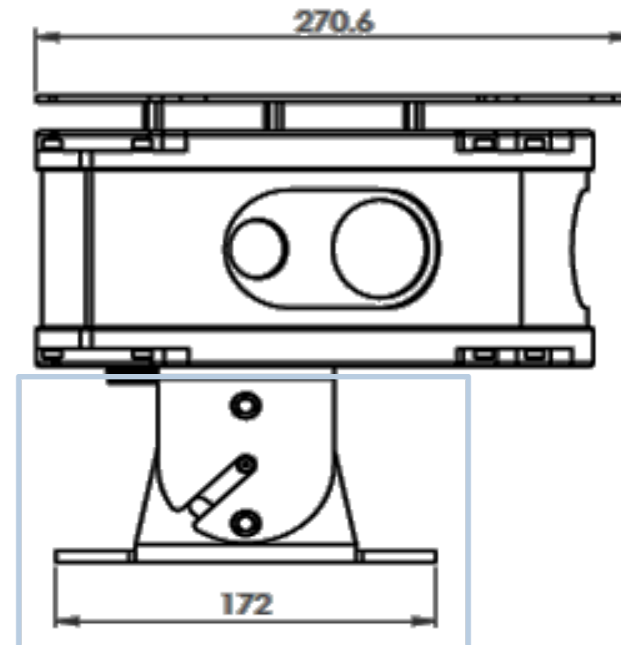
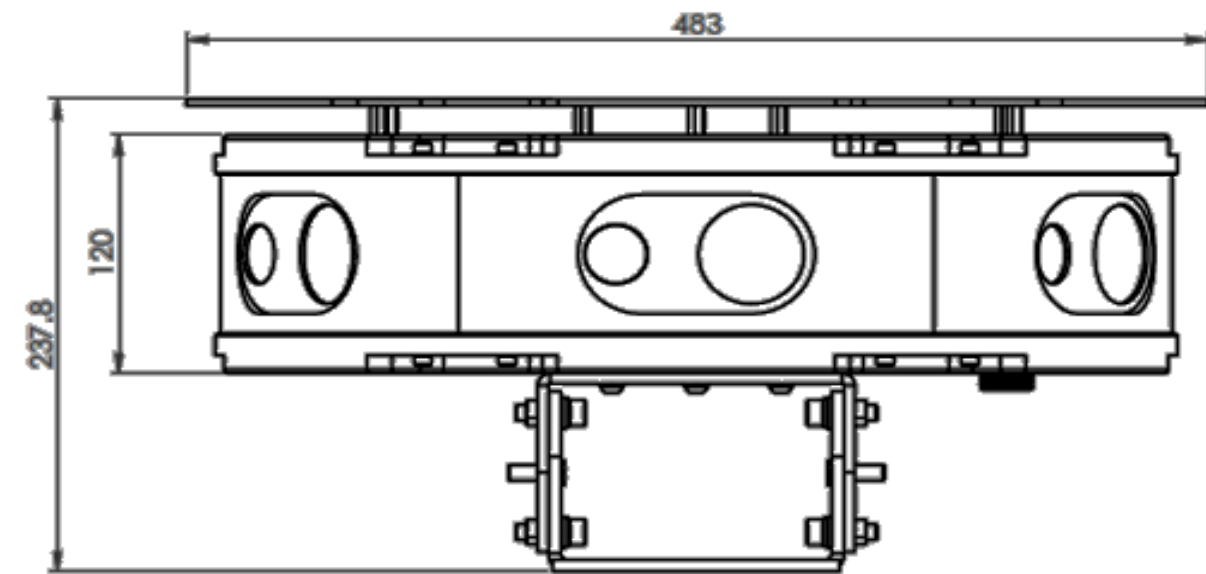


SA180-1280 LWIR DRI (m)

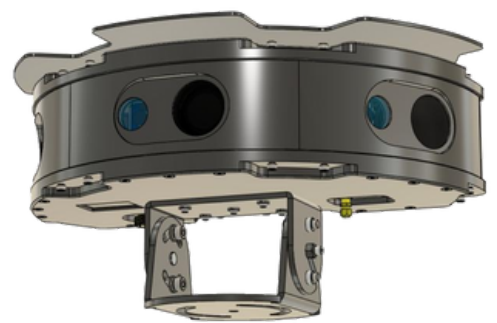


Up to Johnson Criteria

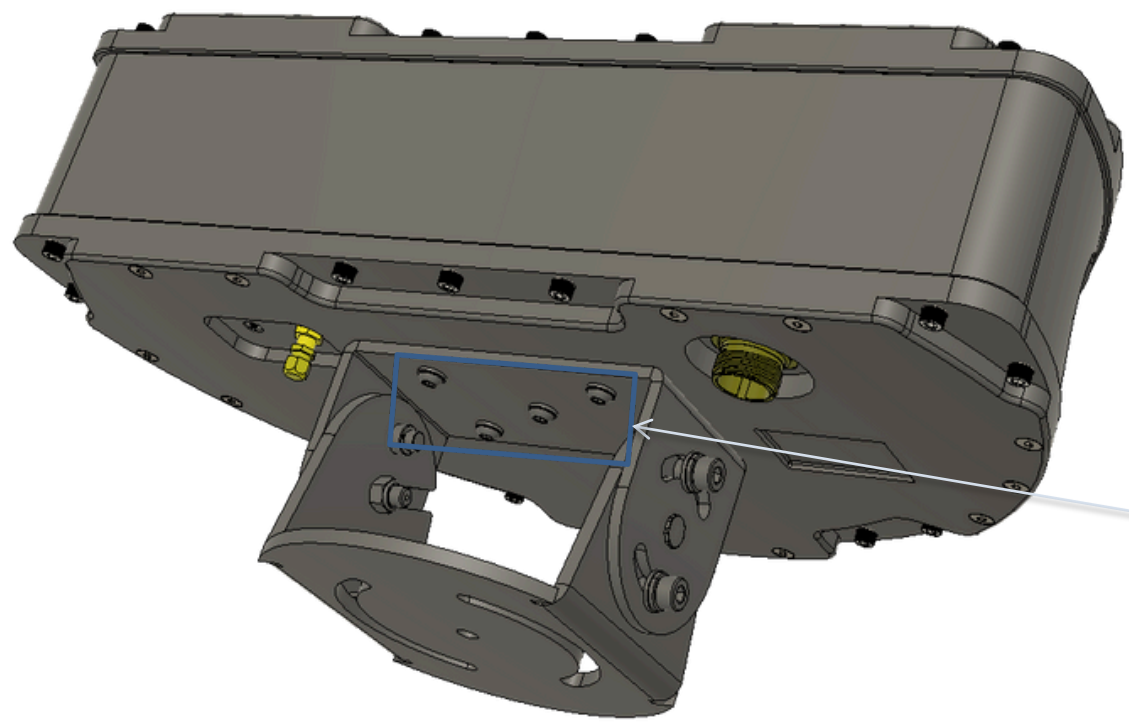
DIMENSIONS (mm)



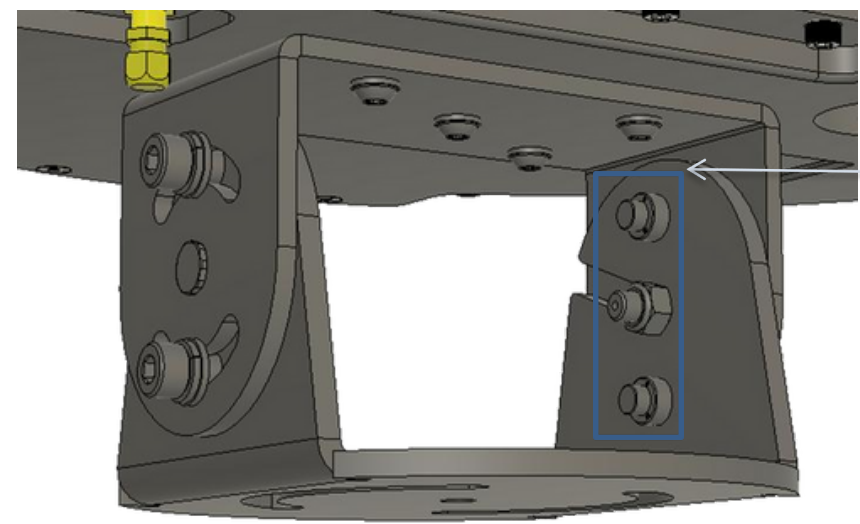
BRACKET INSTALLATION



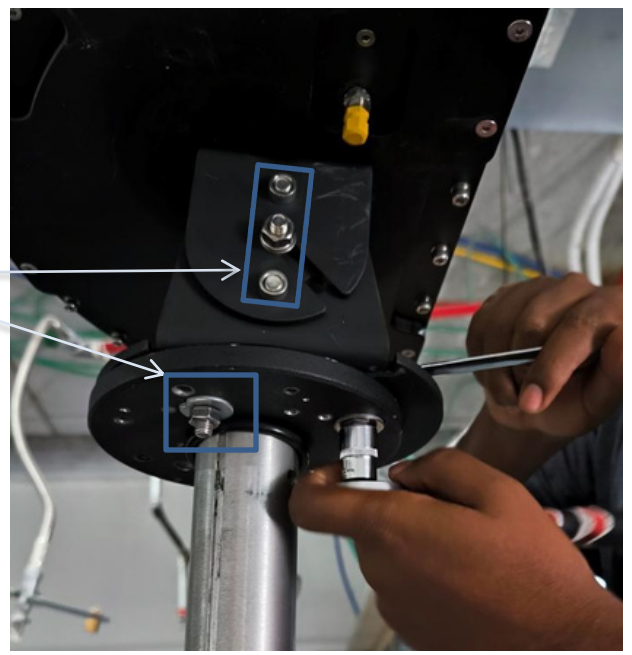
Falcon 180



M8*16



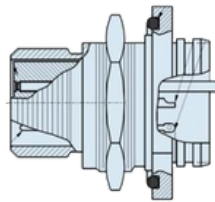
M8



PRODUCT PIN LAYOUT

PANEL Pin Layout

D38999/23YD35PN Stainless Steel Hermetic Connector



| PIN | DESCRIPTION | |
|-----|----------------------------|---------------------------------|
| 1 2 | Main ETH 1 (White Orange) | Giga Ethernet Port to Switch |
| 3 4 | Main ETH 2 (Orange) Main | |
| 5 6 | ETH 3 (White Green) Main | |
| 7 8 | ETH 4 (Blue) Main ETH 5 | |
| 9 | (White Blue) Main ETH 6 | |
| 10 | (Green) Main ETH 7 (White | |
| 11 | Brown) Main ETH 8 (Brown) | |
| 12 | NC NC 12VDC GND 12VDC | |
| 13 | Backup GND Backup CHAIN | |
| 14 | ETH 1 (White Orange) CHAIN | |
| 15 | ETH 2 (Orange) CHAIN ETH 3 | |
| 16 | (White Green) CHAIN ETH 4 | |
| 17 | (Blue) CHAIN ETH 5 (White | |
| 18 | Blue) CHAIN ETH 6 (Green) | |
| 19 | CHAIN ETH 7 (White Brown) | |
| 20 | CHAIN ETH 8 (Brown) NC | |
| 21 | | |
| 22 | | Giga Ethernet to Chained Sensor |
| 23- | | |
| 37 | | |
| | | |
| | | Not Connected |

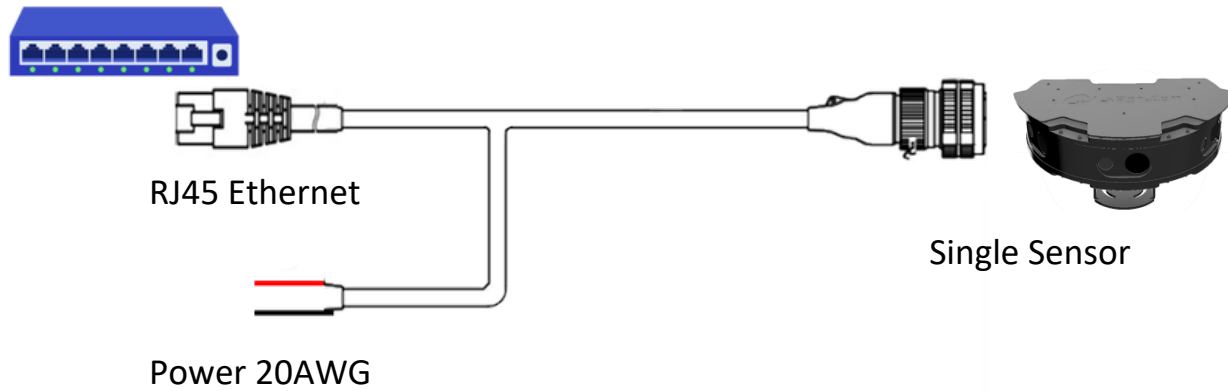
PART Numbering Index

| # | P/N | DESCRIPTION |
|---|-------------------------------------|---|
| 1 | D38999/23YD35PN | Mil. Std Stainless Steel connector |
| 2 | MS51377-2 MS51607-1 MS20813-1 | Nitrogen Valve Core Nitrogen MS Valves Nitrogen Fitting |



CABLE PART NUMBERING

SC Cable



SA180 PART NUMBERING:

SA180-[RES]-[FOV]

[RES] LWIR RESOLUTION:

640 (LWIR 640x512 , 5.8mm)

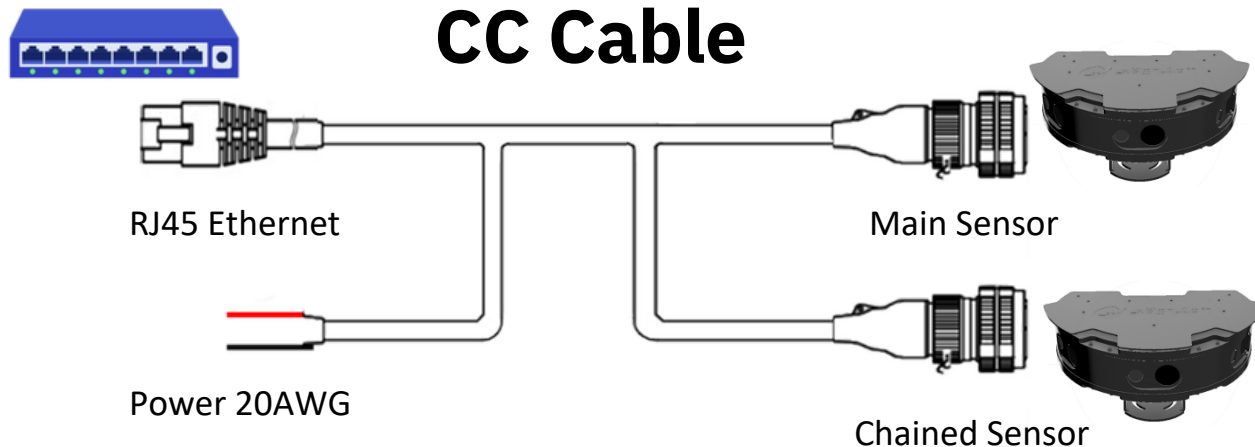
1280 (LWIR 1280x1024 , 13mm)

[FOV] FIELD OF VIEW

70 - 70° LWIR (69.4° x 57.3°), 90° DAY (84.6°x45.9°)

S - 70° LWIR (69.4° x 57.3°), 70° DAY (70.7°x43.5) SYNC

CC Cable



CABLE PART NUMBERING:

SA180-CABLE-[CT]-[LEN1]-[LEN2]

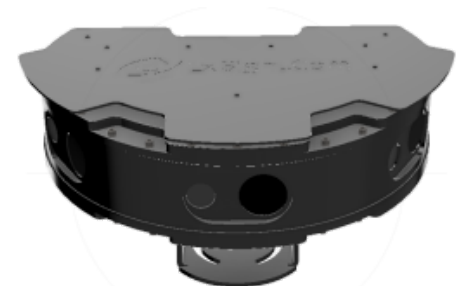
[CT] CABLE TYPE:

SC (SINGLE CABLE)

CC (CHAINED CABLE)

[LEN1] CABLE LENGTH in Meters

[LEN2] CHAINED CABLE LENGTH in Meters (CC cable only)



RQT1601875 CABLE

Cable Specification

22 Conductor Cable

Components:

Cat. 5e Cable:

Conductor: 24 AWG 7/32 Tinned Copper.

Insulation: XLPE, OD 1.3mm.

Color Code: Blue X White, Orange X White, Green X White, Brown X White.

Shield: Aluminum foil + Tinned cooper braid 80% Min coverage.

Jacket: PTX, OD 7.6 mm, Black, Numbered 1-2.

20 AWG pairs:

Conductor: 20 AWG 19/32 Tinned Copper.

Insulation: ETFE, OD 1.4 mm.

Color Code: Black, Red.

Cable:

Two (2) Cat. 5e 4X2X24 AWG SF/UTP.

Three (3) 20 AWG unshielded twisted pairs.

Jacket:

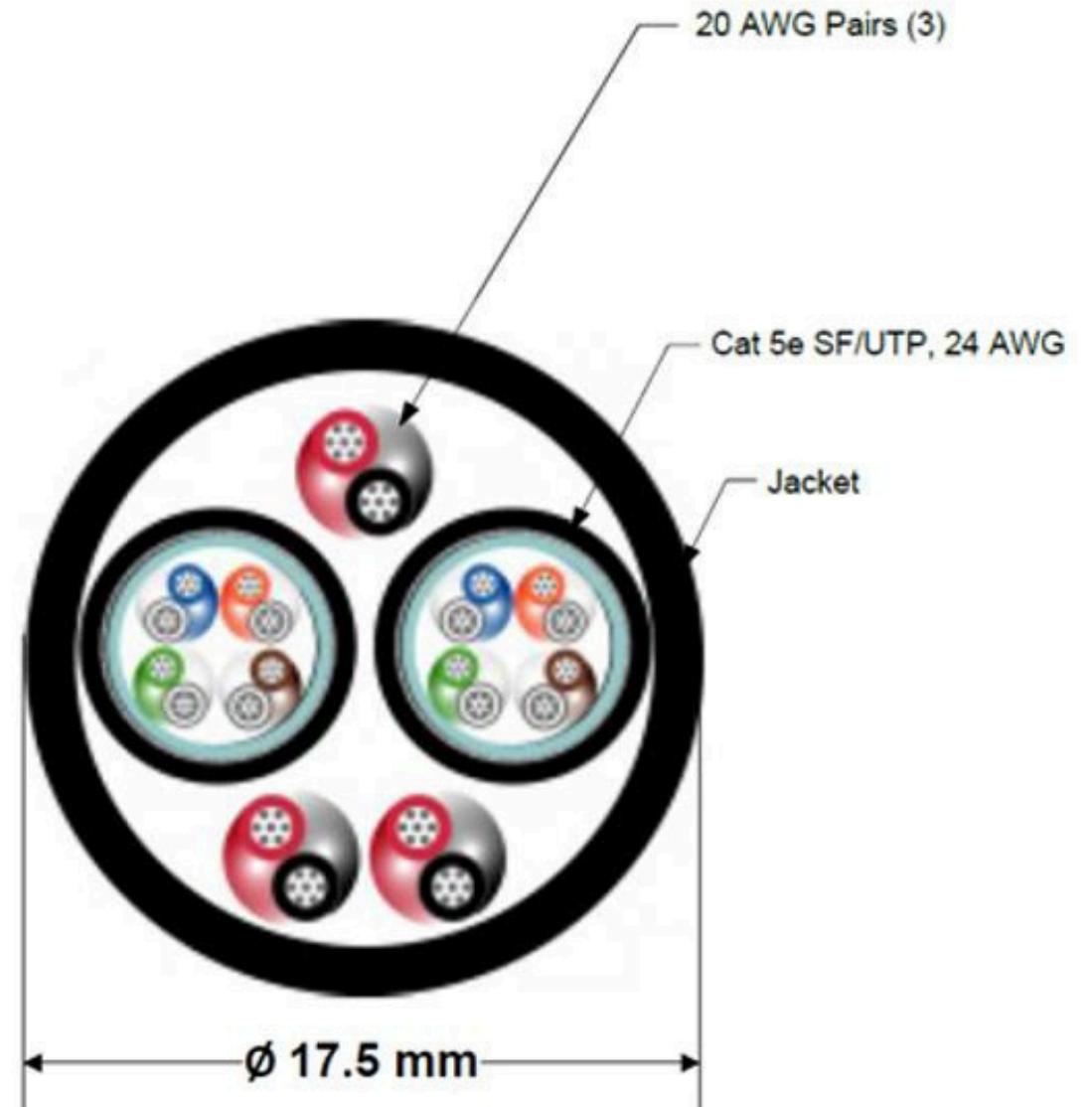
Halogen-free, flame retardant, Cross Linked Thermoplastic Elastomer.
to 17.5 mm nom – Black

Marking:

Jacket marked 'RQT1601875 – Week & Year of Manufacture' at 1000mm intervals.

Performance:

| | |
|---------------------------------|-----------|
| Min. Bend Radius: | 180 rmm |
| Min. Band Radius for Operation: | 150°mm |
| Max. Operation Temperature: | +90 C |
| Min. Operation Temperature: | - 40 C |
| UV Resistance: | Yes |
| Weight: | 260 Kg/Km |



CABLE PIN LAYOUT

CABLE PIN LAYOUT D38999/26KD35SN Stainless Steel Hermetic Connector

| PIN | DESCRIPTION | PIN | DESCRIPTION |
|-----|---------------------------|-----|-----------------------------|
| 1 2 | Main ETH 1 (White Orange) | 13 | 12VDC |
| 3 4 | Main ETH 2 (Orange) Main | 14 | GND |
| 5 6 | ETH 3 (White Green) Main | 15 | Backup ETH 1 (White Orange) |
| 7 8 | ETH 4 (Blue) Main ETH 5 | 16 | Backup ETH 2 (Orange) |
| 9 | (White Blue) Main ETH 6 | 17 | Backup ETH 3 (White Green) |
| 10 | (Green) Main ETH 7 (White | 18 | Backup ETH 4 (Blue) |
| 11 | Brown) Main ETH 8 (Brown) | 19 | Backup ETH 5 (White Blue) |
| 12 | NC NC 12VDC GND | 20 | Backup ETH 6 (Green) |
| | | 21 | Backup ETH 7 (White Brown) |
| | | 22 | Backup ETH 8 (Brown) |
| | | 23- | NC |
| | | 37 | |

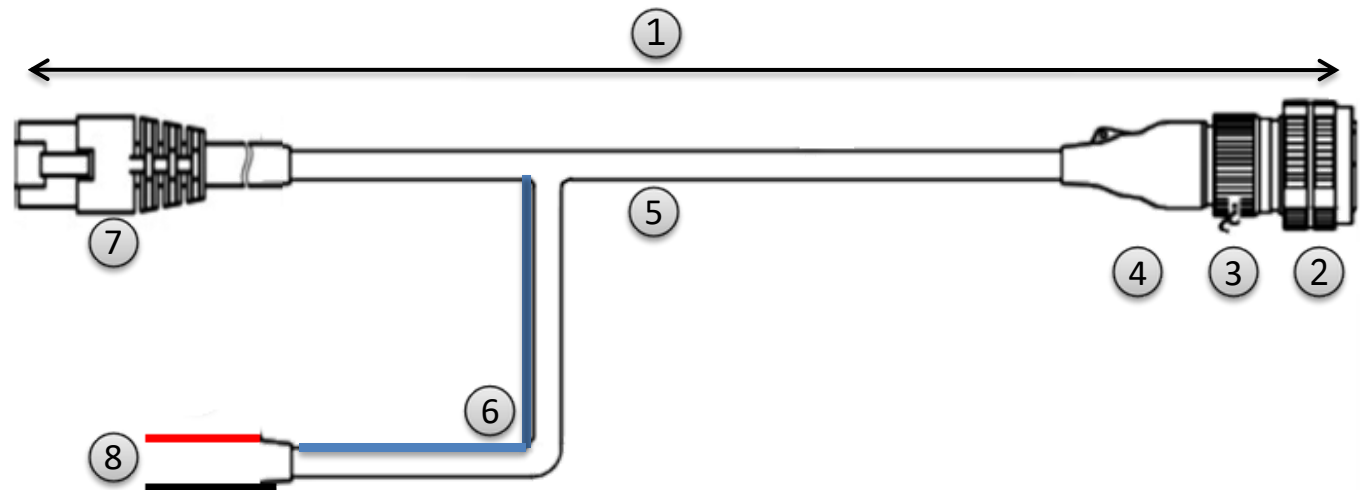
CABLE PART NUMBERING INDEX

| # | P/N | DESCRIPTION |
|---|------------------|---|
| 1 | [LEN1] | Total Cable length (meters) |
| 2 | D38999/26KD35SN | Mil. Std Stainless Steel connector (200°C, firewall capability, 500 hour salt spray resistance) |
| 3 | 27140S141010410 | Stainless Steel Backshell |
| 4 | 202K132-25-0 | Boot |
| 5 | Cable RQT1601875 | 6*20AWG + SPEC55 (RAYCHEM DR-25) |
| 6 | Cable RQT1601875 | 6*20AWG + SPEC55 (1m) (RAYCHEM DR-25) |
| 7 | RJ45 Ethernet | Main Ethernet connector |
| 8 | Power Wires | 20AWG For 9V-36V input |

Falcon180-CABLE-SC-[LEN1]

SA180-CABLE is RQT1601875 Cable (6*20AWG + SPEC 55) with specified length. The cable includes connector D38999/26KD35SN Mil. Std Stainless Steel that connects to the connector D38999/23YD35PN on the SA180 system. On the other side of the cable there is a connection to Power 9- 36V (open black wire + open red wire) and RJ45 Giga Ethernet connection.

MECHANICAL DRAWING



CABLE PIN LAYOUT

CABLE PIN LAYOUT D38999/26KD35SN Stainless Steel Hermetic Connector

| PIN | DESCRIPTION | PIN | DESCRIPTION |
|-----|--|-----|-----------------------------|
| 1 2 | Main ETH 1 (White Orange) | 13 | 12VDC |
| 3 4 | Main ETH 2 (Orange) Main | 14 | GND |
| 5 6 | ETH 3 (White Green) Main | 15 | Backup ETH 1 (White Orange) |
| 7 8 | ETH 4 (Blue) Main ETH 5 (White Blue) Main ETH 6 | 16 | Backup ETH 2 (Orange) |
| 9 | (Green) Main ETH 7 (White | 17 | Backup ETH 3 (White Green) |
| 10 | Brown) Main ETH 8 (Brown) | 18 | Backup ETH 4 (Blue) |
| 11 | NC NC 12VDC GND | 19 | Backup ETH 5 (White Blue) |
| 12 | | 20 | Backup ETH 6 (Green) |
| | | 21 | Backup ETH 7 (White Brown) |
| | | 22 | Backup ETH 8 (Brown) |
| | | 23- | NC |
| | | 37 | |

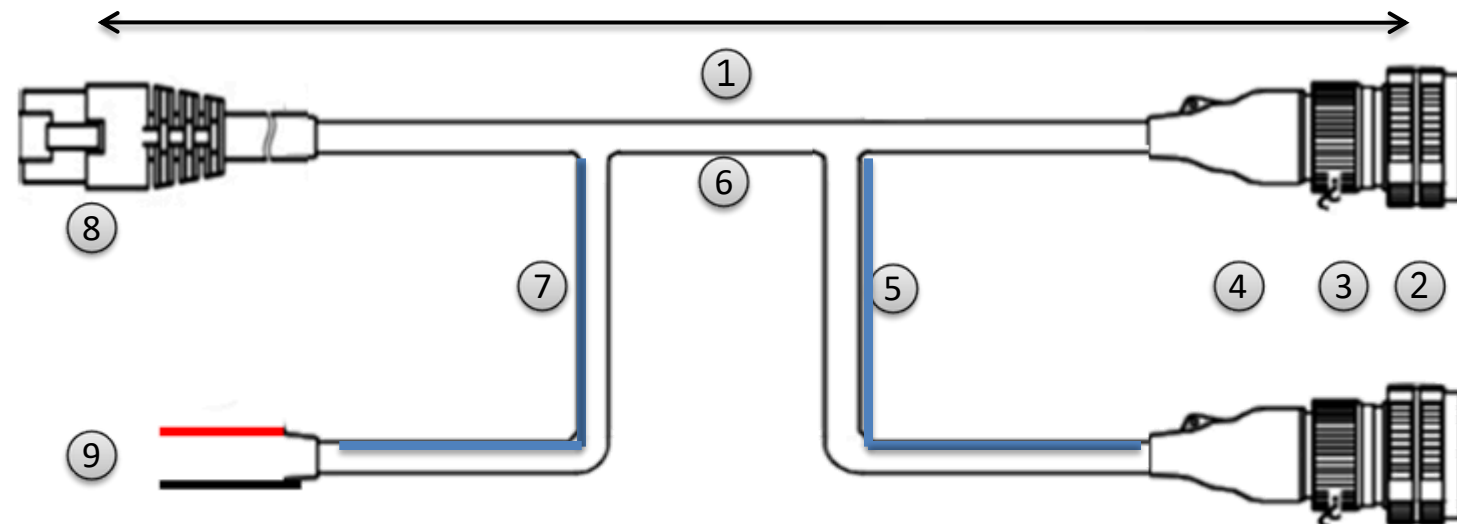
Falcon180-CABLE-CC-[LEN1]-[LEN2]

Falcon180-CABLE is RQT1601875 Cable (6*20AWG + SPEC 55) with specified length and Additional Chained sensor connector. The cable includes two D38999/26KD35SN Mil. Std Stainless Steel connectors that connects to the D38999/23YD35PN on two Falcon180 systems. On the other side of the cable there is a connection to Power 9-36V (open black wire + open red wire) and RJ45 Giga Ethernet connection.

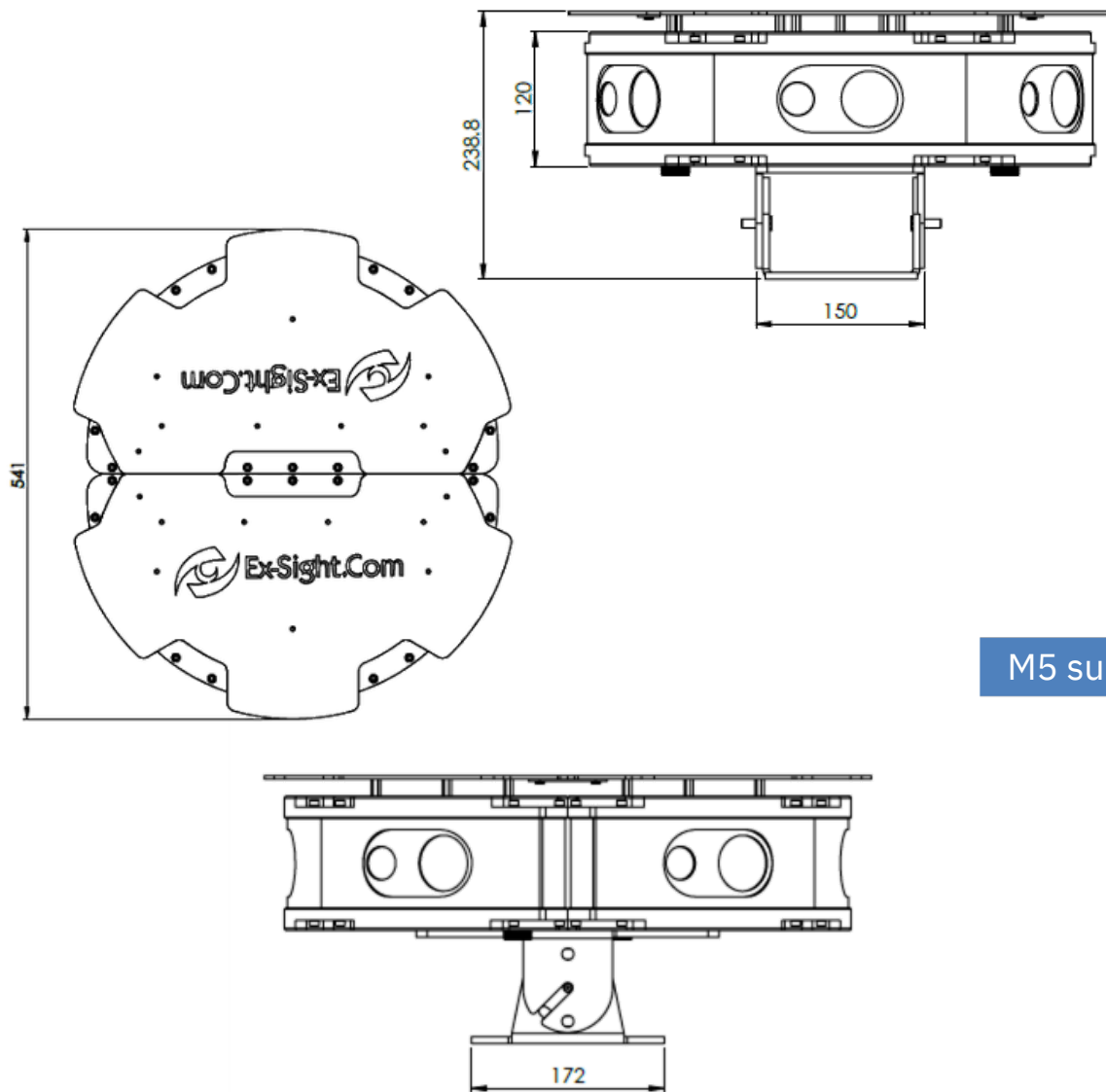
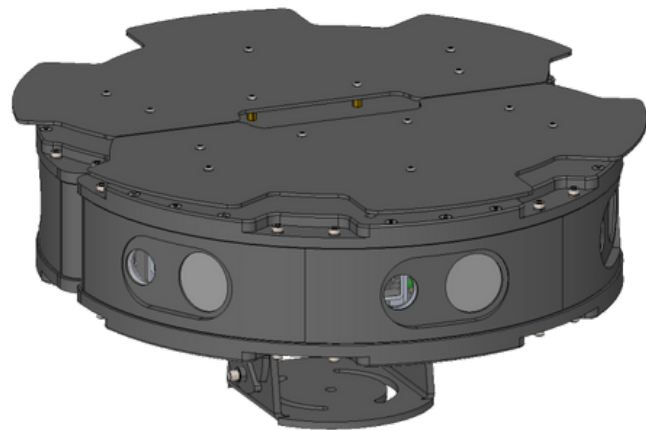
CABLE PART NUMBERING INDEX

| # | P/N | DESCRIPTION |
|---|------------------|---|
| 1 | [LEN1] | Total Cable length (imeters) |
| 2 | D38999/26KD35SN | Mil. Std Stainless Steel connector (200°C, firewall capability, 500 hour salt spray resistance) |
| 3 | 27140S141010410 | Stainless Steel Backshell |
| 4 | 202K132-25-0 | Boot |
| 5 | [LEN2] | Chained Cable Length (in meter) from split |
| 6 | Cable RQT1601875 | 6*20AWG + SPEC55 (RAYCHEM DR-25) |
| 7 | Cable RQT1601875 | 6*20AWG + SPEC55 (1m) (RAYCHEM DR-25) Main Ethernet connector |
| 8 | RJ45 Ethernet | |
| 9 | Power Wires | 20AWG For 9V-36V input |

MECHANICAL DRAWING

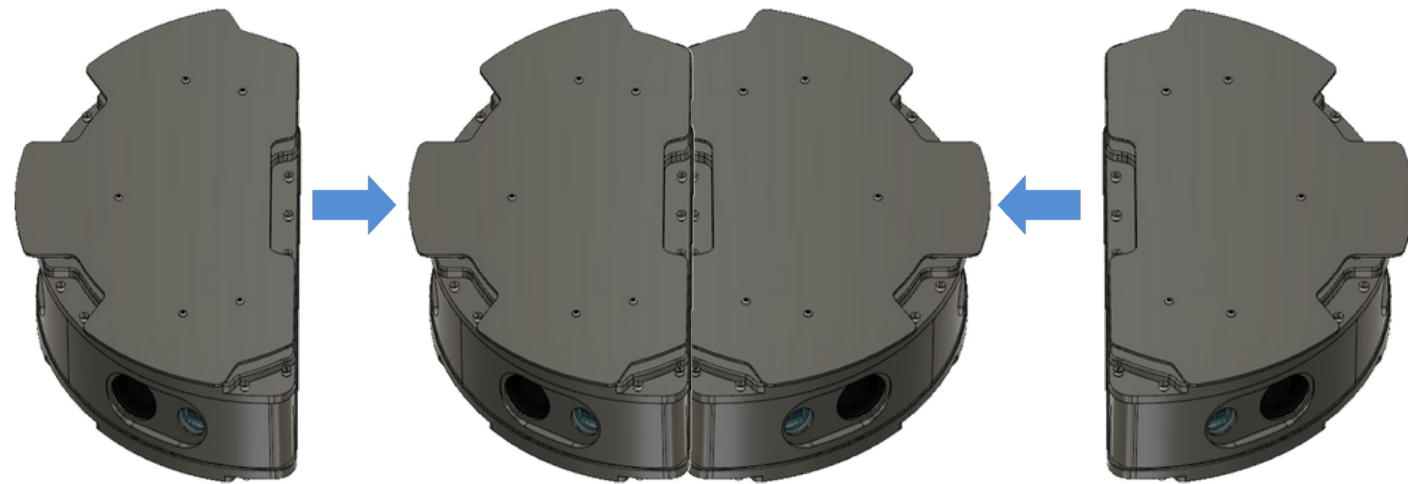


DIMENSIONS (mm)

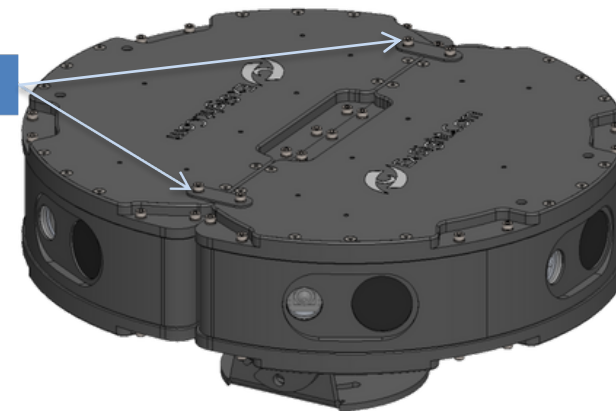


CONFIGURATION

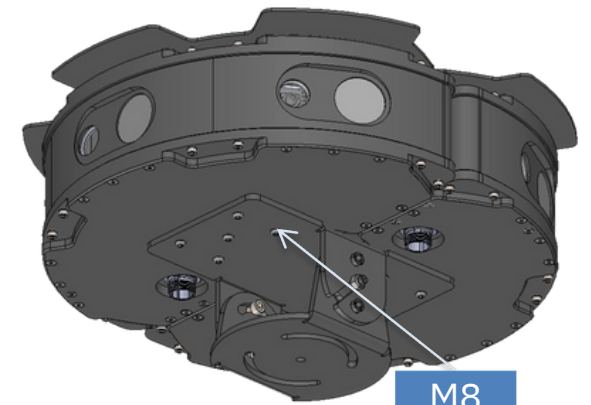
Two Falcon180 units can be assembled together in order to create SA360 system.

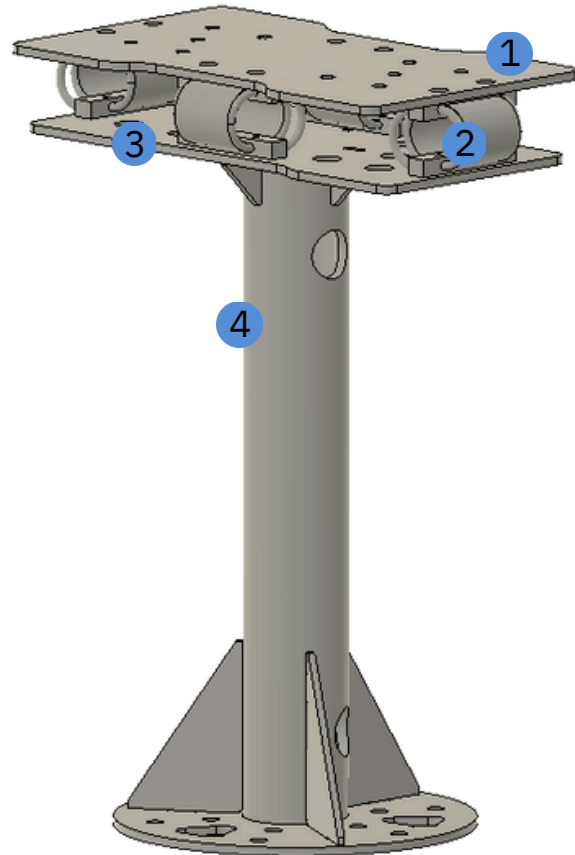


M5 support



M8





ACCESSORIES

MONO POLE

A single-legged support pole bears the camera's weight, providing height and stability. The pole has a wide base and shock absorbers to minimize vibrations and movements, ensuring stability.

OVERVIEW

1. Upper Plate
2. Shock Absorber
3. Bottom plate
4. Pole Base

DIMENSIONS (mm)

