



Carbide 50-SA Installation

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RVision's Carbide 50™ is designed for rugged environments and hosting long range sensors. This document supports the integration of a Sony FCB-EX780/980 Color/NIR camera and an ISAP cPOD thermal camera. The command control application programming interface (API) is attached as document 660032-22.

Carbide 50™ SI Material List:

1. Carbide 50™.
2. Sony Color/NIR Camera (Sealed and attached to Carbide)
3. ISAP cPOD CZ Platform & Cable (Cable attached to Carbide)
4. (4) 3/8"-16 X 1-3/8" Cap Head Bolts (ISAP Platform to Carbide 50 Tilt Hub)
5. (2) Plate Washers (ISAP to Platform, underneath platform)
7. (4) 1/4"-20 x 5/8" Cap Head Bolts (ISAP to Platform)

Tools:

1. 3/16" hex wrench
2. 5/16" hex wrench
3. 9/16" open end wrench
4. 11/16" open end wrench
5. DVM

Preparation:

1. Perform installation site survey and determine Carbide orientation. Home Position is towards you when the Mil-Spec plug on the base is pointed towards you
2. Determine cable routing.
3. Place system on shop bench (fastened to bench) for complete test and check.

1. Lower Carbide onto mounting base and attach firmly with screws.



2. Attach cPOD Platform with (4) 3/8"-16 bolts. The slot is to let the cPOD cable pass. Tighten with 5/16" hex wrench.

CAUTION

DO NOT APPLY POWER.

SYSTEM MUST BE MOUNTED ON PEDESTAL TO ENSURE CLEARANCE OF CAMERAS UNDER ALL TILT AND PAN CONDITIONS.



3. Place cPOD CZ on cPOD Platform and fasten with supplied bolts and plate washers. Snug.

Final adjustment and tightening is performed during bore sighting. cPOD CZ shall be shimmed for tilt and rotated in azimuth to align color and IR optical centers at a distant target.



4. Connect mil-spec plug at rear of cPODcZ. Ratchet Clockwise until snug.



5. Route cPOD cable along platform, tie with zipties. Clip excess zipties.



6. P5 Cable Test:

Before connecting P5 cable to base of Carbide 50, Apply power to cable and connect to communication ports or controller.

Power Supply Voltage Test -

- Measure +24VDC between pin **D** and pin **C** (GND). Main power input.
- Measure +24VDC between pin **N** and pin **M** (GND). Main power input.
- Measure +24VDC between pin **R** and pin **P** (GND). Main power input.

Communication Voltage Test, Tx line:

Carbide 50 Communication (RS232) -

- Measure -5 to -12 VDC between pins **E** and **C** (comm gnd).

cPOD Communication (RS232) -

- Measure -5 to -12 VDC between pins **H** and pin **C** (comm gnd).

7. Remove power from P5 Cable. Attach P5 cable to Carbide 50 MS connector.

Apply power. Witness power-on-movement sequence. Full counter clockwise and down of Carbide 50 axles, then movement to HOME.