SkyEdge II c

Capricorn Outdoor CPE Installation Guide

Capricorn MEC Outdoor CPE General Information

This installation guide is applicable to SkyEdge II-c CAPRICORN OUTDOOR DC/MEC/48vODU (P/N 596100).

The measurements of this SkyEdge II-c Capricorn Outdoor CPE model are 300x211x105 mm. Make sure to leave 30 cm for front panel connections.

To install the SkyEdge II-c Capricorn Outdoor CPE, the installer must:
- Be trained in the installation of the SkyEdge II-c Capricorn MEC Outdoor CPE.
- Have the CPE configuration parameters available.

> ℹ️ VSAT AC and DC power supplies are provided by Gilat. If the power to the VSAT is not through an AC or DC adaptor (e.g., batteries, solar panels, rectifier ETC), the power solution must be approved by the Gilat Technical Support.

Unpacking Guidelines

1. Unpack the Capricorn MEC Outdoor CPE unit and its accessories:
   - SE II-c Capricorn MEC Outdoor DC-48 to 48V ODU
   - Two RF cables - CB018520
   - Five cable glands - CN101943
   - RF Lightning Protection - LNC00214
2. Compare the contents with the supplied BOM and verify that nothing is missing.
3. Verify that nothing is damaged.

The Capricorn MEC Outdoor CPE contains 5 LAN ports, a USB port and can use the DC input 48V only {Pin 1+, Pin 2-(RTN), Pin 3} (Figure 1).
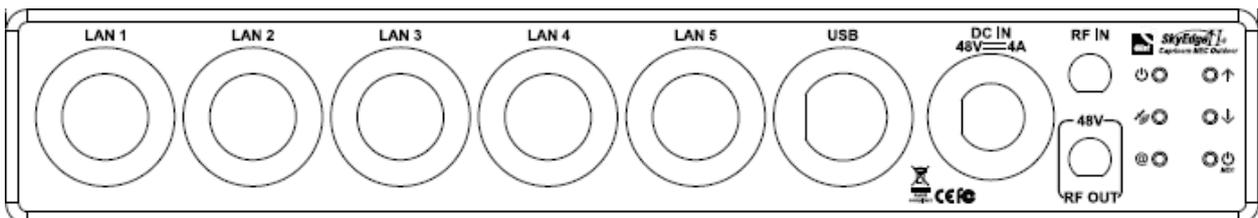

Figure 1: Capricorn MEC Outdoor – Front Panel

The Capricorn MEC Outdoor contains 6 LEDs:
- Power
- Satellite Network
- Link Status
- TX
- RX
- MEC power

> ⚠️ **WARNING**
> BEFORE INSTALLING THE UNIT, VERIFY THAT THE ANTENNA AND DC POWER CORD ARE GROUNDED SO AS TO PROVIDE PROTECTION AGAINST VOLTAGE SURGES AND STATIC CHARGES.
> SECTION 810 OF THE US NATIONAL ELECTRICAL CODE, ANSI/NFPA 70, AND SECTION 54 OF THE CANADIAN ELECTRICAL CODE PROVIDE INFORMATION WITH REGARD TO PROPER GROUNDING OF THE MAST AND SUPPORTING STRUCTURE, GROUNDING OF THE LEAD-IN WIRE TO AN ANTENNA DISCHARGE UNIT, SIZE OF GROUNDING CONDUCTORS, LOCATION OF ANTENNA DISCHARGE UNIT, CONNECTION TO GROUNDING ELECTRODES AND REQUIREMENTS FOR THE GROUNDING ELECTRODE.

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Preparing for Installation

> ⚠️ **CAUTION**
> - **THE CPE** MUST BE GROUNDED PRIOR TO INSTALLATION BY ATTACHING ONE END OF THE GROUNDING CABLE TO THE GROUNDING STUD ON THE FRONT OF THE **CPE,** AND THE OTHER END TO THE SITE MAIN GROUND CONNECTION. **14AWG** GROUNDING CABLE SHOULD BE USED.
> - **THE CPE** MUST BE CONFIGURED PRIOR TO ATTACHING THE **RF** CABLES.
> - **THE POWER CABLE MUST BE DISCONNECTED FROM THE CPE** PRIOR TO CONNECTING THE **RF** CABLES.

> ⚠️ **CAUTION**
> IN ORDER TO PREVENT DAMAGE TO THE RF CONNECTORS, SECURE THE CABLES TO A PERMANENT, STATIC OBJECT SUCH AS A TABLE OR PIPE, AT A DISTANCE OF 25-60 CM (10-25 IN.) FROM THE CPE, PRIOR TO CONNECTION.

Connecting RF Cable

1. Connect the RF Lightning protection with the two RF cables (CB018520) to the **RF IN** and **RF OUT** ports of the modem (as shown in the figure below).

Figure 2: Capricorn MEC Outdoor – Connecting RF Lightning Protection

2. Connect the two RF cables, from the Transceiver, to the RF Lightning protection respectively, using a recommended torque of 13 lbft/in (1.5 N/m). Use only the RF cables approved by Gilat.

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Connecting Grounding Cable

1. Connect the grounding cable (GND) from the CPE to the approved site ground stud using proper cable-lug and screw. Gilat recommends using the AWG 14 600V cable.
2. Connect the grounding cable from the RF Lightning protection to the approved site ground stud using proper cable-lug and screw. Gilat recommends using the AWG 14 600V cable.

Connecting LAN Cable

1. Use only CAT-5 type cables to connect to the LAN port.
2. Use only the Outdoor RJ45 LAN cable prepared according to Gilat instructions.
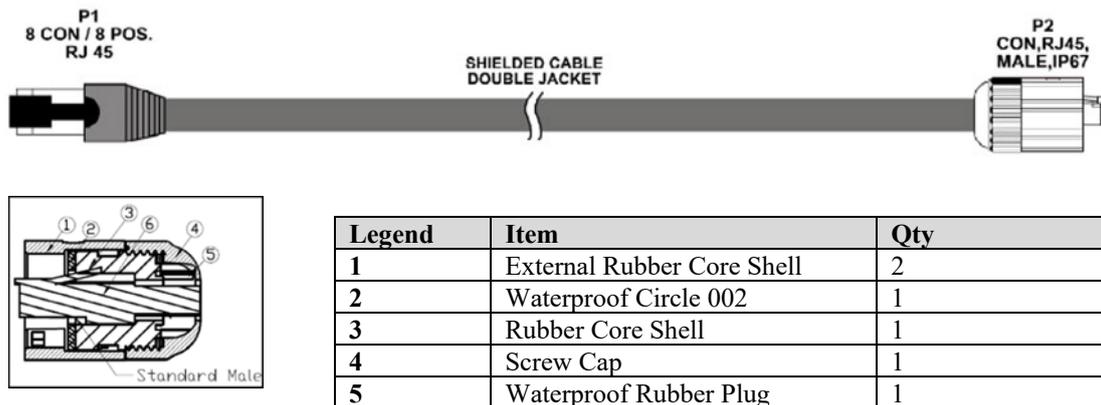3. Use the cable gland(s) provided with the kit to build and connect the cable.

Legend	Item	Qty
1	External Rubber Core Shell	2
2	Waterproof Circle 002	1
3	Rubber Core Shell	1
4	Screw Cap	1
5	Waterproof Rubber Plug	1

Figure 3: P2 Circular Male RJ45 Connector

Wiring List

P1			P2		
Pin No.	Wire Color	Pair	Pin No.	Wire Color	Pair
1	White - Green	3	1	White - Green	3
2	Green	3	2	Green	3
3	White - Orange	2	3	White - Orange	2
6	Orange	2	6	Orange	2
4	Blue	1	4	Blue	1
5	White - Blue	1	5	White - Blue	1
7	White - Brown	4	7	White - Brown	4
8	Brown	4	8	Brown	4
	Shield			**Shield**	

Assembly Instructions

1. Solder the LAN Cable Ground wire to both sides of the RJ45 connectors' shield.
2. Depending on the cable width, use either a black rubber OD (5-6MM) or a red (7-8.1MM) rubber plug.
3. Perform the soldering of the shield to the internal side of the connector only.
4. Use the standard cable testing equipment to verify that the wiring is correct.

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Connecting Power Cable

1. Use only the DC power cable supplied by Gilat - CB102271.
2. Connect the cable to the modem DC IN port using the bayonet connector.
3. Connect the other side to the power source. Verify that a fuse of at 4 AMP is used at the power source.

⚠	**WARNING** **POWER CABLE ASSEMBLY AND CONNECTION SHOULD BE PERFORMED ONLY BY A CERTIFIED ELECTRICIAN.**

⚠	**CAUTION** **DO NOT OPEN BUILT-IN CONNECTORS UNDER ANY CIRCUMSTANCES.**

⚠	**CAUTION** **AFTER COMPLETING THE ASSEMBLY, VERIFY THAT ALL CABLE CONNECTORS ARE FIRMLY TIGHTENED AND THERE ARE NO LOOSE CONNECTIONS.**

Fitting Outdoor Modem and Securing Terminal

1. Place the Outdoor modem on the pivot mount located on one of the tripod legs ensuring the spigot is located in the positioning hole.

Figure 4: Fitting Outdoor Modem

2. Use stakes or sandbags to stabilize the terminal by applying these measures to the extremes of the tripod legs. Ensure the sandbags (if used) only cover the feet of the tripod and not the legs, to avoid damage to the legs. The application of stakes or sandbags is especially important during windy conditions.

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