

INSTALLATION QUALITY PARAMETERS – CPE

QUALITY PARAMETERS:-

1. **Mounting of the Pole.**
2. **Mounting of the Radio Modem in the Pole or Mast.**
3. **Conduiting of the cable.**
4. **Routing of the cable from IDU to ODU.**
5. **Crimping of connectors.**
6. **Earthing to the Radio equipments.**
7. **Power Supply.**

Quality Installation Planning:-

While Planning for the quality of installation of any RF installation the below points have to be strictly followed when planning the site.

There are three basic site planning processes to be followed at the time of Installation,

1. Location of the PoE or IDU.
2. Location and Mounting of the Outdoor unit (Radio Modem).
3. Cable Routing Path between IDU to Outdoor Unit.

Location of the PoE or IDU:-

The PoE or the IDU should be installed near the customers Hub or computer and also need to consider the Ethernet cable from PoE to the ODU should be limited to 100 Meter in length.

Location of the Outdoor Unit (Radio Modem):-

For optimal Wireless performance, the wireless modem should be installed in the least obstructed path to the remote end wireless Modem. Install the Radio Modem where the path is least likely to be affected by obstructions. If a clear LOS is not available we need to install the RF Modem in the path which has minimum obstructions.

The Important factors need to be strictly followed at the time of installation of Outdoor unit include,

Cable Length between IDU and ODU:

Install the Outdoor unit to limit the Ethernet cable length to 100meter.

Cable Routing:-

The cable has to be routed properly as per the Installation standards from Outdoor unit to the PoE and inside the Building.

Accessibility:

While installing the ODU the location of the ODU should be easily accessible for any adjustment or repair in future maintenance activity.

Installation Requirements:-

While Installing any CPE Installation the Field engineers should have the below tools without fail,

1. Drilling Machine
2. Screwdriver set
3. Cable Cutter
4. Crimping Tool
5. Cable Tester
6. Cable Ties and Tags
7. Clamps for anchoring Cables
8. Insulation Tap and weather Proofing taps
9. Silicone sealant
10. Iron nails
11. Multimeter.

Cable and Connector Requirement:-

The Ethernet cable should be Cat 5e Outdoor rated cable or Cat 5e cable with conduit for any CPE installations.

The connectors for both the installations required are Shielded RJ 45 connectors.

Mounting of the ODU:-

1. The ODU should be installed with the Mounting Brackets provided at the back of the ODU.
2. Install the Mounting brackets to the ODU using screws and tighten them well.
3. Adjust the Azimuth and elevation of the ODU for the desired orientation and tighten the nuts.

Grounding the Outdoor Unit:-

1. Crimp the grounding lug on both the end on the earthing cable
2. Connect one end of the earthing cable to the ODU and tighten properly.
3. Other end of the earthing cable should be connected t to the Earth Pit in the Ground.

Make sure when providing the grounding to the ODU, the Ground earthing is separated from the Power earthing.

Connecting the ODU to the PoE or IDU:

1. Connect the ODU end cat 5e cable with rubber boot.
2. Crimp the cable with shielded RJ45 connector on each end of the cable.
3. Make sure the cable shield to the RJ45 ground shell.
4. Plug the cable into the RJ45 socket on the ODU.
5. Make sure the boot is properly seated and it should be flush with the radio housing.
6. Ensure the cable should not hang or unsupported from the connector.
7. Seal the entry of the cable to the building.