



### 1 Safety Notes

This Quick Guide is intended as a handy reference for setting up the EtherHaul 1200™ ODU with integrated 1ft Antenna. This guide does not replace the full manual; please refer to the “EH-1200 Install and User Manual” for full installation and setup details.

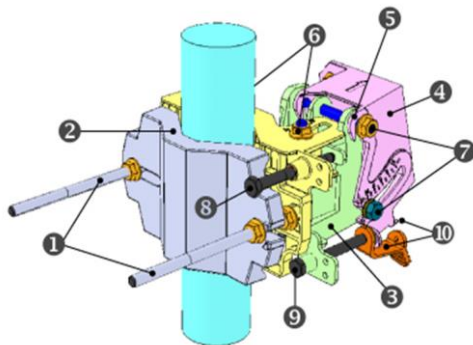
The Installation and maintenance of this link should be performed by service personnel who are properly trained and certified to carry out such activities. Make sure to disconnect all power cables before service!

ODU must be grounded using min 16AWG cable or according to local electrical code.

For DC (36 ÷ 57 VDC) connection use a 2-wire cable (14-18 AWG) with 2 Amp circuit breaker on the live voltage (+ or -). The other poly should be grounded.

### 2 Mounting 1ft Antenna

1. Mount the ODU on a fixed reinforced steel mounting pole with 2-4 inches diameter.
2. Assemble the Mounting Bracket and attach it to the pole according to following diagram:



1. Unit Mounting Screws and Bolts
2. Back Mounting Bracket
3. Front Mounting Bracket
4. Quick Release Plate (Attached to ODU)
5. Quick Release Hooks
6. Azimuth Adjustment Lock Bolts
7. Elevation Adjustment Lock Bolts
8. Azimuth Fine Adjustment Screw ( $\pm 8^\circ$ )
9. Elevation Fine Adjustment Screw ( $\pm 16^\circ$ )
10. Elevation Screw Tension Band and Pin

3. Position the Azimuth and Elevation Adjustment Lock Bolts at 0 degrees (in the middle of the scale) and unlock them to allow free movement during alignment.



#### CAUTION:

**Use care to avoid damaging or scratching the antenna radome:**

Do not touch the radome when unpacking the ODU.

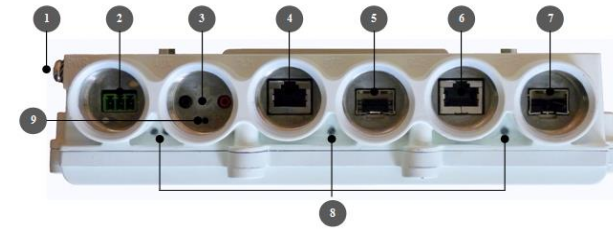
Do not rest the ODU face down to prevent scratches.

Prevent all contact between the radome and other objects.

4. By default, the ODU is delivered with the Quick Release Plate attached in a vertical polarization. If necessary, change the ODU polarization by rotating the Quick Release Plate so the arrow will point the “H” (horizontal) mark on the back of the ODU.
5. Mount the ODU on the bracket using the Quick Release Hooks and slide it firmly inwards.
6. Stretch the Elevation Screw Tension Band slightly and connect it to its mating Tension Pin, located on the Quick Release Plate.

### 3

#### Connecting the Cables



- |   |   |
|---|---|
| 1. Electrical Ground Point (GND)          | 6. Ethernet Cable RJ45 Interface (#3/RJ2)                                   |
| 2. Power Connector Interface (PWR)        | 7. Fiber Cable SFP Interface (#4/SFP2)                                      |
| 3. DVM Probe Interface (AUX)              | 8. System LEDs  |
| 4. Ethernet Cable RJ45 Interface (#1/RJ1) | 9. Reset Button (press for more than 6 seconds to restore factory defaults) |
| 5. Fiber Cable SFP Interface (#2/SFP1)    |   |

1. All cabling connected to the ODU should be outdoor-grade, with UV protection.

**2. Shielded outdoor Cat5e cables terminated with metallic RJ45 connectors must be used.**

3. Two or four Ethernet interfaces available (depending on product type and HW configuration), electrical RJ45 or optical SFP.

4. Connect the ground cable to the ODU GND point.

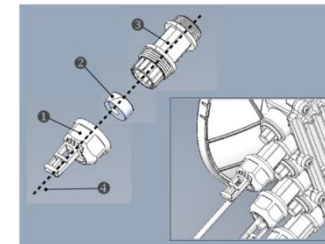
5. Power up the ODU using DC cable or 802.3at Power over Ethernet (connection available port 1 only).

6. In case of DC power feed, connect **only** the (+) and (-) wires to the DC terminal provided with the ODU.

### 4

#### Connectors Weatherproof

Use the provided protective All-Weather Shells as described in the following diagram (fits cables from 3.5mm to 9.0mm diameter).



1. Cable Inlet Portion
2. Rubber Gasket Insert
3. Connector Outlet Portion
4. Cable

1. Thread the cable connector through the Cable Inlet Portion (1) of the shell, through the Rubber Gasket (2) and through the Connector Outlet Portion (3).
2. Choose Rubber Gasket that best fits the cable diameter (note the Rubber Gasket is spliced and can be assembled on cables with connectors).
3. Connect the cable connector to the ODU interface.
4. Screw the Connector Outlet Portion (3) to the ODU firmly by hand (do not use tools).
5. Insert the Rubber Gasket snugly into the Connector Outlet Portion (3) of the shell.
6. Screw the Cable Inlet Portion (1) to the Connector Outlet Portion (3) firmly by hand (do not use tools).
7. When removing All-Weather Shell, make sure to unscrew the Cable Inlet Portion (1) first, making sure the Connector Outlet Portion (3) does not move and only then remove the Connector Outlet Portion (3) from the ODU port.
8. When using two adjacent interfaces make sure to use the Fiber-Extender gland (purchased separately).

## 5

## System LEDs

LED	Color	Description
PWR (Power)	Green – Power OK	Blink Green – Device boot (~90 sec)
	Red – Power Failure	
	Off – ODU off	
RF	Green – Link Up	
	Orange – Alignment Mode	
	Off – Link Down	
ETH1/2:	Green – Link (Carrier) 1G	Blink Green – 1G activity
	Orange – Link (Carrier) 10/100	Blink Orange – 10/100 activity
	Off – No Link (Carrier)	

## 6

## Aligning the Antenna

1. Perform a coarse Azimuth and Horizontal alignment using a line-of-sight visual check with the remote ODU. Lock the Mounting Bracket to the pole using a 13mm/0.5" open wrench.
2. Once ODU is powered up, switch both ODUs to Alignment Mode by inserting the Digital Volt Meter probes into the DVM Probes at the AUX Interface. Following this action, the RF LED color indicator will turn orange, indicating the ODU is in Alignment mode. The ODU will remain in Alignment Mode even if the DVM probes are ejected, until the ODU is rebooted.
3. Read the receive level (RSSI) using the DVM. The voltage reading will be between 0 to 1Vdc, indicating the RSSI in dBms (for example 0.45V=-45dBm).
4. Perform fine Azimuth and Elevation alignment using the fine adjustment bolts, identifying the main lobe until the expected receive level is achieved (within +/-4dB).
5. Once the optimum position has been achieved, tighten the azimuth adjustment lock bolts on one ODU first.
6. **Tightening the azimuth adjustment lock bolts will tilt the ODU, so realign the elevation again for optimum position and then tighten the elevation adjustment lock bolts.**
7. Use the DVM to verify that the received signal level has not changed on ODU after final tightening of the brackets.
8. Repeat steps 5-7 on the second ODU. *Antenna alignment is now complete.*

## 7

## Initial System Setup

1. Disconnect the DVM and reboot both ODUs by shortly pressing the ODU Reset Button. This returns the ODU to Adaptive Mode (ODU's default operational mode). Following this action, and after the ODU has finished rebooting, the RF LED color indicator on both ODUs will turn Green, indicating that the radio link is **Up**.
2. Carefully reinsert and tighten the AUX port protective seal.

The EtherHaul link can now pass traffic and management between the ports and over the radio link. For further radio link configuration, connect to the ODU using the web-based management.

## 8

## Basic Configuration Using Web-Based Management

1. Launch an Internet browser and enter the ODU's IP address in the address bar. For the default IP address enter: **https://192.168.0.1**.
2. Enter the username and password (default read/write access: **admin, admin**).
3. Use the **Quick Config** wizard to configure the basic system parameters for both local and remote systems.

4. **System** section: set system information such as Name, Date (YYYY.MM.DD) and Time (HH:MM:SS).

5. **Radio** section: set RF parameters.

- **Channel Width (MHz)** – 250MHz or 500MHz. Default value is 500. Note that 250MHz support depends on product's specs.
- **Frequency (MHz)** – select the transmit frequency from list (default values is 74375 or 74375/84375 in FDD systems). Rx frequency will be configured accordingly.  
**Make sure to select a channel that is approved for use by local regulation.**
- **Tx Power (dBm)** – ODU's transmit power (+5 to -35dBm). Default value is +5/+7dBm. Note you may have to reduce the Tx power in case of short links, making sure the RSSI at the remote ODU does not exceed -35dBm (overload threshold).
- **Mode** – Default value is Adaptive (Adaptive Bandwidth, Code and Modulation), meaning the ODU will switch to the highest modulation profile available by data-rate license and link condition.  
In Adaptive mode, the modulation profile the ODU has reached is available in the Modulation, Sub-Channels, Repetitions and FEC fields.
- **Transmit Asymmetry** – TDD systems only. Default value is symmetric configuration: 50% for Tx and Rx (50tx-50rx). When selecting asymmetric configuration (75%/25% or 90%/10%), the **Role** will be changed from **Auto** and will be set automatically (Master for 75tx-25rx or 90tx-10rx, and Slave for 25tx-75rx or 10tx-90rx). **Role** settings can be found in the Radio Advanced Settings section.

6. **Eth Ports**: set Ethernet ports configuration such as enable/disable, auto-negotiation and Speed/Duplex. For TDD systems with 2 Eth ports, the port type (RJ45 or SFP) is configurable (default – RJ45).

7. **Network** section: set IP address (static or DHCP, IPv4 or IPv6) and SNMP attributes.

- **IP Address** – set up to 4 IP addresses: IP, Prefix-length (in mask bits) and VLAN for management (VLAN 0=untagged). It is recommended to leave default IP as IP #1 and configure the new IP address as IP #2.
- **Default gateway**
- **SNMP Manager** – set SNMP trap destination (up to 5 manager can be defined).

8. Click **Apply**. Settings will be applied for local and remote systems.

Note: when changing RF parameters the link will go down and recover after ~1 minute.

Note: changing IP address will terminate your connection. Reconnect and launch the Web management using the new IP address.

9. To save the system configuration, click **Save Configuration** on the **Main** page for local and remote systems.



**Note:** If you do not click **Save Configuration**, saving the currently running configuration to the startup configuration, all changes made will be lost upon the next ODU reset.

10. To monitor radio link status, use the **Main** (or **Radio**) page:

- **Status** – Displays the radio link status (Up or Down).
- **RSSI (dBm)** – displays the Receiver Signal Strength Indicator displays the received signal level.
- **CINR (dB)** – displays the Carrier to Interference + Noise ratio, which indicates the radio link's signal quality. In normal conditions, CINR≥18 indicates a good signal quality.
- **Mode** – when working in Adaptive mode, the current modulation profile is displayed. Modulation profile depends on link status (CINR) and loaded data-rate license.

11. To view and set the loaded license configuration, use the **System** page under the **Licensing** section.

## 9

## Support Contacts

Contact your local distributor for the technical support.

Technical support for Siklu's direct customers:

- Siklu Support - [support@siklu.com](mailto:support@siklu.com)

Download your copy of the product's user manuals from <ftp://85.17.162.140/> (user: installmanual, password: siklu).

Watch us install and setup a link at [www.youtube.com](http://www.youtube.com) (search: Siklu Etherhaul Installation)

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