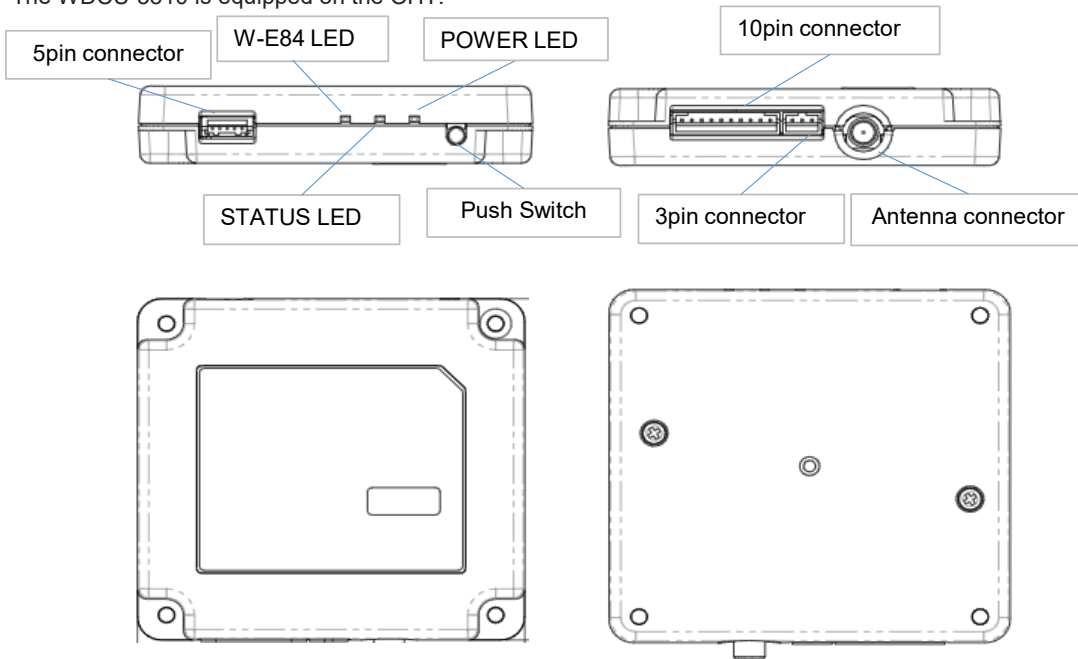


## Wireless E84 Digital Communication Unit(WDCU-3310) User Manual

WDCU-3310 is a device that E84 interlock communication by wireless communication during FOUP transfer between the OHT (Overhead Hoist Transfer) and semiconductor manufacturing equipment. The WDCU-3310 is equipped on the OHT.



### Parts and Functions

|            |                       |   |
|------------|-----------------------|---|
| POWER LED  | Green light on        | : Power On  |
|            | Green light flashing  | : Program changing  |
|            | Orange light on       | : Initializing process  |
|            | Red light on          | : Hardware error  |
| STATUS LED | Green light on        | : Power On  |
|            | Green light flashing  | : Setting various parameters of wireless E84 communication unit from wireless converter or OHT controller                   |
|            | Orange light flashing | : During PIIO data communication between the wireless converter or OHT control unit and the wireless E84 communication unit |
|            | Red light on          | : Communication error occurred between wireless converter or OHT control unit and wireless E84 communication unit           |
| W-E84 LED  | Green light on        | : Power On(2.4GHz)  |
|            | Green light flashing  | : Communicating in the 2.4 GHz band   |
|            | Orange light on       | : Power On(5.8GHz)  |
|            | Orange light flashing | : Communicating in the 5.8 GHz band   |
|            | Red light on          | : An error occurred in communication with the wireless E84 device   |

|                   |   |
|-------------------|---|
| 3pin connector    | Debug port  |
| 5pin connector    | CPU internal ROM writing (only used in the factory) |
| 10pin connector   | Connect to Wireless LAN converter (FBR-3250) or OHT |
| Antenna connector | Connect the antenna                                 |
| Push Switch       | Used to initialization settings                     |

## Setup

1. Use a dedicated cable to connect the 10-pin connector to FBR-3250 or OHT.
2. Power supplied from OHT and the WDCU-3310 is controlled by the OHT controller.

## Basic configuration

|                         |   |
|-------------------------|---|
| Wireless Frequency Band | ISM (2.4GHz,5.8GHz)                         |
| Wireless Channel        | Ch3~Ch80(2.4GHz)<br>Ch1~Ch142(5.8GHz)       |
| Wireless Channel Width  | 1MHz  |
| Channel Power           | -20dBm~0dBm(2.4GHz)<br>-20dBm~+2dBm(5.8GHz) |
| Channel Period          | 10,20,30,40,50ms                            |
| Receive timeout         | 100~60000ms                                 |
| Communication timeout   | 100~5000ms                                  |
| Pairing threshold level | -80~-24dBm, No threshold                    |

## Specification

|                       |                           |                          |
|-----------------------|---------------------------|--------------------------|
| Operating environment | Temperature               | 0~+40°C                  |
|                       | Humidity                  | 20~80%RH(Non condensing) |
| Storage environment   | Temperature               | -10~+50°C                |
|                       | Humidity                  | 20~90%RH(Non condensing) |
| Power supply          | DC24V                     |                          |
| Wireless I/F          | ANT                       |                          |
| Push Switch           | initialization switch × 1 |                          |
| LED                   | POWER LED                 | Green/Red/Orange         |
|                       | STATUS LED                | Green/Red/Orange         |
|                       | W-E84 LED                 | Green/Red/Orange         |

**Supplier's Declaration of Conformity**  
**47 CFR § 2.1077 Compliance Information**

**Unique Identifier:** WDCU-3310

**Responsible Party – U.S. Contact Information**

**Responsible Party Name:** Silex Technology America, Inc.  
**Responsible Party Address:** 1751 E. Garry Ave. Santa Ana, CA 92705  
Phone: 657-218-5199  
URL <https://www.silextechnology.com/>

**FCC Compliance Statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference undesired operation.

**FCC CAUTION**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**Compliance with FCC requirement 15.407©**

Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the and can radiate radio frequency energy and, if not installed and used in accordance with the instruction packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinue transmission in case of either absence of information to transmit or operational failure.

Frequency Tolerance:  $\pm 60$  ppm

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines as this equipment has very low levels of RF energy.