silex technology E84 Digital Communication Device User Manual

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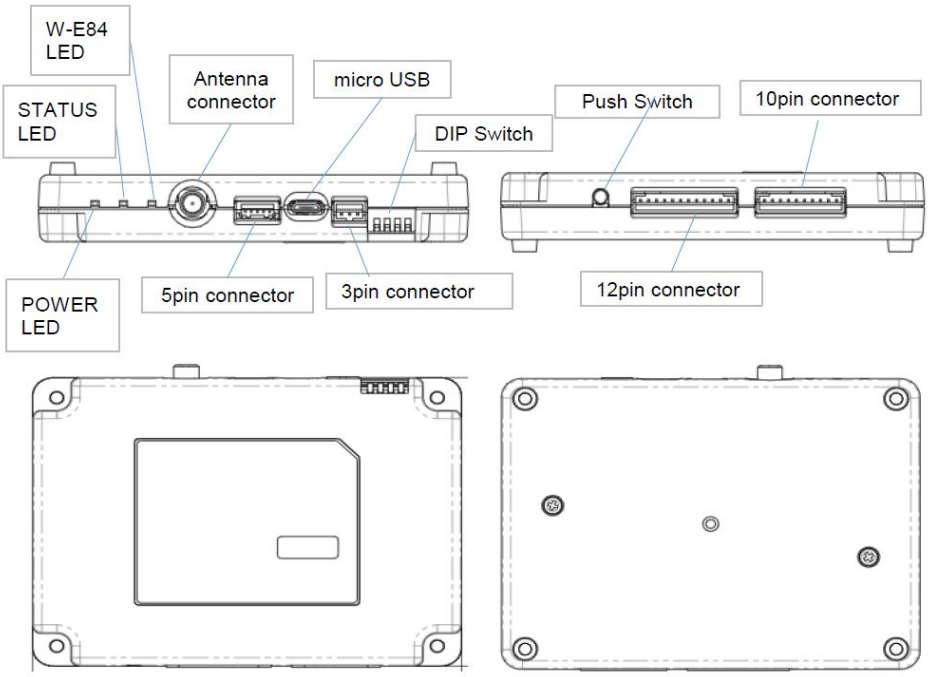
WDCD-3310 is a device that E84 interlock communication by wireless communication during FOUP transfer between the OHT. Overhead Hoist Transfer and semiconductor manufacturing equipment. The WDCD-3310 is equipped on the semicunductor manufacturing equipment.

PARTS AND FUNCTIONS



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
	Orange light on	Setting various parameters of wireless E84 device via tool
	Red light on	Wireless E84 device parameter setting error via tool
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 unit

3pin connector	Debug port
5pin connector	CPU internal ROM writing only used in the factory
10pin connector	Connect to semicondutor manufacturing equipment
12pin connector	Connect to semicondutor manufacturing equipment
Micro USB	Debug port
Antenna connector	Connect the antenna
Push Switch	Used to initialization settings

Setup

1. Use a dedicated cable to connect the 10-pin & 12 pin connector to semiconductor manufacturing equipment.
2. Powered by semiconductor manufacturing equipment and controls WDCD-3310.

Basic configration	
Wireless Frequency Band	ISM 2.4GHz,5.8GHz
Wireless Channel	Ch3~Ch80(2.4GHz) Ch2~Ch100(5.8GHz)
Wireless Channel Width	1MHz
Channel Power setting	20dBm~0dBm(2.4GHz) 20dBm~+2dBm(5.8GHz)
Channel Period	10,20,30,40,50ms
Receive timeout	100~60000ms
Commnication timeout	100~5000ms
Pairing threshold level	80~-24dB No threshold

SPECIFICATION

Specification	
Operating environment	Temperature 0~+40℃ Humidity 20~80%RH (Non condensing)
Strorage environment	Temperature -10~+50℃ Humidity 20~90%RH (Non condensing)
Power supply	DC24V
Wireless I/F	short-range wireless(2.4GHz/5.8GHz)
Push Switch	initializaition swtich ×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: WDCD-3310
- **Responsible Party** U.S. Contact Information
- **Responsible Party Name**: silex technology America, Inc.

- **Responsible Party Address**: East Sandpointe, #245 Santa Ana, CA 92707
- Phone: 657-218-5199

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

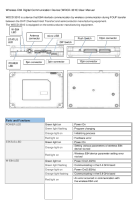
- This device may not cause harmful interference, and this device must accept any interference received, including interference undesired.

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

Documents / Resources

	silex technology E84 Digital Communication Device [pdf] User Manual WDCD3310, N6C-WDCD3310, N6CWDCD3310, E84 Digital Communication Device, E84, Digital Communication Device, WDCD-3310