UC193 User's Guide

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Contents

1. A Summary

1.1 Document Contents

This document is a summary of UC193(one of YISO's wireless modem)'s hardware and software specifications. Contents are as followings.

- Product summary and features : Describes about the UC193's main features and provide pictures of product.
- Specification : Describes about the Environment specifications, Hardware, Software and Mechanism specifications.

1.2 Revision History

Version	Date	Descriptions
V1.0	December 28, 2007	Initial Release

1.3 Pictures of Product

- UC193 Modem

3. Specifications

3.1 General Specifications

3.1.1 Environmental

- Relative Humidity : 5%~95%
- Storage Temperature : -30 ℃ ~ 60 ℃
- Operation Temperature : -20 ℃ ~ +50 ℃
- Vibration Stability : 1.5G peak 5 to 500Hz

3.1.2 Hardware

- CDMA Protocol : US PCS CDMA 1xRTT , 1x-EVDO
- Power Consumption : 5V/500mA (Max Power)
- IF Receiving Chip : RFL6000, RFR6000
- IF Transfer Chip : RFT6100
- Chipset : Qualcomm MSM6500
- Interface
    - ❖ Mini-USB

3.1.3 Software

- Data Service : IS-878P1,P2 and IS-835-B
- Baud Rate
    - ❖ DM : Default 230,400bps (variable)
- Transmitting
    - ❖ Forward-2.4Mbps
    - ❖ Reverse-153.6kbps
- SMS (IS-637) : MO,MT Support
- NAM : 5 NAM
- Product Support Tool : PST
- DM : Qualcomm CAIT

3.2 Electronic Specifications

3.2.1 Transmitter

- Type of Multiplexing : Duplexer
- Normal Output Power : 0.3W
- Frequency Range : 1851.25 ~ 1908.75MHz (USPCS)
- Frequency Stability : Under defined Freq. ±150Hz(USPCS)
- Channel : 42ch(USPCS)
- Channel Spacing : 1.25MHz(USPCS)
- Occupied Frequency Bandwidth : Below 1.25MHz
- Oscillation Method : PLL SYNTHESIZER
- Local Oscillation Frequency : 1720.87 ~ 1778.37MHz(USPCS)
- Antenna Impedance : 50 ohm

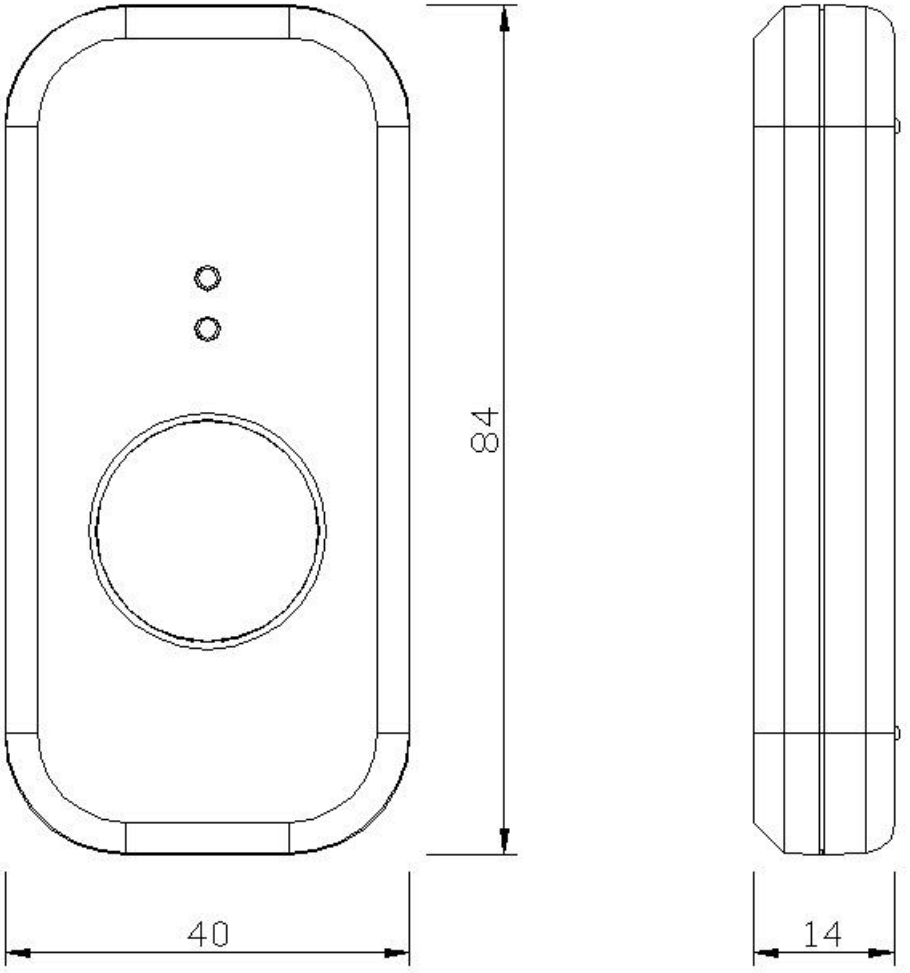
3.2.2 Receive Specifications

- Receive Method : Zero IF
- Frequency Range : 1931.25 ~ 1988.75MHz(USPCS)
- Channel : 42ch(USPCS)
- Channel Spacing : 1.25MHz(USPCS)
- Occupied Frequency Bandwidth : Below 1.25MHz
- Oscillation Method : PLL SYNTHESIZER
- Local Oscillation Frequency : 1720.87 ~ 1778.37MHz (USPCS)
- Antenna Impedance : 50Ω

3.3 Mechanical

- Dimension : 40 X 84 X 14(mm)

- Mechanical Drawing



4.1 Health and safety Information

* Operating enviornment

Remember to follow any special regulations in force in the area you are in, and always turn off your modem whenever it is forbidden to use it, or when it may cause interference or danger.

When connecting the modem to another device, do not connect incompatible products.

As with other mobile radio transmitting equipment, users are advised that for the satisfactory operation of the equipment and for the safety of personnel, it is recommended that the equipment should only be used in the normal operating position

Electronic Devices

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless modem. Consult the manufacturer to discuss alternatives.

Pacemakers

Pacemaker manufacturers recommend that a minimum distance of 15cm be maintained between a wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research and recommendations of Wireless Technology Research. If you have any reason to suspect that interference istaking place, turn off your modem immediately.

4.2 Health and safety Information

Hearing aids

Some digital wireless devices may interfere with some hearing aids. In the event of such interference, you may wish to consult your hearing aid manufacturer to discuss alternatives.

Other medical devices

If you use any other personal medical devices, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy.Your physician may be able to assist you in obtaining this informationTurn off your modem in health care facilities when regulations posted in these areas instruct you to do so

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle.You should also consult the manufacturer of ant equipment that has been added to your vehicle.

* Care and maintenance

-Keep your modem and accessories out of the reach of small children and pet. They may accidentally damage these things or choke on small parts

-Keep your modem dry. Precipitation, humidity, and liquids contain minerals that corrode electronic circuits.

4.3 Health and safety Information

-Do not drop, knock or shake the modem. Rough handling can break internal circuit boards.

-Do not store the modem in hot areas. High temperatures can shorten the life of electronic devices and warp or melt certain plastics.

-Do not store the modem in cold areas. When the modem warms up toits normal operating temperature, moisture can form inside the modem, which may damage the modem's electronic circuit boards.

-Do not put the modem in or on heating devices, such as a microwave oven, stove, or radiator. The modem may explode when overheated.

5.1 RF EXPOSURE INFORMATION

• Your USB Modem is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S.Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluate on of scientific studies. Thestandards include a substantial safety margin designed to assurethe safety of all persons, regardless of age and health.

• The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg.*Tests for SAR are conducted with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the USB Modem is designed to operate at multiple power levels so as to use onlythe power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a wireless device is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure.

• The highest SAR value for this CDMA Dongle is1.390 W/kg (CDMA USPCS). The FCC has granted an Equipment Authorization for this CDMA Dongle with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/ fccid after searching on FCC ID : V4MUC193.

• Additional information on Specific Absorption Rates (SAR) can befound on the Cellular Telecommunications &Internet Association (CTIA) web-site at http://phonefacts.net.*In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6watts/kg (W/kg)averagedover one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any agitations in measurements.

• In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

- For more information about RF exposure, please visit the FCC website at www.fcc.gov

6.1 WARNING!

Read this information before use

• Caution

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

• FCC Compliance Information

This device complies with Part 15 of 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 that may cause undesired operation.

• Information to User

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and canradiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which canbe determined by turning the equipment off and on, the user is encouraged to try to correct the interference by oneor more of the following measures:

-Reorient or relocate the receiving antenna.-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/ tvtechnician for help.