MBD-220HU Circuit Description

The 220HU USB MODEM is designed to enable PC user access to Internet via GSM/GPRS/EDGE/WCDMA/HSUPA/HSDPA network. This mode uses a standard USB interface for a fast simple connection to your PC.

As to 220HU USB MODEM, which is designed based on HSPA technology with multi-chipsets, support 3G technology, as well as 2G technology.

Functions:

■ Access to Internet by wireless connection with high speed

■ Send and receive messages

■ Contact Manager

■ Hardware support voice calling

■ Auto search-register wireless network

Technology Parameter

◆ Multi-chipsets scheme

◆ HSUPA/HSDPA/WCDMA 850/1900MHz,

◆ EDGE/GRPS/GSM 850/1900MHz,

◆ HSPA:7.2Mbps Downlink rate, 2Mbps Uplink rate, Update to 5.76Mbps,

◆ UMTS/WCDMA: 384Kbps Downlink and Uplink rate,

◆ EDGE: 384Kbps Downlink rate,177Kbps Uplink rate,

◆ GPRS/GSM:115.2Kbps downlink rate, 57.6Kbps uplink rate,

◆ Windows 2000/xp(Basic home, Professional)/vista(Basic home, Business), Mac OSX

◆ HSUPA/HSDPA/WCDMA/EDGE/GPRS/GSM network compatible,

◆ GSM SIM, 3G, 3.5G USIM

◆ -10℃~+50℃ working temperature

◆ Dimension/Weight 83*29*12mm/35g

This production embedded 3G U6100 module, and it support 3G network accessing and better audio applications.

This device power supply is from USB2.0 interface with 5.0 V power input, and then the voltage is converted from 5.0V to 3.8 V by U1(mic2207) component, and then this voltage is sent to U2(U6100), at the same time, the data transmission between PC and U1 is by D+/D- of USB interface. In addition, Capacitance C21/C22/C23 keeps U1 stable 3.8V power input without noise wave.

What's more, the SIM card slot J4 is connected to module by SDCC_DATA0,SDCC_DATA1,SDCC_DATA2,SDCC_DATA3,SDCC_CMD SDCC_MMC,SDCC_CLK data bus controlling between U2 and SIM slot J4. Besides, the audio function is from J3 and you can phones to others by this device.

of course, this device applies the SMA interface antenna with 3.5dbi.For better display, the red led D2 stands Red Power and the green led D3 stands 3G status.

U6100 RF Module Circuit Descirption

1. RF connector is used for connect our module to the antenna. Its type is MM9329-2700RA1 and is supplied by Murata.
2. Duplexers are the channels of receive and transmit RF signals. PA is power amplifier of RF signal. Both of them are supplied by Murata.
3. RF transceiver is RTR6280 which is supplied by Qualcomm. It is used for process the RF receives and transmits.
4. Baseband processor is MSM6290 which is also supplied by Qualcomm; The MSM6290 chipset solution integrates powerful applications processors into the QUALCOMM market-proven wireless modem, offering increased processing capacity and lower power consumption. A complete system solution that operates on all UMTS networks worldwide; this chipset and system software offers a feature-rich set of enhanced multimedia data applications and state-of-the-art position location capabilities. The MSM6290 device supports streaming video, audio, still-image and video encoding and decoding, 2D and 3D graphics acceleration, and Java® acceleration. It also integrates a 5.0 mega pixels camera interface, complete Bluetooth baseband support, and assisted or standalone GPS.
5. PMU is PM6653 which is also supplied by Qualcomm. The input power management portion accepts power from common sources — battery, external charger, adapter, USB_VBUS, coin cell backup — and generates all the regulated voltages needed to power the appropriate handset electronics. It monitors and controls the power sources, detecting which sources are applied, verifying that they are within acceptable operational limits, and coordinates battery and coin cell recharging while maintaining the handset electronics supply voltages.
6. In additional, U6100 provided a 60-pin board-to-board connector, which provided these interfaces: Power supply, USB, USIM, Audio, GPIO. The B-B connector is AXK5F60545YJ and is supplied by NAIS.