

## **Circuit Description**

### **X-431 DIAGUN MAINBOARD**

#### **Power Supply (DC):**

The power supply is managed by U8. The 3.3V and 1.3V power supplies are provided to S3C2440 I/O and CORE respectively, and the 1.2V power supply is used to reset CPU and for I/O state. The 5V power supply provides voltage to the ZIGBEE module and the touch screen. A branch of 3.3V power supply is converted to 30V through U10 providing voltage to the LCD background light. And the U8 output is divided into 3.3V and 1.8V providing voltage to CODEC.

#### **System clock configuration:**

16.9344MHZ provides the system with the primary frequency reference clock.  
32768KHZ is the real-time clock reference.

#### **Memory system structure:**

S3C 2440 is the main CPU with SDRAM (U13 and U14) and a FLASH (U15) extended.

#### **Function module extension structure:**

The data transmits wireless via the Bluetooth module U12 to PC or the diagnostic box.  
The Bluetooth transmit frequency is 2402~2480MHz.

The system has a MICRO SD card interface to perform software import and data store.

The digital audio output is performed by U2 in the system audio module.

The system has standard RS232 interface and USB port and communicates with the diagnostic box through CON3 in a wire.

#### **Display module: 4.3'' TFT LCD MODULE**

The background light is controlled by U10 independently.