

The Board's main function is Communicate with Outside.

Devide in three parts:

Power Circuit, Communication Circuit and Entrance Guard Circuit

Power Circuit:

1. Converter 12V to 5V by MC34063A.

Communication Circuit:

1. RS232 Circuit,
Use MAX3221CAE.
2. RS485 Circuit,
Use SP485EN. For avoid interference with RS232 circuit, RO Pin anti-connect with 1N4148 .
3. USB Circuit.
Full speed USB device controller compatible with the USB specification version1.1
4. TCP/IP Circuit,
Ues ENC28J60. 10Mbit/s SPI Interface, Half Duplex mode .

Entrance Guard Circuit:

1. WIEGAND.
Connect S3C2410A with NZ37WZ07US.
2. Tamper Button .
The button avoid the front and back conver open with illegal.
3. Door Button.
Notice 2410 whether the button is pressed by pull-up or pull-down relative pin.
4. Door State.
The circuit's principle is same as Door Button circuits.
5. Alarm Circuit.
A NPN triode , which is controlled by 2410,control a relay to open or close.
6. Gate Controller Circuit.
The circuit's principle is same as Alarm circuits.

The Board's main function is process data

Devide in eight parts:

1. Power on Circuit:

Connect DC to DC circuit to 5V by some triode and MOSFET.

2. DC to DC Circuit

Convert 5V to 3.3V by AMC1117-3.3SKF, and convert 5V to 1.8V by AMC1117-1.8SKF.

3. Reset Circuit

Reset by IMP809.

4. Memory Circuit

Nor Flash is SST39VF3201(4MB), SDRAM is HY57V641620(8MB)

5. The S3C2410A works with an external 12MHz crystal,
the RTC unit works with an external 32.768KHz crystal.

6. Connect with JTAG by 14Pin socket.

7. Connect with Communication board by 30Pin socket .

P1, P2 connect with 5V,

P3, P4 connect with GND.

P5, P6 connect with 3.3V.

P7, P8 connect with Wiegand.

P7, P8 connect with USB.

P11, P12, P13, select communication mode by pull-high to 3.3V or pull-down to GND.

P14, P15, select Entrance Guard and Checking Attendance mode by pull-high to 3.3V or pull-down to GND.

P16, P17, P18, connect with Serial Interface.

P19 to P25, Connect with TCP/IP.

P26, Go out button.

P27, Alarm Port.

P28, Door State.

P29, Entrance Guard.

P30, Tamper Button.

8. Connect with fingerprint module by 24Pin socket.

I2C Serial Interface.

The fingerprint module connect in Data-Bus, so whether it connect is choosed by

SN74AHC244PW.

9. LCD

Select normal module in market.20 Pins. Operating voltage is 5V, and can control back-lighting.

10. Use BLA1008 in audio circuit, amplify by LM386.