Circuit description of BKS-4800HP

The device is an access controller by FP/RF/PIN.
Device has an user data of 2FP, 1RF, 1PIN.

Main blocks
-Power, CPU, Memory, Voice chip, LCD, CMOS sensor, 485 communication, RS232, LAN, I/O ports, Mifare Module

-Power
DC 12V => 5V by an U2 switching regulator => output 3.3V to the circuit after passing by U3.
U5 switches to 1.8V for supplying into the CPU Core power.

-CPU
ARM9 Core CPU is supplied 12Mhz clock though OCS1 and the CPU processes as 200Mhz.

-Memory
U6, U8 16Mbyte RAM is connected to Memory by 32bit data bus, operates as 100Mhz.

-Voice chip
U7 chips works the process of "voice files write into the chip => CPU call a number of file => playing the called
Voice file"

-LCD
This graphic LCD is controlled by a 8bit data bus.

-CMOS sensor
The FP module can read the FP image, consists of an optic sensor and a CMOS sensor. When placing a finger on
The sensor, it calls LED for reading FP image. The 320X240 CIF level image sensor controls by 12C communication
And call the image though 8bit data bus.

-485 communication
It's for the communication with an external server. The U20 of 485 chip connects to UART port of CPU and works
With the external 485 device.

-RS232 communication
It's for the communication with an external server. RS232 chip (U21) interfaced to CPU UART port, makes to be communication with the PC serial port

-LAN
U25 containing TCP/IP protocol stack transmits the Ethernet data to CPU by 8bit data bus.
It can connect to a network using by U 27 Single-Port 10/100M fast Ethernet PHYceiver and RJ45 jack built-in transformer coil

-I/O ports
It has several I/O ports for send/receive a signal from external contacts.

-HID Module (125Khz)
It contains an Eprox 4025A01 chip made by HID Corp..
It connects to CPU I/O port though 2 cables.
The CPU only receives the data from HID module by Wiegand protocol.