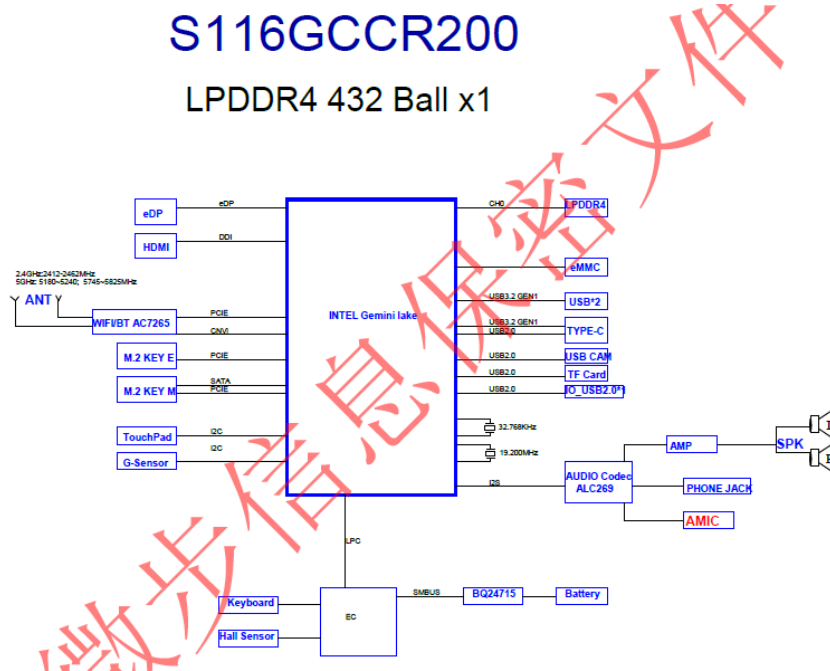


K1100 Function Description

1. Block Diagram



2. Circuit Description

This machine uses Intel Gemini Lake Refresh N4120 as the processing center. The CPU uses LPDDR4 memory, EMMC as system storage, and the audio recording and playback output is completed by the high-definition audio decoder ES8336. The display output is connected to the HD LCD screen by the LVDS interface. Devices can be entered via the touchpad and matrix keyboard. The machine audio input uses a dual digital MIC, and the audio output uses 2 speakers. The device contains WIFI and Bluetooth modules for wireless transmission. The device includes a full-featured USB host interface for USB 3.0 transmission, HD video output, external headphones, and DC power input. The device can be charged with an external 12V/2A DC power supply. The internal IC EC completes the charge management and power timing management of the lithium battery, and the PMIC provides the core power for the entire motherboard. The machine contains a fingerprint security mechanism, which is powered on by the fingerprint identification module and runs the Windows 11 system.

2.1 CPU N4120

The CPU N4120 completes all calculation and display functions and coordinates the normal and orderly operation of each device.

2.2 DDR

DDR completes fast storage of CPU operation data.

2.3 Storage

Use EMMC to store operating system and user files.

2.4 Audio Code ES8336

Audio Code completes the dual digital MIC recording input processing and system audio output decoding and drives the speaker output.

2.5 PMIC IC BD2671

PMIC is responsible for all CPU power supply and CPU power timing management.

2.6 Embedded Controller UEC1/IT8987E

The EC completes keyboard input, temperature acquisition, LED control, charge management and boot timing functions. It provides a complete Type C function, USB 3.0, display output, analog headphone output and 12V power input charging.

2.7 Keyboard Matrix J9506

Use to connect to matrix keyboard.

2.8 Led D2, LED1

LED completes the keyboard case lock indication and power on/off, charging indication.

2.9 DC-IN Protector of WS3205D on MB

The DC-IN interface charges the notebook with an external 12V/2A DC power supply.

2.10 LCD Connector directly from CPU.

The LCD connector provides a display interface for the user by externally connecting a 1366*768 resolution LCD through the LVDS interface.

2.11 RF section also includes a combo chips AC 7265, which supports WLAN, BT.

Device features:

WiFi Features:

- Singleband single stream 802.11b/g/n RF;
- Support WiFi and Bluetooth TDD operation and single-antenna topology with integrated TR-switch;
- Integrated PA with max 16 dBm CCK output power;
- Typical RX sensitivity with companion chip modem: -77.5dBm at 11g 54Mbps mode;
- Support external LNA with an auxiliary RX input;
- Integrated power detector to support per packet TX power control;
- Built-in calibrations for PVT variation; One fully integrated frequency synthesizer for both wifi/BT supporting multiple crystal clock frequencies;

Bluetooth Features

- Bluetooth specification v2.1+EDR;
- Integrated PA with 9dBm(class 1) transmit power;
- Typical RX sensitivity with companion chip modem: GFSK -95dBm, DQPSK -94dBm, 8-DPSK -88dBm;

Bluetooth

| | |
|---------------------|------------------------------|
| Operating Frequency | 2402MHz~2480MHz |
| Modulation | GFSK, $\pi/4$ -DQPSK, 8-DPSK |
| Number of Channels | 79 Channels |
| Antenna Type | PIFA Antenna |
| Antenna Gain | 1.2 dBi |

BLE

| | |
|---------------------|-----------------|
| Operating Frequency | 2402MHz~2480MHz |
| Modulation | GFSK |
| Number of Channels | 40 Channels |
| Antenna Type | PIFA Antenna |
| Antenna Gain | 1.2dBi |

WIFI2.4G

| | |
|---------------------|--|
| Operating Frequency | 2412-2462MHz for 802.11b/g/11n(HT20); 2422-2452MHz for 802.11n(HT40); |
| Modulation | DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n; |
| Number of Channels | 11 channels for 802.11b/g/11n(HT20); 7 channels for 802.11n(HT40); |
| Antenna Type | PIFA Antenna |
| Antenna Gain | 1.2 dBi |

WIFI5G

| | |
|---------------------------------|--|
| IEEE 802.11 WLAN Mode Supported | <input checked="" type="checkbox"/> 802.11a/n/ac (20MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11n/ac (40MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11ac (80MHz channel bandwidth) |
| Data Rate | 802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20):MCS0-MCS8; 802.11ac(VHT40/VHT80):MCS0-MCS9; |
| Modulation | OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac; |

| | |
|---------------------------|--|
| Operating Frequency Range | <input checked="" type="checkbox"/> 5180-5240MHz for 802.11a/n(HT20)/ac(VHT20); 5190-5230MHz for 802.11n(HT40)/ac(VHT40); 5210MHz for 802.11ac(VHT80) <input checked="" type="checkbox"/> 5745-5825 MHz for 802.11a/n(HT20)/ac(VHT20); 5755-5795 MHz for 802.11n(HT40)/ac(VHT40); 5775MHz for 802.11ac(VHT80) |
| Number of Channels | <input checked="" type="checkbox"/> 4 channels for 802.11a/n20/ac20 in the 5180-5240MHz band ; 2 channels for 802.11 n40/ac40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; <input checked="" type="checkbox"/> 5 channels for 802.11a/n20/ac20 in the 5745-5825MHz band ; 2 channels for 802.11 n40/ac40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band ; |
| Antenna Type | PIFA Antenna |
| Antenna Gain | 1.2dBi |