Diagram Description:

Input is 12V DC, through the filtering, it is provided to three DC-DC chips: one is 34063 and other two are AX3120. The buck circuit is made up with three switch power, and it will output three branch voltage, they are 5V, 1.8V and 3.3V. The 5V one is provided to the circuit drive chip　BCM6301; the 1.8V one is provided to BCM5325E as the inner core voltage; the 3.3V one is provided to BCM6333 as the I/O interface voltage, and also as the work voltage of SDRAM.

BCM6333 is a high performance and single chip of ADSL2+ chip, the chip integrates ADSL2+ transceiver and AFE module, and the main parameters of BCM6332 is such as:

- 240MHz MIPS32 R4KC processor，with 24KB cache;
- Integrate and support ADSL/2/+/RE transceiver and AFE module, support Annex　A,B,C,I,J K,L,M;

Support full rate, ITU and ANSI connection of ADSL, include:

ITU T G.994

ITU T G.992.1 (G.dmt), support Annex A and Annex C；

ITU T G.992.2 (G.lite), support Annex A and Annex C；

ANSI T1.413；

ITU T G.992.3(ADSL2)；

ITU T G.992.5 (ADSL2+)；

- With 10/100 Mbps Ethernet PHY and MAC, support Auto-MDIX;
- 120MHz，16bits SDRAM interface;
- With SPI interface, support serial FLASH startup；
- Internal 1.8V, 2.5V and 1.2V voltage regulator；
- 256 pins PBGA encapsulation.

BCM6301 is a Line Driver chip, adopt 5V supply power, and provides the drive voltage to ADSL circuit.

The front-end circuit includes the RX filtering and the TX filtering, and Hybrid circuit. It completes the D/A&A/D connection of signal between the phone line and DSP.

Wireless module

Wireless module, BCM4312:

- Support IEEE802.11a/b/g；
- Comply Rev1.1 PCI-E, and support SDIO;
- 3.3V supply power;
- Need the drive control to support dynamic power management.

Switch module

Switch module, BCM5325E:

- 6 10/100 full duplex controllers；
- 5 full duplex 10/100 transceivers which comply IEEE802.3u；
- Need 25M crystal；
- Low power consumption, need 1.8V and 3.3V voltage，adopt 0.18um of CMOS technique；
- Support network port self-adaptation.