The input is 12V DC, after filtering, it provides to three-way DC-DC chips and each way is 34063. A buck circuit is constituted by the three-way 34063; the output voltages are three branches, namely, 5V, 1.2V and 3.3V. The 5V voltage is provided to the line driver chip BCM6301; the 1.2V voltage is provided to the BCM6332 as core voltage; the 3.3V voltage on the one hand is provided to the BCM6332 as I / O interface voltage, and it is as well as the SDRAM operating voltage.

BCM6332 is a high performance, single-chip ADSL2 + chip, and it has integrated ADSL2 + transceiver and AFE module. The main parameters of BCM6332 are as follows:

- 240MHz MIPS32 R4KC processor, with 24KB cache；
- Integrated Support ADSL / 2 / + / RE standard transceiver and AFE module; support Annex A, B, C, I, JK, L, M; support the ADSL connection which is full-rate, and in line with the ITU and ANSI, including:

  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 port；
- With SPI port，support serial FLASH start；
- Built in 2.5V and 1.2V voltage regulator；
- 256-pin PBGA package.

BCM6301 is a Line Driver chip, and uses 5V power supply, and provides drive voltage for ADSL lines.

Front-end circuits include a RX filter, a TX filter and a Hybrid circuit part. It completes the D / A & A / D connection of signal between the telephone line and the DSP.