TECOM GW6200 用途說明:

Tecom Intelligent Gateway GW6200 is a solution that
provides Data, Voice and Wireless access in a single
solution for very small and small offices.
With built-in SIP Proxy, Auto Attendant and Voice Mail
system and the intelligent call server database, GW 6200
offers completed IP-PBX functions that a small office will
need.
In addition to the IP-PBX functions, GW6200 also
supports 4 port switches and 802.11g wireless and
Firewall security features. It is a comprehensive solution
provides every network access feature that a small office
may need in the most cost-effective manner.

TECOM GW6200 動作原理:

PSTN Line: 3 PSTN Lines Connect to 3 FXO RJ-11 port.
Internet: Connect to WAN port. 3 Type :PPPOE(ADSL),DHCP(Cable/IP
sharing),Static IP(Fixed IP).
WIFI: as an AP Router for NB , also For WIFI phone VOIP application.
LAN:4 RJ-45 port with max 24 set IP Phone for VOIP application.
FAX/Phone:One FXS port for telephone or Fax machine application.

TECOM GW6000 電路設計製造:

Design:

Circuit design is based on One MCU : BCM6348 Network processor.

Using AudioCode AC482-C DSP IC to deal with Voice Packet processing , including:
RTP , Echo cancellation , tone generation/detection , PCM format voice
modulation/demodulation etc..

Using SiliconLab FXO(DAA+Codec) : Si3050 + Si3019 package solution ,
totally 3 ports for 3 real PSTN line connection.

Using SiliconLab FXS(SLIC+Codec) :Si3215 solution , 1 port for Telephone or
FAX machine connection.

Using BroadCom EtherSwitch IC : BCM5325E to serve as 4 LAN ports connection.

Using OTI-2168 USB controller + NAND Flash 128MB to serve as VoiceMail
application.

Using BroadCom WIFI solution : BCM4318+Front End to provide 802.11b/g
application.

Illustration:

-BCM6348 controls AC482-C By Host Interface(sharing data/address bus with FLASH
by ChipSelect).

-AC482-C serve as PCM Master(PCM-IN,PCM-OUT,PCM-FSYNC,PCM-CLK)
connecting to 3 x Si3050's & 1 x Si3215's PCM Slave Interface.

-BCM6348 provide SPI Master Bus(SPI_IN,SPI_OUT,SPI_CLK,SPI_CS)
connect to 3 x Si3050's & 1 x Si3215's SPI Slave interface to
read/write registers to set or get the corresponding state information ,such as
ring detection , OffHook detection , Polarity reversal detection , Slic Mode setting , ..
etc.

-BCM6348 control BCM4318 by proprietary PCI interface to provide WIFI app.

-BCM6348 connect to BCM5325E by MII interface to provide 4 port 10/100 Mbps AUTO-MDI/MDIX LAN port app.

-BCM6348 provide internal Ether Phy interface(TX+/TX-,RX+/RX-) connect to 1 port Ether XFMR to provide WAN port app.

-BCM6348 USB Host 1.1 interface(USB+/USB-) connect to OTI2168 and OTI2168 connect to NAND 128MB flash to provide VoiceMail app.

Manufacturing:

PCB spec:
A. PCB 單片尺寸: 178 (W) * 271 (L) mm
B. 層數: 6-Layer
C. 板厚: ☑1.6mm
D. 銅箔厚: ☑1oz
E. 電鍍: ☑無
F: PREPREG 組成 ☑2116
G: 材質及防火等級: ☑FR-4;94-V0
H: SMT 零件: ☑雙面
I: 防銲☑雙面
J: 文字☑雙面 ; 傳統網印;顏色 a.白: ☑零件面
K: 最細銅箔線路: 5mil ; 最小銅箔線距:5mil ; 最小鑽孔孔徑:8 mil
L: 銅箔線路製程:☑乾膜
M: 碳膠厚度: 15u inch 以上
N: WIFI Impedence :50 OHM.