

Technical Document

for

IPC2(V)-5600, IPC2(V)-3360

a V.90, V.34+ Modems for PC104

Interface Industrial PC

Revision	Issue Date	Engineers/Comments
V1.0	Dec.15, '01	Peter
V1.1	Oct. 15, '02	Add Speaker Jack Output Power/Kiwi
V.1.2	Feb. 25, '03	+12V/-12V DC are needed only for IPC2V-5600 with voice function only

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Related Documents:

- 1) AT Command Sets (1199_AT-RC56D from Conexant): Available upon request.
- 2) Design Guide (1154r#-RC56D, from Conexant): for internal use only
- 3) PCB: for internal use only
- 4) Regulation Approval Reports: Available upon request
 - CTR21+TBR21
 - FCC Part 68
 - FCC Part 2 and Part 15
 - EN60950
 - UL 1950
 - Austel (Available thru 3JTech's distributor in Australia)

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Introduction

IPC2-5600 is a PC104 add-on card V.90 modem using Conexant modem chip sets, RC56D. PC104 is a 16 bit data bus interface for industrial PC. Since RC336D is pin compatible to RC56D. 3JTech could also provide IPC2-3360. With additional components mounted on the IPC2 PCB, the modem could have additional voice function. The model is called IPC2V-5600 or IPC2V-3360. The product has the following regulation approvals:

(CTR21+TBR21)	FCC Part 68	Part 15	EN 60950	UL 1950	CE
YES	YES	YES	YES	YES	YES
Regist. #: BT2010196	File #: 655-CX-2000	Report #: J1015119	Report #: T60LVL20	File #: E172664	
Report #: D2064018 E01	Regis. #: 5CQ TAI-40146-M%-E			Project #: 00NK90945	

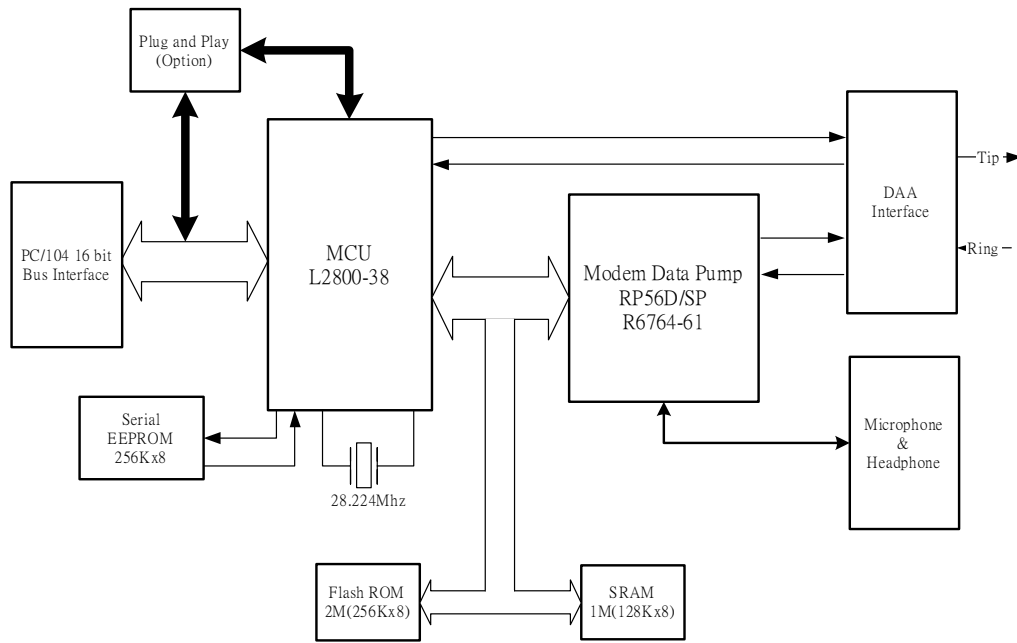
LVD Report is for EN60950

TUV Report is for CTR21 & TBR21

EMC Test is for Part 2 and Part 15

- *** The product also has **Austel** approval through our distributor in Australia.
- *** The reports are available upon request.
- *** 3JTech will conduct other regulation approvals upon customer's request for the product.

Block Diagram



IPC2(V)-5600 Modem System Block Diagram

IPC2(V)-5600 Modem Specification

Function Specification:

- Data modem
 - ITU-T V.90 (56 kbps)
 - V.34 (33.6 kbps)
 - V.32 bis, V.32, V.22 bis, V.22, V.23, and V.21
 - Bell 212A and 103
 - V.42 LAPM, MNP 2-4, and MNP 10 error correction
 - V.42 bis and MNP 5 data compression
 - MNP 10EC™ enhanced cellular performance
- Fax modem send and receive rates up to 14.4 kbps
 - V.17, V.29, V.27 ter, and V.21 channel 2
- V.80 synchronous access mode supports host-based communication protocols
- Voice/TAM/telephony extensions mode(voice Version)
 - Handset support
 - Full-duplex speakerphone mode
 - ITU-T V.61 modulation (4.8 kbps data with audio)
- Communication software compatible AT command sets
- Built-in host/DTE interface with speeds up to 230.4 kbps
- PC/104 16bit Bus Interface
- Plug and Play supported (PnP Version)
- Work with Windows 95, 98, ME, NT 4.0 and Windows 2000 system
- Work with Linux system, WinCE, WinCE.net, etc.

Power Consumption

- DC5V 240mA
- DC 12V 20mA (for IPC2V-5600 with voice function)
- DC -12V 20mA (for IPC2V-5600 with voice function)

* Note: only 5V DC is needed for IPC2-5600.

Operating Temperature Range: 0 ~ 70°C

Storage Temperature Range: -15 ~ 85°C

Speaker Output Power

The IPC2V-5600 speaker Jack output voltage range from 20mV to 2V and driver current 40mA Max.

The Max power output is 80mW so you need a booster.

IPC2(V)-5600 DIP Switch Setting

There are two dip-switches on the PCB. The locations are show on the Figure 1. Switch number one is for setting which COM port the add-on card will be assigned to. The second switch is for setting the IRQ number according to which COM port assigned.

Table 1: SW1 – Switch settings for COM port selection or Plug and Play

Function\No.	1	2	3	4	5
PnP	OFF	ON	OFF	ON	OFF
switch	ON	OFF	ON	OFF	ON

Table 2: SW2 – I/O port & IRQ setting

No.	1	2	3	4	5 (IRQ3)	6 (IRQ4)	7 (IRQ5)	8 (IRQ7)	9 (IRQ9)
COM1 3F8h/IRQ4	ON	OFF	ON	OFF	OFF	ON	OFF (Nonstandard IRQ support for COM port)		
COM2 2F8h/IRQ3	OFF	ON	ON	OFF	ON	OFF			
COM3 3E8h/IRQ4	ON	OFF	OFF	ON	OFF	ON			
COM4 2E8h/IRQ3	OFF	ON	OFF	ON	ON	OFF			

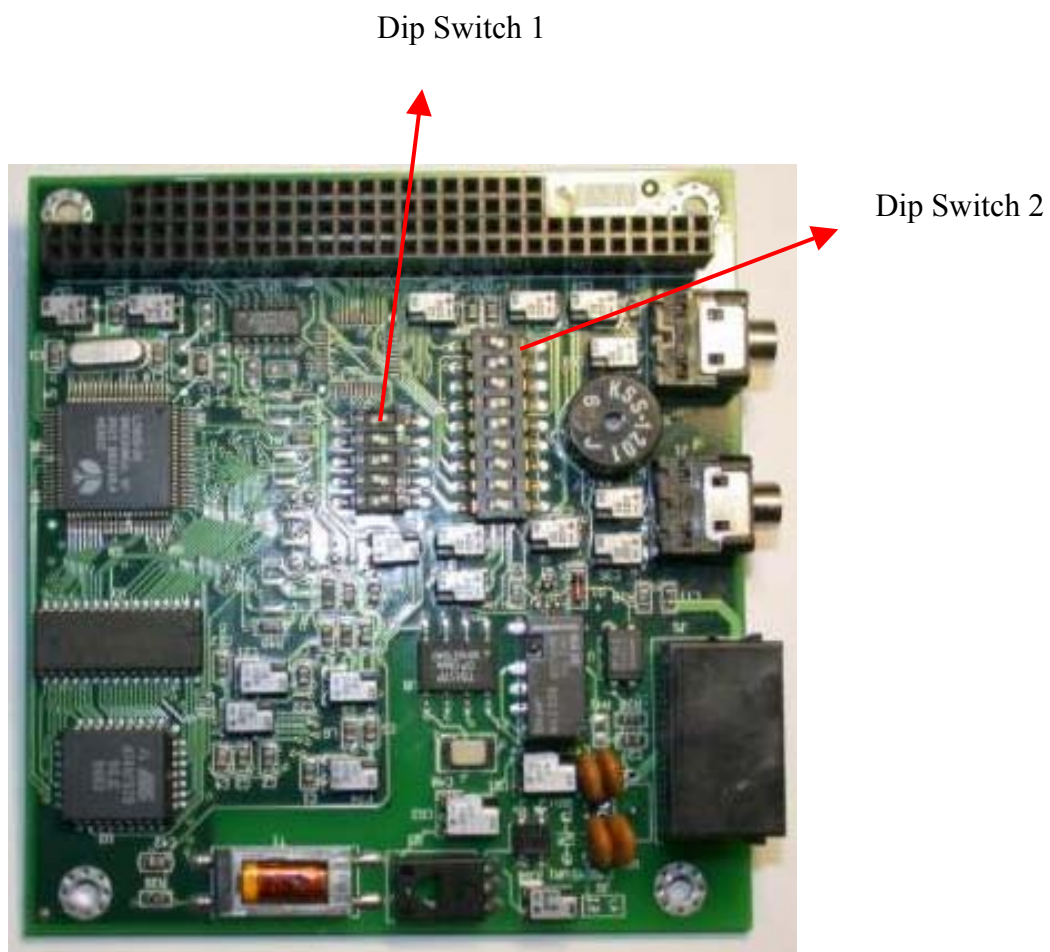
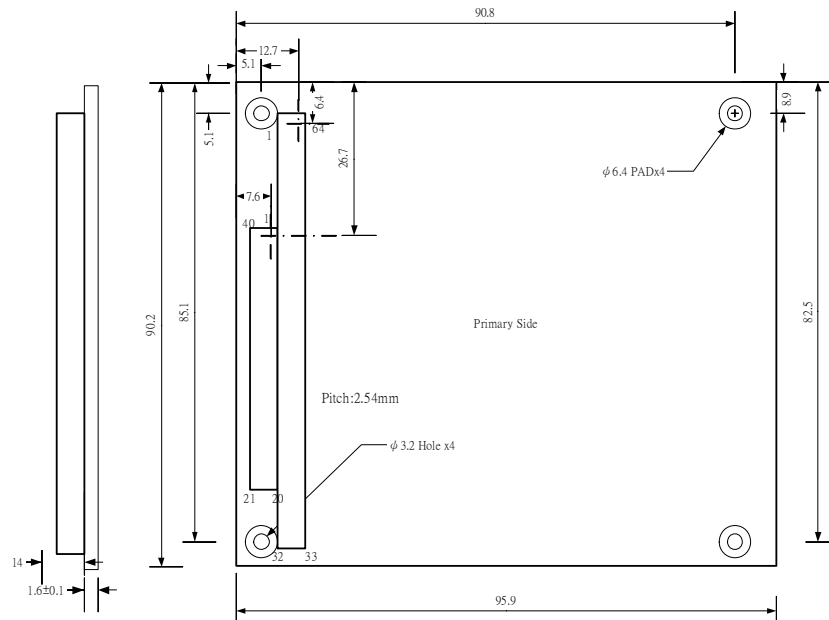


Figure 1: Location of the Dip Switch

Mechanical Drawing of the PCB



IPC2(V)-5600 Dimensions

Unit: mm

Tolerance: ± 0.1 mm