



Integrated Technology Express, Inc.

Application Note of IT887X

IT887x On Board Design Reference Guide V1.0

Feb. 18, 2002

Reversion History

Reversion	Change List	Note
V1.0		First Draft

IT887x design for card using INTA# (Sharing IRQx), driver auto detect IRQx & assign I/O address for IT887x. If customer intends to add more serial or parallel ports on their board, it is strongly recommended that SERIRQ# is used instead of INTA#. IT887x doesn't need the driver, except the dummy driver^{Note}, thereby avoiding the compatibility issue. SERIRQ# can be used to set UART1, UART2, Parallel port interrupt routing to SERIRQ via the serial EEPROM (SM-bus). All ports can be set to different IRQx & I/O addresses.

Note: Because IT887x is a PNP device, it needs a dummy driver to cover "!" signal in Windows system.

Here is an example for IT8872 on board design, using SERIRQ.

Reset-Strap Setting

Symbol	Jumper	Function Description
CSA0#	(P/UP)	INTA#
	P/Down	SERIRQ#

Programming steps:

- a. Set Internal UART1, UART2 and Parallel Ports Base Address
 - ====> IT8872' s configuration 7Ch<15::00>=03,F8h (UART1)
 - ====> IT8872' s configuration 7Ch<31::16>=02,F8h (UART2)
 - ====> IT8872' s configuration 80h<15::00>=03,78h (Internal LPT)
 - ====> IT8872' s configuration 80h<31::16>=07,78h (Internal LPT for ECP)
- b. Positive Decode UART1, UART2 and Parallel Ports I/O Base Address
 - ====> IT8872' s configuration 60h<31::0>=E3,00,03,F8h (UART1)
 - ====> IT8872' s configuration 64h<31::0>=E3,00,02,F8h (UART2)
 - ====> IT8872' s configuration 68h<31::0>=E3,00,03,78h (Internal LPT)
 - ====> IT8872' s configuration 6Ch<31::0>=E3,00,07,78h (Internal LPT for ECP)
- c. Set Internal UART1, UART2 and Parallel Ports' Interrupt Routing
 - ====> IT8872' s configuration 9Ch<15::12>=0100b (UART1)
 - ====> IT8872' s configuration 9Ch<11::08>=0011b (UART2)
 - ====> IT8872' s configuration 9Ch<07::04>=0111b (Internal LPT)
- d. Set Internal Parallel Ports' Mode & DMA Channel
 - ====> IT8872' s configuration 9Ch<31::30>=11b (SPP & EPP & ECP mode)
 - ====> IT8872' s configuration 9Ch<29::27>=011b (DMA channel_3)
- e. Enable Internal UART1, UART2 and Parallel Ports' control
 - ====> IT8872' s configuration 9Ch<23::21>=111b