Parallel Port Register Read/Write Tool

Help user to make sure the platform whether able to access legacy ISA address 278/378/3BC and standard (resource assigned by system automatically)

Test Tool Simple User Guide

First Edition, December 2015



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1. Tool Feature

Parallel Port Register Read/Write Tool could verify the IO address which mapped with the parallel port, If the test result is unable to access the register, The indication is the system doesn't assigned the IO address or the IO address is conflicting, Legacy ISA Address especially (278h/378h/3BCh), some motherboard BIOS prohibit **PAR5008R** Legacy ISA Address remap function, this situation cause users couldn't use some parallel port device which binding with Legacy ISA Address(ex. Keypro),the tool could help user make sure the platform which whether allow Legacy ISA Address remap function.

2. Preparation Before Execute Tool

- a. Please access to SUNIX website to download driver "ParallelPortRegiserReadWriteTool" for PAR5008R.
- B. Run InstallDriver.exe, If x86 machine, System will install InpOut32.sys;
 If x64 machine, system will install InpOutx64.sys

| | | | | | | | | | × |
|---|---|-------------------|--------------------|-------|------------|-----------------|------------|-------|--------------|
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| InstallDriver.ex Application | e Date modified: 1/14/2011 8:24 AM Date created: 11/20/2015 10:4 Size: 48.0 KB | 19 AM | | | | | | | |





c. Run ParallelPortRegisterReadWriteTool.exe

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| Parallel Port Register Read/Write Tool | | |
|--|---------------|--------------------|
| Legacy ISA I/O address / Standard : | Base Address: | Extension Address: |
| 3/8 · | | |
| Register Table : | | |
| DATA - | | |
| Register Value: | Write Data: | |
| | | |
| Read | Write | |
| Loading inpoutx64.dll Succe | SS | |



3. Set IO Address

3.1 278h

> Check IO address form LPT Properties

| CP Printer Port (LPT3) Properties | | | | | | | | |
|-----------------------------------|------------------------------|-----|--|--|--|--|--|--|
| General Port Settin | ngs Driver Details Resources | | | | | | | |
| ECP Printer Port (LPT3) | | | | | | | | |
| Resource settings: | | | | | | | | |
| Resource type | Setting | | | | | | | |
| 📕 I/O Range | 0278 - 027A | | | | | | | |
| | | | | | | | | |
| Setting <u>b</u> ased on: | Current configuration | • | | | | | | |
| | Use automatic settings | | | | | | | |
| Conflicting device | ist: | | | | | | | |
| No conflicts. | | • | | | | | | |
| | | - | | | | | | |
| | OK Can | xel | | | | | | |

3.2 378h

| ECP Printer Port (LP | T3) Properties | × | | | | | |
|-------------------------|------------------------------|----------------|--|--|--|--|--|
| General Port Setti | ngs Driver Details Resources | | | | | | |
| ECP Printer Port (LPT3) | | | | | | | |
| Resource settings | : | | | | | | |
| Resource type | Setting | | | | | | |
| I/O Range | 0378 - 037A | | | | | | |
| | | | | | | | |
| Setting based on: | Current configuration | | | | | | |
| | Use automatic settings | Change Setting | | | | | |
| Conflicting device | list: | | | | | | |
| No conflicts. | | * | | | | | |
| | | - | | | | | |
| | | K Cancel | | | | | |

3.3 3BCh

| ECP Printer Port (LPT3) Properties | | | | | | | | |
|------------------------------------|--|--|--|--|--|--|--|--|
| General Port Setti | General Port Settings Driver Details Resources | | | | | | | |
| ECP Printer Port (LPT3) | | | | | | | | |
| Resource settings | c | | | | | | | |
| Resource type | Setting | | | | | | | |
| I/O Range | 03BC - 03BE | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Setting based on: | Current configuration | | | | | | | |
| | | | | | | | | |
| | Use automatic settings | | | | | | | |
| Conflicting device | list: | | | | | | | |
| No conflicts. | A | | | | | | | |
| | | | | | | | | |
| | _ | | | | | | | |
| | · · · | | | | | | | |
| | OK Cancel | | | | | | | |



3.4 Resource Assigned By System Automatically

| 1 | SUNIX 1-Port Parallel Card Properties | | |
|---|---|---|------------------|
| | General Port Control Driver Details Resources | | |
| | SUNIX 1-Port Parallel Card | | |
| | Resource settings: | | |
| ١ | Resource type Setting | | Deve Address |
| | I/O Range C010 - C017 | ł | Base Address |
| 1 | I/O Range C000 - C007 | F | Extended Address |
| | TRQ 0x00000011 (17) | | |
| | Setting <u>b</u> ased on: | | |
| | ☑ Use automatic settingsChange Setting | | |
| | Conflicting device list: | | |
| | No conflicts. | | |
| | • | | |
| | OK Cancel |) | |

- 3.5 Select Parallel Port IO Address
 - a. Select parallel port IO address in ParallelPortRegisterWriteTool.exe

| Parallel Port Register Read/Write Tool | 100 | |
|---|---------------|--------------------|
| Legacy ISA I/O address / Standard : 378 - 278 - 278 - 3BC - Standard - | Base Address: | Extension Address: |
| Register Value: | Write Data: | |
| | | |
| Read | Write | |
| Loading inpoutx64.dll Succ | ess | |

 b. If select standard , need type base address and extension address, Reference section 2.4

| Parallel Port Register Read/Write Tool | | | | | | | |
|---|-----------------------|--------------------|--|--|--|--|--|
| Legacy ISA I/O address / Standard : Standard | Base Address: C010 | Extension Address: | | | | | |
| Register Table : DATA - | | | | | | | |
| Register Value: | Write Data: | | | | | | |
| | | | | | | | |
| Read | Write | | | | | | |
| Loading inpoutx64.dll Succes | S | | | | | | |



4. Register

4.1 Register Table

| Parallel Register | Parallel Register Describe | |
|---------------------------------|---|-----|
| DATA | Data Register | R/W |
| ECP-AFIFO | ECP Address FIFO Register | W |
| DSR | Status Register | R |
| DCR | Control Register | R/W |
| EPP-APORT | EPP Auto Address Strobe Register | R/W |
| EPP-DPORT | EPP-DPORT EPP Auto Data Strobe Register | |
| C-FIFO | C-FIFO Parallel Port Data FIFO | |
| ECP-DFIFO | ECP-DFIFO ECP Data FIFO Register | |
| T-FIFO | T-FIFO Test FIFO Register | |
| CNFG-A Configuration Register A | | R |
| CNFG-B | CNFG-B Configuration Register B | |
| ECR | Extended Control Register | R/W |

4.2 Select Register

| Parallel Port Register Read/Write Tool | | | | | | | |
|--|---------------------------|--------------|--------------------|--|--|--|--|
| Legacy ISA I/O address / 378 | Standard : B | ase Address: | Extension Address: | | | | |
| Register Table : | | | | | | | |
| DATA - | | | | | | | |
| DATA | ata Register Read/Write | | | | | | |
| ECP-AFIFO | Ţ | Write Data: | | | | | |
| DSR | | | | | | | |
| DCR | | | | | | | |
| EPP-APORT | | | | | | | |
| EPP-DPORT | | | | | | | |
| C-FIFO | Г | | | | | | |
| ECP-DFIFO | | Write | | | | | |
| T-FIFO | | | | | | | |
| CNFG-A | dll Success | | | | | | |
| CINFG-B | | | | | | | |



5. Read/Write

- 5.1 Use ECR Register To Make An Example
 - a. Read register

| Parallel Port Register Read/Write Tool | | |
|--|---------------|--------------------|
| Legacy ISA I/O address / Standard : 378 | Base Address: | Extension Address: |
| Register Table : | | |
| Register Value: | Write Data: | |
| . | | |
| Read | Write | |
| Loading inpoutx64.dll Succe | SS | |

0x15(h) = 00010101; Standard Mode(SPP)

| Parallel Port Register Read/Write Tool | | |
|--|---------------|--------------------|
| Legacy ISA I/O address / Standard : 378 | Base Address: | Extension Address: |
| Register Table : ECR - | | |
| Register Value: | Write Data: | |
| 15 Read | Write | |
| Loading inpoutx64.dll Succes | S | |

b. Write register, set 0x35(h) = 00110101;PS/2 Mode(BPP)

| Parallel Port Register Read/Write Tool | | |
|--|---------------|--------------------|
| Legacy ISA I/O address / Standard : 378 • | Base Address: | Extension Address: |
| Register Table : ECR - | | |
| Register Value: | Write Data: | |
| 15 | 35 | |
| Read | Write | |
| Loading inpoutx64.dll Succe | SS | |



| Parallel Port Register Read/Write Tool | | |
|--|---------------|--------------------|
| Legacy ISA I/O address / Standard : 378 | Base Address: | Extension Address: |
| Register Table : ECR - | | |
| Register Value: | Write Data: | |
| 35 | 35 | |
| Read | Write | |
| Loading inpoutx64.dll Succes | S | |