

# Working with the iNet-230 PCMCIA Card

Application Note #94, 5/27/2003

The iNet-230 PCMCIA instruNet card controls an instruNet network via a PCMCIA card slot. The iNet-230 is similar to the iNet-200 PCI controller, except it enables one to do data acquisition with instruNet from a Windows 95/98/Me/2k/Xp (not NT) laptop computer, or a PPC Macintosh Powerbook computer. Also:

## 1. External Power Supply

The iNet-230 requires an external power supply:

#iNet-312.8	110/220VAC	.8A +/-12V, 2A 5V	3 prong USA plug
#iNet-312.8eu	110/220VAC	.8A +/-12V, 2A 5V	2 prong Euro CE plug

## 2. No Counter/Timer Signals

The controller counter/timer signals (there are 10 of these on the iNet-200 pci card) are not accessible on the iNet-230, due to space considerations. If one wanted access to of these signals, they could solder a small wire to a pin, and route it outside the card, to a connector, which is mounted on the iNet-230 housing. If using an input, it would be recommended that they place a 1K resistor in series w/ the pin, to protect it from overvoltage. This is a little messy, and is only advocated for those who are comfortable with kind of activity.

## 3. Compatibility

The iNet-230 is compatible with Windows 95/98/Me/2k/Xp (not Win NT) computers and Macintosh Powerbook 1400/2400/3400/5300/G3/G4/> computers running OS >= 8 (must boot OS 9 if on OS >= 10.2 Mac) with >= 1 available Type II 16bit Pcmcia slot.

## 4. Heat & Power Considerations

The iNet-230 card draws about 300mA at 5Volts from the PCMCIA socket. Consequently, it heats by 1.5Watts. The pcmcia specification says cards can draw a maximum of 1Amp and heat by a maximum of 5Watts. Therefore, the iNet-230 should not get too hot, since Laptop computers should provide adequate ventilation to for up to 5Watts. Yet some laptops do not do well here, since they are focusing on being light weight and being about to survive for long periods of time on batteries. One way to reduce the temperature inside a laptop is to place the laptop on several rubber supports so that it sits about 2cm off the table. This allows cool air to move over the bottom surface of the laptop, and subsequently draw heat away from the system.

## 5. Mechanical Survivability

All PCMCIA cards are inherently vulnerable to structural failures, since they have very little material, and sometimes inadvertently absorb powerful forces on small surface areas. The iNet-230 has 2 connectors, a DB25 and DIN5 that are large, strong, & not prone to breaking. The plastic supports around the DB25 are also strong. The weak link is the card itself. Therefore it is recommended that the card be handled with care, and inserted into the computer without bending. Also, one should attach the DB25 and DIN5 cables to the card before insertion, and not later yank on the cables.