



Andor Technology has developed the most powerful, most flexible controller on the market. The latest high-density electronics and surface mount technology mean everything fits on to one plug-in card. A powerful 32-bit RISC micro-controller on the card works with AndorMCD software to bring you detector control for data acquisition. An Inter-Integrated Circuit Bus (I²C) provides a convenient way of communicating with the camera head and other electronic devices. Inputs and outputs needed to control external equipment are all on board. The controller card also powers Thermoelectric cooling in the head to maintain your selected operating temperature.

- Compact Size Andor cameras are completely controlled from one PC plug-in card
- RISC micro-controller Reduces PC workload and enables fast data access
- 16-bit A/D converter Provides 16-bit accuracy and true dynamic range
- 1µs per pixel readout rate with CCI-010 card Provides faster readout at 1µs per pixel with 16-bit accuracy
- I²C bus Enables bi-directional, two-line communications between different devices or ICs
- Controlled camera cooling Provides the power required to cool and stabilise the camera
- Auxiliary Cooling connector Utilises power from the computer internal power supply to provide extra cooling capability
- TTL inputs and outputs Enables control of external equipment

● **Controller Overview** A 32-bit, 33MHz, 5V bus-mastering PCI plug-in card

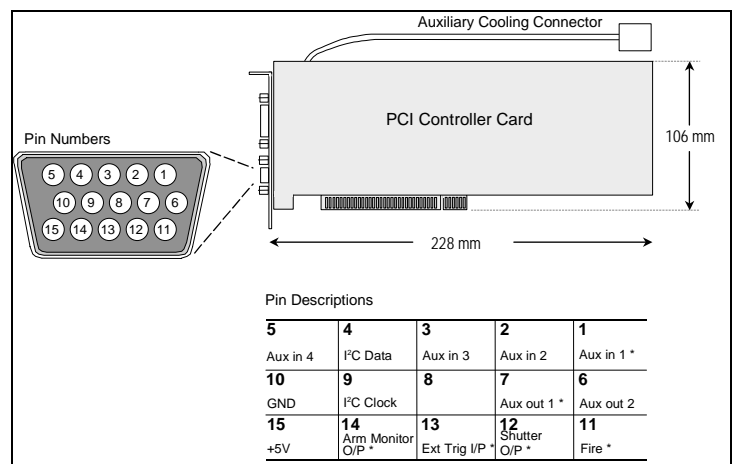
Options:

CCI-001 PCI Controller card with 62KHz & 32KHz pixel readout rate options

CCI-010 PCI Controller card with 1MHz, 500KHz, 62KHz & 32KHz pixel readout rate options

The auxiliary cooling connector is used to supply extra power to the thermoelectric cooler. It is a 4-way power connector and is compatible with most popular 5¼ and 3 inch standard disk drive connectors.

An optional Multiple I/O Box (IO-160) is available with optically isolated BNC connectors to the outputs marked * in the table alongside.



● Controller Noise

<i>Readout Noise</i>	<i>Typical</i>	<i>Maximum</i>
62 kHz pixel readout rate	0.5 A/D Counts	1 A/D Count
1 MHz pixel readout rate (CCI-010 only)	0.7 A/D Counts	1 A/D Count

Note - Controller readout noise is for the Controller alone and arises predominantly from A/D noise. For this reason it is measured in A/D counts. The equivalent noise in electrons will depend on the gain setting of the CCD readout electronics.

● Computer Requirements

The *minimum* computer specification is:

- 800 MHz Pentium, 256 MB of RAM

The *recommended* computer specification is:

- 2.4 GHz Pentium (or better) and 512 MB RAM

Also:

- PCI-compatible computer
 - PCI slot must have bus master capability
 - Available auxiliary internal power connector
 - Minimum of 25 MB free hard disc to install software
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◆ Note – specifications subject to change

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