

**Title:** +3.3 Volt Requirement for MultiFlex PCI 1000 Series Motion Controllers  
**Products:** MultiFlex PCI 1000 Series  
**Keywords:** 3.3V, ATX, Power Supply, Desktop, Industrial PC, Passive Backplane  
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## Summary

MultiFlex PCI 1000 series motion controllers require that a minimum of 0.6 amps of +3.3 VDC be provided via the PCI bus. If +3.3 VDC is not available the controller will fail to function (the **+3.3VDC PC Logic Supply OK LED** may be off and/or the controller **Run LED** will never turn on).

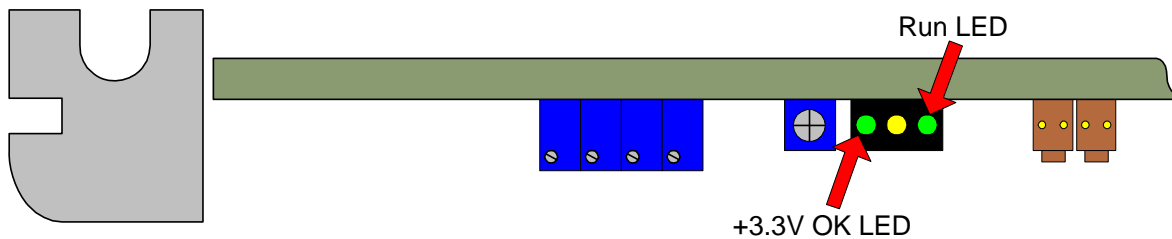


Figure 1: MFX-PCI1000 Diagnostic LED's

## More Information

The easiest way to identify the presence of +3.3 VDC on the PCI bus is to verify that an **ATX Power Supply Connector** is used to mate the PC power supply to the PC motherboard / PCI passive backplane.

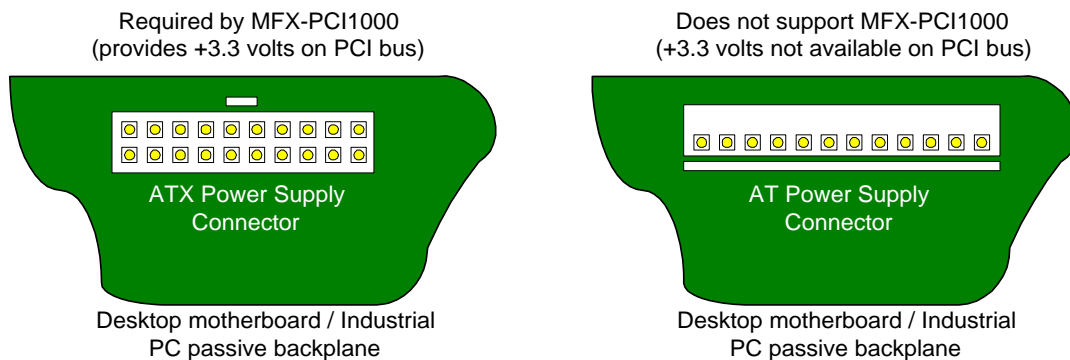


Figure 2: Typical PC computer power supply connectors



**Desktop PC's:** The ATX Form Factor specification (currently at revision 2.1) was initiated by Intel Corporation in 1995. For the most part desktop PC computer industry acceptance of the ATX spec occurred between the years 1997 and 1999. Included within the ATX spec is the connector pin out for the ATX power supply (diagram on the left side of Figure 2). In general most desktop PC computers manufactured in the last 4 to 5 years should be compatible with the MFX-PCI1000.

**Industrial PC's:** To leverage the volume cost savings of PC computer accessories **most** Industrial PC manufacturers (of which passive backplane / Single Board Computer systems are a subset) have standardized on the use of PC (AT/ATX) power supplies. The presence of an ATX power supply (and mating motherboard / backplane connector) should guarantee controller compatibility. **However just to be thorough it is recommended that prospective MFX-PCI1000 users contact the Industrial PC manufacturer and verify that the computer PC provides +3.3 VDC via the PCI bus.**

A partial list of suppliers for MultiFlex PCI compatible Industrial PC applications include:

**Industrial computers:** Advantech, Diversified Technology, ICP America, Texas Micro, Xycom

**Passive backplanes & SBC's (Single Board Computers):** Advantech, Diversified Technology, ICP America, ICOP Technology

**Power Supplies:** Enermax, Fortron/Source (FSP Group), PC Power and Cooling, Zippy/Emacs