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Find the *Precision MicroControl MFX-PCI1440* at our website: *Click HERE*

# Product Selection Guide

| Product Family | Multi Flex | | DCX | | | | | | | DC2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | MultiFlex PCI Series | | DCX 300 Series | | | DCX 200 Series | | DCX 100 Series | | DC2 Series | |
| Part Number | MFX-PCI 1440 | MFX-PCI 1040 | DCX-PCI 300 | DCX-AT 300 | DCX-VM 300 | DCX-AT 200 | DCX-VM 200 | DCX-PCI 100 | DCX-PC 100 | DC2-PC100 | DC2-STN100 |
| Distinguishing Characteristics | 4 analog axes plus 4 pulse axes | 4 pulse axes | High-performance up to 16 axes | High-performance | High-performance | Value performance | Value performance | Direct-drive for small servo motors | Low cost up to 8 axes | Low cost 2+2 axes | Stand-alone 2+2 axes |
| Form-Factor | PCI short-card | PCI short-card | PCI | ISA | VME | ISA | VME | PCI | ISA | ISA | Stand-Alone |
| Servo Control | Yes | Pulse only | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Stepper Control | Yes | Yes | Yes | Yes | Yes | Yes | Yes | - | Yes | Indexing only | Indexing only |
| Total Number of Axes | 8 | 4 | 1-16 | 1-6 | 1-6 | 1-6 | 1-6 | 1-8 | 1-8 | 4 | 4 |
| Analog Command (Servo) Axes | 4 | - | 1-16 | 1-6 | 1-6 | 1-6 | 1-6 | 1-8 | 1-8 | 2 | 2 |
| Pulse Command (Stepper or Servo) Axes | 4 | 4 | 1-16 | 1-6 | 1-6 | 1-6 | 1-6 | 0 | 1-8 | 2 (Indexer) | 2 (Indexer) |
| Number of Closed-Loop Axes | 4 or 8 (option) | 4 (option) | 1-16 | 1-6 | 1-6 | 1-6 | 1-6 | 1-8 | 1-8 | 2 | 2 |
| Servo Loop Rate (each axis) | 4 KHz PID-FF | 1 KHz PID-FF | 8 KHz PID-FF | 8 KHz PID-FF | 8 KHz PID-FF | 2 KHz PID-FF | 2 KHz PID-FF | 3.3 KHz PID-FF | 3.3 KHz PID-FF | 1 KHz PID-FF | 1 KHz PID-FF |
| Encoder Frequency Limit | 20 MHz | 20 MHz | 10 MHz | 10 MHz | 10 MHz | 1 MHz | 1 MHz | 1 MHz | 1 MHz | 1 MHz | 1.25 MHz |
| Pulse (stepping) Frequency Limit | 5 MHz | 5 MHz | 5 MHz | 5 MHz | 5 MHz | 1.25 MHz | 1.25 MHz | N/A | 1.25 MHz | 30 KHz | 30 KHz |
| Multi-Axis Coordinated Motion | Yes | Yes | Yes | Yes | Yes | Yes | Yes | - | - | Yes | Yes |
| Modes of Motion | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Linear/Circular Velocity Gearing/Slaving Continuous Path | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Velocity/Torque | Point-to-point Velocity/Torque | Point-to-point Linear/Circular Velocity/Torque Gearing/Slaving Continuous Path | Point-to-point Velocity/Torque Linear Gearing/Slaving Camming |
| Motion Profiles | Trapezoidal, Parabolic S-Curve | Trapezoidal, Parabolic S-Curve | Trapezoidal, Parabolic S-Curve | Trapezoidal, Parabolic S-Curve | Trapezoidal, Parabolic S-Curve | Trapezoidal, Parabolic S-Curve | Trapezoidal, Parabolic S-Curve | Trapezoidal | Trapezoidal | Trapezoidal | Trapezoidal |
| On-Board Program Multi-tasking | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | - | - | Yes |
| Direct-Drive of Small DC Servos | - | - | - | - | - | Yes | Yes | Yes | Yes | Yes | - |
| AC Brushless Sine Commutation | - | - | Yes | Yes | Yes | - | - | - | - | - | - |
| Closed-Loop Stepper | Yes | Yes | Yes | Yes | Yes | Yes | Yes | N/A | - | - | - |
| Axis I/O (limits, home, amp enable, etc.) | Yes (optoisolated) | Yes (optoisolated) | Yes (optoisolated) | Yes (optoisolated) | Yes (optoisolated) | Yes | Yes | Yes | Yes | Yes | Yes (optoisolated) |
| General-Purpose I/O | 32 Digital I/O (16 in/16 out) | 32 Digital I/O (16 in/16 out) | 16 Digital I/O 8 in, 8 out | 16 Digital I/O configurable | - | 16 Digital I/O configurable, 4 Analog in | - | 16 Digital I/O 8 in, 8 out | 16 Digital I/O configurable, 4 Analog in | 16 Digital I/O 4 Analog in | 16 Digital I/O 8 in, 8 out 4 Analog in |
| Optional General-Purpose I/O | 8 Analog in 14 bit | 8 Analog in 14 bit | Digital - 128 I/O Analog 12 bit 32 in, 32 out | Digital 96 I/O Analog 12 bit 24 in, 24 out | Digital 96 I/O Analog 12 bit 24 in, 24 out | Digital 96 I/O Analog 12 bit 24 in, 24 out | Digital 96 I/O Analog 12 bit 24 in, 24 out | Digital - 128 I/O Analog 12 bit 32 in, 32 out | Digital - 128 I/O Analog 12 bit 32 in, 32 out | - | - |
| Interconnection & Cabling | High-density shielded cables for all signals | High-density shielded cables for all signals | High-density shielded cable or ribbon cable | Ribbon Cable | Ribbon Cable | Ribbon Cable | Ribbon Cable | Ribbon Cable | Ribbon Cable | 15 pin D-Sub | 15 pin D-Sub |
| Programming Libraries & Utilities for C/C++, Visual Basic, Delphi, LabVIEW | Yes | Yes | Yes | Yes | - | Yes | - | Yes | Yes | Yes | Yes |
| Operating System Support Win 98/NT/2000/XP | Yes | Yes | Yes | Yes | - | Yes | - | Yes | Yes | Yes | Yes |

*This chart represents only a limited sample of the features supported by our motion controllers.*
*For complete product specifications, see our individual product data sheets in the Products section of our web site - www.pmccorp.com*

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