

**Table of Contents**

Single Board Embedded Computers	Page 1
Instrument Controllers & Operator Interfaces	Page 2
Expansion I/O Modules: the Wildcards	Page 3
Motion Control: Stepper Motor Kit	Page 6
Software	Page 7
Enclosures	Page 7
Accessories	Page 7
Quantity Discounts	Page 8

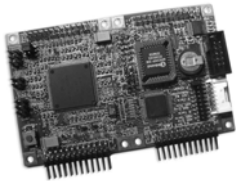
**How to Order**

1. Choose among our core computer products for the one best suited to your application. You may need a single-board embedded computer, a full-featured operator interface with touchscreen and graphic display, or a customizable handheld computing platform. Whatever your choice, for each of our computer products there's a Starter Kit that includes everything you need to rapidly prototype your new product.
2. Need additional I/O? Choose among the Wildcard I/O modules for those best suited to your needs. Need custom I/O for your OEM product? Give us a call and we'll be glad to design a custom solution.
3. Choose the programming language you prefer. The Mosaic IDE provides a full-featured FORTH language development environment at no cost, and a one-time purchase of the C-language compiler gives you unlimited, royalty-free use of C for all your development needs.
4. Give us a call – our friendly, knowledgeable applications engineers will be glad to help you specify the core components best suited to your new product.

**SINGLE BOARD EMBEDDED COMPUTERS**

**PDQ™ Board**

*New!*



This 2.5" by 4" single board computer packs 1 megabyte of memory, communications, dozens of analog and digital I/O lines, and dual expansion I/O buses onto a compact low-cost board. The PDQ Board hosts a fast Motorola 68HCS12 microprocessor. This controller has a 16 bit data bus and uses a Phase Locked Loop to synthesize a 40MHz internal clock and 20MHz bus clock, resulting in execution speeds 8 times faster than the 8 bit 68HC11 processor. The PDQ Board is ideal for instrumentation, industrial control, automation, and data acquisition. You can specify options to add a battery backed real time clock, and a USB interface cable.

To take your PDQ Board online, add an **EtherSmart** or **WiFi Wildcards** ( see *Wildcards* section).

**Part No.**

**PDQB**

Options: (add price to the standard product)

\$199.00

100 qty: \$159.00

**-USB** USB to RS232 adapter and 10 pin dual DB9F communications cable

\$30.00

**PDQ Board Starter Kit**

Part No. **PDQB-SK**

\$299.00

Part No. **PDQB-SK-USB**

\$329.00

Includes a PDQ Board (p/n **PDQB**) with 512K on-chip Flash, 512K RAM, 512K Flash for RAM backup, and a real time clock; a 2.5" x 4" version of the Docking Panel (p/n **DP**) to provide a power supply and convenient connectors for your PDQ Board and for up to eight Wildcards; a 9 pin serial cable, an 9VDC wall-mount power supply and documentation (Limit of 1 Starter Kit per Customer at this low price). To communicate with the PDQ Board via USB, order the **PDQB-SK-USB** version which includes a USB to RS232 adapter cable.

**PDQ Lite™**

*New!*



The 2.5" by 4" **PDQ Board Lite** (a lower-cost version of the PDQ Board) is intended as a development platform for instrument controllers. It comes without some lesser used features (like RS485 or the battery backed calendar clock) and includes a healthy subset of the I/O signals available on the PDQ Board, plus a prototyping area for custom electronic circuitry and a standard Micro-USB power jack. The PDQ Board Lite is programmed similar to the PDQ Board, using the Mosaic IDE Plus. Its MC9S12A512 processor is operated in single-chip mode, relying on only the processor's internal memory. The PDQ Board Lite provides all the I/O of the processor chip itself, including dual logic level and standard RS-232 serial ports, analog inputs, I2C, dual SPI links, PWM, and timer-controlled digital I/O. Numerous headers and connectors provide access to its plentiful I/O and custom prototyping area.

The PDQ Board Lite does not have a Wildcard bus, so it does not interface to active Wildcards. The following passive Wildcards (that do not require access to the processor's control signals) may be used with appropriate cables: PWM Driver Wildcard (W-PWM), Signal Conditioning Wildcard (W-SIC), I/O Filter Wildcard (W-IOF), Conductivity Sensing Wildcard (W-COND), Prototyping Wildcard (W-PROTO), Screw Terminal Wildcard (W-SCM).

**PDQ Board Lite**

Part No. **PDQBL**

\$99.00

100 qty: \$84.00

**PDQ Lite Starter Kit**

Part No. **PDQBL-SK**

\$135.00

Includes: a PDQ Board Lite (p/n **PDQBL**); a 10-pin-to-dual-DB-9 communication cable (p/n **QED-COM-CABLE-9**); a 5.1V 0.7A USB Charger with a 6 ft. USB to micro-USB cable (p/n **ADAP-USB-5.1V-6FT**); IDE Plus programming environment and documentation.

# SINGLE BOARD EMBEDDED COMPUTERS

## QCard™



This 2" by 2.5" single board computer fits any handheld or space-constrained applications and is ideal for interfacing to sensors and actuators in machine automation, industrial control, and scientific instrumentation. The QCard sports a 16 MHz Motorola 68HC11F1 microprocessor, 512K Flash and up to 512K RAM, 320 bytes of EEPROM, 8 lines of programmable digital I/O, 8 lines of 8-bit analog-to-digital conversion, and dual RS232/485 ports. You can specify options to add more RAM, a battery backed real time clock, and a USB interface cable.

To take your QCard online, add an EtherSmart or a WiFi Wildcard (see *Wildcards* section).

### Part No. QCC

QCard Controller with 128K RAM and 512K Flash \$149.00  
100 qty: \$119.00

Options: (add price to the standard product)

**-M** 512K RAM replaces 128K RAM (cannot be battery backed) \$30.00  
**-RB** Real time clock and battery backup for 128K RAM (does not back up 512K RAM) \$30.00  
**-USB** USB2.0 to RS 232 adapter and 10 pin dual DB9F QCard communications cable \$30.00

### QCard Starter Kit

Part No. **QCSK** \$299.00  
Part No. **QCSK-USB** \$329.00

This kit includes everything you need for a fast time to market: a QCard (p/n **QCC-RB**) with 512K Flash, 128K RAM, and a real time clock; a 4" x2.5" version of the Docking Panel (p/n **DP**) to provide a mechanical and electronic platform for your QCard and for up to eight Wildcards; as well as a 9 pin serial cable (p/n **PCC9-232**), an 8VDC wall-mount power supply (p/n **PS-8V**) and documentation. To communicate with the QCard via USB, order the **QCSK-USB** version which includes a USB to RS232 adapter cable.

## DOCKING PANELS, POWERDOCKS, AND THEIR ACCESSORIES

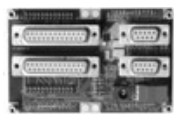
### Part No. DP



**Docking Panel** \$99.00

The Docking Panel (Part No. **DP**) is a 4" x 2.5" physical platform for mounting a QCard or PDQ Board and up to eight Wildcards. It contains a high-efficiency switching power supply and hosts serial connectors for development. When used with the QCard it has room for a full complement of eight Wildcards, four on the QCard and four more on an additional Wildcard port. When used with the PDQ Board, up to 8 Wildcards can be mounted on the PDQ Board.

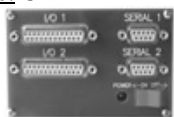
### Part No. DP25



**Docking Panel with a DB-25 option** \$115.00

The Docking Panel with DB-25 option (Part No. **DP25**) features additional DB25 I/O connectors. It's a physical platform for mounting the QCard or PDQ Board and a full complement of Wildcards; it provides power; and it functions as a full back-panel instrument interface with serial and I/O connectors.

### Part No. DP25-CP Part No. CP



**Docking Panel with a DB-25 option and a Cover Plate;  
Cover Plate only** \$125.00  
\$10.00

Part No. **DP25-CP** features the Docking Panel with additional DB25 I/O connectors and a cover plate. A cover plate with cut-outs for serial connectors, power switch and power jack simplifies enclosure mounting and provides a clean, solid appearance. Sold as part of the Docking Panel (Part No. DP25-CP) or separately (Part No. CP) .

### Part No. PDS



**Slim PowerDock** \$94.00

Ideal for space-constrained applications, the Slim PowerDock (**Part No PDS**) provides power and convenient connectors and switches for the QCard and for up to 4 Wildcards. Measuring just 2"x2.5", it hosts a high-efficiency 1 amp 5 volt switching power supply, dual DB9 serial connectors, IO connectors, a power jack, and a power switch.

### Part No. DP-Proto-Cable

**Prototyping Cable Set** \$19.95

To facilitate prototyping we offer a cable manufacturing kit, which includes:  
 - Two 12" flat ribbon cables with mounted 24pin IDC sockets for connecting to Mosaic Wildcards;  
 - 36" 24pin flat ribbon cable for custom cable manufacturing;  
 - Four additional 24 pin IDC sockets for custom cable manufacturing.

### Part No. PCC25-232

DB25 male to DB25 female extension cable assembly, 6 ft long. Interfaces the 25 pin female RS-232 connector on the Docking Panel to a 25 pin male PC-compatible serial connector. \$19.95

## QScreen Controller™



Competitively priced, this fully functional industrial computer is ideal for OEM applications where installation space is critical. The QScreen Controller sports a touchscreen-operated graphical user interface on a high-contrast 128x240 pixel display with a 5 x 4 touchscreen overlay. It commands eight 8-bit A/D lines, 8 digital I/O lines including timer-controlled and PWM channels, and two RS232/485 ports.

Choose among many options: from 512K Flash and 128K RAM for a standard configuration up to 1M Flash and 512K RAM with the expanded memory option. For those applications that require mass memory or removable data storage, add the Compact Flash Wildcard. The QScreen Controller directly hosts up to 7 Wildcards, including the Ethersmart Wildcard (p/n **W-ETHx**) that puts your QScreen online. (see "Wildcards"). A USB connection is available using the USB-to-RS-232 adapter (p/n **ADAP-USBRs**).

<u>Part No.</u>		<u>Price per unit</u>
<b>QSC</b>	QScreen Controller, which includes a monochrome LCD, touchscreen, convenient connectors, 128K RAM, 512K Flash and precoded GUI Toolkit.	\$449.00
	<u>Options:</u> (add price to the standard product)	100 qty: \$359.00
<b>-BZ</b>	Mounted on a 5"x7" black anodized aluminum bezel	\$60.00
<b>-MM</b>	512K RAM (cannot be battery backed) replaces 128K RAM and 1MB Flash replaces 512K Flash	\$50.00
<b>-M</b>	512K RAM (cannot be battery backed) replaces 128K RAM	\$30.00
<b>-F</b>	1MB Flash replaces 512K Flash	\$20.00
<b>-RB</b>	Real time clock and battery backup for 128K RAM (does NOT back up 512K RAM)	\$30.00
<b>-CC *</b>	CCFL current controller provides sure start and even luminosity over all temperatures	\$15.00
<b>-IS *</b>	An intrinsic safety barrier protects all touchscreen leads	\$50.00
<b>-NC *</b>	Does NOT include DB9 connectors, power jack, or power switch	-\$5.00
<b>*Note:</b>	-CC, -IS, and -NC options are only available for quantity orders of 10 or more	

## QScreen Starter Kit™

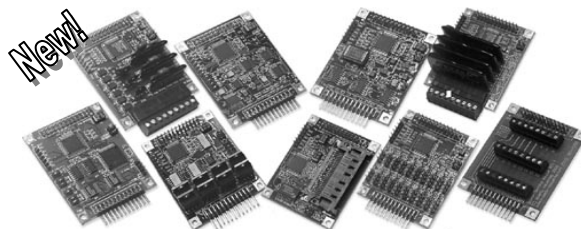
Part No. <b>QSSK</b>	\$549.00
Part No. <b>QSSK-USB</b>	\$579.00

The QScreen Starter Kit includes everything you need to develop a prototype instrument with an advanced GUI: the QScreen Controller (p/n **QSC-MM-RB**) with a monochrome display, real time clock, 512K RAM and 1MB flash, a full documentation package, 14 VDC power supply (p/n **PS-14V**) and a serial cable (p/n **PCC9-232**). For a sleek look add a black anodized aluminum bezel. The QScreen Controller can either be flush mounted using the bezel or mounted to a panel with a cutout. To communicate with the QScreen via USB, order the **QSSK-USB** version which includes a USB to RS232 adapter cable.

## *WILDCARD EXPANSION MODULES*

### *Need a unique combination of specialized I/O?*

Create your own custom system by mixing-and-matching these versatile I/O modules that measure only 2" x 2.5". Up to eight wildcards can be mounted directly onto any of Mosaic's embedded controllers for any type of sensor measurement or real-time control. Standard quantity discounts are offered.



### **EtherSmart Wildcard™**



**Part No. W-ETHx** \$175.00

The EtherSmart Wildcard™ implements a hardware/software Ethernet interface that enables communications between your instrument and other computers or peripherals via a Local Area Network (LAN) using the standard packet-based Ethernet signaling protocol. Simply plug an Ethernet cable into the Wildcard via the standard RJ-45 Ethernet connection. Built-in software lets you send emails from the instrument, serve out static and dynamic web pages to your PC-based browser, and implement serial data exchanges with peripheral devices (this is known as "Serial Tunneling").

### **WiFi Wildcard™**



**Part No. W-WiFi** \$299.00

The WiFi Wildcard implements a wireless interface that enables communications between your instrument and other computers or wireless access points via a Wireless Local Area Network (WLAN) using the standard 802.11b/g packet-based protocol. Built-in software lets you send emails from the instrument, serve out static and dynamic web pages to your PC-based browser, and implement serial data exchanges with peripheral devices. Antenna is sold separately.

Antenna:

**ANT-WIFI-1:** WiFi antenna, 4.5" long, 0.375" dia at base, 2.1dBi 2.4GHz whip, RPSMA male (no pin) \$14.00

**CABLE-WIFI-EXT:** WiFi Antenna extension, LMR195 Cable, RPSMA male to RPSMA female, 2feet long \$40.00

# WILDCRADS (CONTINUED)

<b>USB Wildcard™</b>	<b>Part No. W-USB</b>	<b>\$75.00</b>
	The USB Wildcard implements a standard USB (Universal Serial Bus) interface that enables a PC host to communicate with Mosaic's embedded computers. You can plug it into any PDQ Board, PDQScreen, QCard, QScreen, or Mosaic Handheld system to add USB communications to your application.	
	<u>Cables:</u> USB 2.0 cable, type A to 5-pin Mini-B, 6 ft. long	\$9.50
	USB type B female panel-mount to 1x5 female 0.1" header, 1 ft	\$19.50
<b>GPS Wildcard™</b>	<b>Part No. W-GPS</b>	<b>\$169.00</b>
	The GPS Wildcard enables your instrument to know where it is. Your application program can read the current latitude, longitude, altitude, speed, course heading, time, and date. In addition, the GPS Wildcard software reports position error estimates, GPS fix quality, and the number of satellites in view and in use to enable real-time diagnostics. The Wildcard incorporates a GPS subsystem made by industry leader Garmin, and includes a connection for a remote-mounted active antenna for good signal reception. The high-gain GPS antenna is sold separately, see below.	
	<u>Accessory:</u> High-gain GPS antenna & cable	\$59.00
<b>24/7 Data Acquisition Wildcard™</b>	<b>Part No. W-DA24/7</b>	<b>\$140.00</b>
	The 24/7 Data Acquisition Wildcard, with its 7 channels of 24-bit analog to digital conversion, is your instrument's complete analog front end, offering exceptional resolution, stability, and noise rejection. Ideal for high resolution, low frequency measurements, this I/O module accepts low level signals directly from transducers, amplifies and conditions them, and converts them with 24 bits of resolution with no missing codes performance.	
<b>AC Solid State Relay Wildcard™</b>	<b>Part No. W-ACM</b>	<b>\$120.00</b>
	This Wildcard gives you electrically isolated control of any AC operated equipment: relays, motors, pumps, valves, heaters, fans. Each module independently controls up to four devices at up to 5 Amps, and switches at zero crossings of the AC line.	
<b>DC Solid State Relay Wildcard™</b>	<b>Part No. W-DCM</b>	<b>\$120.00</b>
	This Wildcard provides optically isolated control of three high-current DC devices at up to 60V and 3A continuously. It is the ideal solution for operating DC motors, relays, and valves.	
<b>Digital I/O Wildcard™</b>	<b>Part No. W-DIM</b>	<b>\$50.00</b>
	The Digital I/O Wildcard provides 20 digital I/O lines, including 4 input channels plus 16 channels that can be configured as input or output in groups of 4. Output pins can sink up to 24mA	
<b>Analog I/O Wildcard™</b>	<b>Part No. W-AIM</b>	<b>\$150.00</b>
	This general-purpose Analog I/O Wildcard features 8 channels of 12-bit voltage output digital-to-analog conversion, and 8 channels single-ended or 4 channels differential 16-bit resolution analog-to-digital conversion. The DAC output ranges are user selectable as 0 to 2.048V or 0 to 4.096V, while the A/D input has a user selectable full scale of 1V, 2V, 4V or 5V. Either can also use an external reference, and onboard references are provided for external circuitry.	
<b>Signal Conditioning Wildcard™</b>	<b>Part No. W-SIC</b>	<b>\$75.00</b>
	The Signal Conditioning Wildcard extends the capabilities of the Analog I/O Wildcard by increasing its input and output voltage range and adding current inputs and outputs. It amplifies four DAC outputs on the Analog I/O Wildcard to provide 0 to 10V outputs and attenuates four A/D inputs to allow voltages up to 10 volts. It also converts the other four DAC outputs to 0 to 20 mA outputs and converts the other four A/D inputs to 0 to 20 mA inputs. The board is easily customized for other input/output voltage or current ranges. Includes a Wildcard interconnect cable, P/N SCM1-24-CABLE, for easy connection to an Analog I/O Wildcard.	

## WILDCRADS (CONTINUED)

### UART Wildcard™

Part No. **W-UAM**

\$110.00



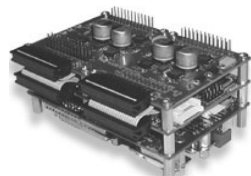
This Universal Asynchronous Receiver/Transmitter (UART) Wildcard Module implements two full-duplex, buffered serial ports that can be configured for RS232, RS422, and RS485 protocols with data rates up to 56000 baud. Optional handshaking signals enable a modem connection for remote communications via any phone line.

### PWM Driver Wildcard™

Part No. **W-PWM-4**  
**W-PWM-8**

\$130.00

\$214.50



The PWM Driver Wildcard measures 2.5" by 4" and mates with the PDQ Board. The PWM Driver Wildcard comes in two versions: with four or eight channels. Depending on the Wildcard's version, it contains four or eight MOSFET PWM low-side drivers which convert the PDQ Board's logic-level PWM (Pulse Width Modulation) outputs to the high current drive required of solenoids, heaters, coils, lamps, control valves, actuators, motors and other devices.

### Thermocouple Measurement Wildcard™

Part No. **W-TCM-1**  
**W-TCM-2**

95.00

95.00



The Thermocouple Measuring Wildcard precisely transduces temperature from one or two thermocouples of any type. Comes in two versions: single channel (W-TCM-1) and dual channel (W-TCM-2). Measure one or two temperatures over wide temperature ranges using Type B, E, J, K, N, R, S or T thermocouples. This Wildcard delivers built-in cold junction compensation and pre-coded curve fitting for accurate temperature measurement.

### Conductivity Sensing Wildcard™

Part No. **W-COND**

\$199.00



Add conductivity sensing to your existing instrumentation. The Conductivity Sensing Wildcard can be used to measure either solution conductivity or total ion concentration of aqueous samples for analytical investigation or process measurement. The Conductivity Sensing Wildcard measures the ability of a solution to conduct an electric current between two electrodes. This wildcard provides an easy way to meter any conductivity changes using a microcontroller.

### LCVR Driver Wildcard™

Part No. **W-LCVR**

\$350.00



The LCVR Driver Wildcard (Liquid Crystal Variable Retarder) may be used to control any nematic liquid crystal device, such as the LC retarders and phase modulators available from Thorlabs, Meadowlark, or Edmund Optics. The LCVR Driver Wildcard is the only commercially available LC controller-driver suitable for embedding in a microcontroller-based OEM instrument.

### Compact Flash Wildcard™

Part No. **W-CFM**

\$75.00



This Compact Flash Wildcard expands the memory capabilities of Mosaic controllers by providing a plug-in interface to large-capacity removable flash data storage. The CF module allows you to plug in Compact Flash memory cards (we recommend SanDisk CF cards). Pre-coded software supports a standard DOS- and Windows-style "FAT" file system, allowing files to be created on a PC and read by Mosaic controllers, or visa versa. Mosaic also sells a Compact Flash PC card adapter (**Part No. CF-ADAP**) that lets you plug the memory card into your laptop PCMCIA socket to easily exchange data files. USB to Flash Card Adapters are also widely available.

### Transcend Compact Flash 128+ Mbyte Memory Card CF to PC Card Adapter

Part No. **CF-128+**

call Mosaic

Part No. **CF-ADAP**

\$30.00

### Power I/O Wildcard™

Part No. **W-PWR**

\$110.00



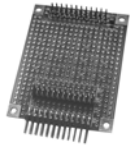
This Wildcard provides eight optically isolated high-current DC outputs and four optically isolated high-voltage inputs. The current sinking outputs are intended to actuate high-current devices such as motors, relays, heaters, and solenoids. They can each sink 2 A continuously and up to 10 A intermittently, withstand field voltages of 50 volts, and are snub diode protected against kickback from inductive loads. The opto-isolated inputs sense switch closures and/or bipolar voltages from  $\pm 5$  to  $\pm 50$  V. Inputs and outputs are optically isolated to  $\pm 2500$  V.

# WILDCRADS (CONTINUED)

## Prototyping Wildcard™

Part No. **W-Proto**

\$50.00



The Prototyping Wildcard is a general purpose, sea-of-holes printed circuit board you can use to prototype custom circuitry. It provides power supply rails and several convenient I/O connectors. It may be mounted on any of Mosaic's Controllers or Docking Panels and derives its power from the Wildcard Bus. You can also operate it stand alone if you provide power to it. Includes a Wildcard interconnect cable, P/N SCM1-24-CABLE, for easy connection to other Wildcards.

## I/O Filter Wildcard™

Part No. **W-IOF**

\$50.00



The I/O Filter Wildcard provides a place for prototyping analog circuitry or for filtering or conditioning I/O lines of other Wildcards. Twenty-four I/O lines can be independently filtered, or their signals can be combined in custom ways. Two 24-pin connectors are used for input and output; one generally mates to the field connector of a Wildcard I/O module, while the other connects to your external signals. A third connector accommodates the Wildcard Bus, which can be used for power and ground. Up to four through-hole and four surface-mount components can be soldered onto the board to filter each of the 24 I/O lines. Includes a Wildcard interconnect cable, P/N SCM1-24-CABLE, for easy connection to other Wildcards.

## Screw Terminal Wildcard™

Part No. **W-SCM**

\$50.00



Easily connect to the logic or field side of any WildCard module using these handy screw terminals. Each board provides 24 terminals rated at 1A and 300 VDC. These simple connections are ideal for prototyping and breadboarding your product. Includes a Wildcard interconnect cable, P/N SCM1-24-CABLE, for easy connection to other Wildcards.

## Keypad/Display Wildcard™

Part No. **W-KPD**

\$175.00



This Wildcard provides the hardware and software to interface the QCard Controller to a 4 x 5 keypad and 4 x 20 character display. It is an ideal solution for hand-held or space-constrained applications that require a programmable computer and a low-cost yet smart interface. The Keypad/Display Wildcard mounts directly on the QCard and is connected to the keypad and display via a simple ribbon cable.

**Includes 4x5 keypad, 4x20 character display, and cable.**

## MOTION CONTROL

### Stepper Motor Control Kit

Part No. **SMCK-QCC** (with a QCard Controller)

\$299.00

Part No. **SMCK-PDQ** (with a PDQ Board)

\$359.00



(A stepper motor is sold separately, part # STEPMOT-1)

A low cost modular solution to stepper motor control, easy on any budget and ideal for space-constrained applications. The Stepper Motor Control Kit includes:

- a choice of an embedded single board computer: the QCard or the PDQ Board;
- the Power I/O Wildcard, a plug-in heavy-duty module providing eight high-current outputs and four high-voltage digital inputs. Inputs and outputs are optically isolated to  $\pm 2500$  volts;
- the Screw Terminal Wildcard for rapid connect/disconnect of stepper motors or other devices;
- a stepper motor control software package.

This modular design is well suited to both small and large applications, instrumentation and automation projects, and where cost and physical size are critical.

The software package provided with the kit makes it easy to manage ramping, speed and step control of the stepper motor. Pre-coded library routines enable the user to specify starting/jogging speeds, as well as acceleration and deceleration rates for the stepper motor. Simple functions can be called on to specify speed, change speed and define the number of steps to be taken. The ramp-up, steady speed and ramp-down profiles are generated for you, and a 32-bit step counter is automatically updated for use by your application program.

### Stepper Motor with Cable

Part No. **STEBMOT-1**

\$40.00

A NEMA Size 17 (1.7" diameter) stepper motor with a 6-pin in-line header. The motor is a 4-phase 12-volt 400 mA per phase unipolar stepper with 200 steps per revolution, rated at 220 g-cm detent torque and 2000 g-cm holding torque.

## SOFTWARE

---

**Mosaic IDE Plus** Part No. **IDE+** Free Onboard

The Mosaic IDE Plus™ (integrated development environment) provides all the tools you need to edit, compile, debug/test, and deploy your embedded application on your PDQ Board or PDQ Board Lite. The Mosaic IDE Plus consists of three main components: The Codeblocks editor, the GNU C compiler, and the Mosaic Terminal. Codeblocks and GNU C (also called GCC) are well known “open source” software tools that have been customized for use with Mosaic products. The Mosaic Terminal was developed by Mosaic Industries, making it easy to download a program to the embedded controller and to interactively execute commands via your PC’s serial port.

Our documentation and coded examples show you how to call all of the pre-coded device drivers, invoke the multitasker, post interrupt handlers, and set up your application as a turnkeyed program that automatically executes each time the board starts up.

**Mosaic QED Forth Software** Part No. **QED-4<sup>TH</sup>** Free Onboard

The QED-Forth software is provided free of charge on the QED Board, QCard, QScreen, and Mosaic Handheld onboard ROM. It delivers an interactive interpreter, compiler, assembler and debugger to speed programming and testing. In addition, it provides resources that are callable from Forth or C, including automatic system initialization as well as a multitasking executive, heap memory manager, and extensive libraries of device drivers and interrupt support routines.

**Mosaic IDE for C Programmers** Part No. **C-DEV** \$50.00

This software provides a C cross-compiler, assembler and linker that run on your PC. Its customized environment makes it easy to compile and download programs to run on the QED Board, QCard, Qscreen, and Mosaic Handheld. Our documentation and coded examples show you how to call all of the pre-coded device drivers, invoke the multitasker, post interrupt handlers, and set up your application as a turnkeyed program that automatically executes each time the board starts up. Purchase of one C-DEV provides you with a license to use the compiled code in all your OEM instruments.

## ENCLOSURES

**Black Anodized Aluminum Bezel** Part No. **BZL-ST** \$60.00

Mounts to the QScreen or Panel-Touch Controller. Gives a sleek professional look to panel-mount applications. Measures 5" x 7" x 0.25".

**Environmental Gasket** Part No. **EG-QVGA** \$15.00  
Part No. **EG-ST** \$15.00

Two sizes of 0.049" thick soft, slow rebound foam gaskets are available: 3.875"x5.0" (Part No. EG-QVGA sized to fit BZL-QVGA or 320x240 pixel display) and 2.8"x4.9" (Part No. EG-ST sized for BZL-ST or 128x240 pixel display). The environmental gasket mounts to the bezel or to the touchscreen itself.

**Screen Protector** Part No. **SP-ST** \$15.00

A tough, transparent, non-adhesive, slip-on plastic sheet that protects your touchscreen. Currently available in one size to fit 128x240 pixel display

## ACCESSORIES

---

### Power Adapters

**5.1V Power Supply** Part No. **ADAP-USB-5.1V** \$25.00

Wall transformer delivers 5.1V @700mA to power the PDQ Board Lite; comes without a cable

**5.1V Power Supply and Cable** Part No. **ADAP-USB-5.1-6FT** \$35.00

Wall transformer delivers 5.1V @700mA to power the PDQ Board Lite; comes with a 6 ft USB to Micro-USB cable

**6V Power Supply and Cable** Part No. **PS-6V** \$25.00

Wall transformer delivers 6VDC @ 800 mA to power the QED Board.

**9V Power Supply and Cable** Part No. **PS-9V** \$25.00

Wall transformer delivers 9VDC @ 1000mA to power the PowerDock, Qcard or PDQ Board.

**14V Power Supply and Cable** Part No. **PS-14V** \$25.00

Wall transformer delivers 14VDC @ 1000mA to power the QVGA Controller or the Qscreen Controller.

**24V Power Supply and Cable** Part No. **PS-24V** \$25.00

Wall transformer delivers 24VDC @ 800mA to power the Mosaic Handheld.

### Cables

**USB to RS-232 Adapter** Part No. **ADAP-USBRs** \$30.00

Connects any PCs USB 2.0 port into an RS-232 DB-9M port for connection to any Mosaic controller

**USB to Micro USB Cable** Part No. **USB-MicroUSB-6FT** \$15.00

A USB to Micro USB 6 ft cable to power the PDQ Board Lite. A 5.1V power supply is sold separately (see Power Adapters section)

**PDQ/QCard OEM programming & power cable** Part No. **7P-PowerCable** \$15.00

This 18 inch (46 cm) cable facilitates easy power application to the Qcard, PDQ Board, or PDQ Lite controllers when they are mounted in your OEM instruments. One end of a 7-wire ribbon cable is unterminated, the other terminates with crimp pins in a 2mm Molex socket.

## ACCESSORIES (CONTINUED)

<b>9 Pin QED Serial Communications Cable</b> Interfaces a 10-pin communications header to two 9 pin female RS-232 PC-compatible serial connectors.	Part No. <b>QED-COM-CABLE-9</b>	\$15.00
<b>9 Pin PC Serial Cable</b> A 6' long 9 pin male to 9 pin female cable. Interfaces the 9 pin female RS-232 connector on your Mosaic controller to a 9 pin male PC-compatible serial connector.	Part No. <b>PCC9-232</b>	\$15.00
<b>25 Pin PC Serial Cable</b> A 6' long 25 pin male to 25 pin female cable. Interfaces the 25 pin female RS-232 connector on the Docking Panel to a 25 pin male PC-compatible serial connector.	Part No. <b>PCC25-232</b>	\$19.95
<b>Wildcard Interconnect Cable</b> IDC-socket-terminated, 2" (5cm) long, 24 conductor ribbon cable for connecting the field headers of adjacent Wildcards.	Part No. <b>24P-2"-CABLE</b>	\$5.00
<b>Single-Socket Terminated Prototyping Cable</b> One 24-pin IDC-socket terminates one end of a 16" (41cm) long, 24 conductor ribbon cable for connection to a 24-pin field header; the other end is unterminated	Part No. <b>FC24-F16U</b>	\$5.00
<b>Double-Socket Terminated Prototyping Cable</b> Two 24-pin IDC-sockets terminate a 16" (41cm) long, 24 conductor ribbon cable for connection to 24-pin headers.	Part No. <b>FC24-F16F</b>	\$6.00
<b>Prototyping Cable Set</b> To facilitate prototyping, we offer a cable manufacturing kit, including: <ul style="list-style-type: none"><li>- Two 16" long, 24 conductor, flat ribbon cables, one terminated on each end and one terminated on one end only with mounted 24-pin female IDC sockets for connecting to Mosaic Wildcards (P/Ns FC24-F16F and FC24-F16U);</li><li>- 36" 24pin flat ribbon cable for custom cable manufacturing;</li><li>- Four additional 24 pin IDC sockets for custom cable manufacturing.</li></ul>	Part No. <b>DP-Proto-Cable</b>	\$19.95

### Mechanical Hardware:

<b>Aluminum standoffs</b> , size #4-40, length 1/2", type M-F. (a pack of 100):	Part No. <b>4-40-1/2-MF</b>	\$20.00
<b>Screws &amp; Washers:</b> Size #4-40x1/4" Phillips pan flat stainless steel machine screws, type MS 18-8, with matching stainless steel split lock washers. (a pack of 100)	Part No. <b>ME-40-51</b>	\$15.00

**Order Now! Call 510-790-8222**

---

**Call us and we will help you select the product that will work for you.**

### Ordering Information

Orders may be placed by mail, fax, or by calling Mosaic Industries at 510-790-8222. We welcome orders by check, Visa, MasterCard, wire transfer or COD. A 3% surcharge will apply to credit card transactions for quantity purchases. Net 30 day terms are available upon approval of a credit application. Payments must be in US dollars and be drawn on a US bank.

### Quantity Discounts

For most, but not all, of Mosaic's board-level products the volume discount schedule is:

<u>Quantity</u>	<u>Discount</u>	<u>Minimum Delivery Size</u>
10-49	10%	10 units
50-99	15%	10 units
over 100	20%	25 units

These discounts are available on scheduled orders; please contact Mosaic Industries for details.

Discount does not apply to documentation and manuals; quantity orders of QED packages do not include documentation. Mosaic Industries, Inc. reserves the right to make changes to products, prices or documentation without notice.

### Evaluation Policy

To allow evaluation of our product, we ask that you place a purchase order for the goods with net 30 terms (on approval of credit). During the 30 day trial period we encourage you to take advantage of our free technical support. At the end of 30 days, you may either pay the original invoice and keep the product, or return the product in saleable condition and pay only the outbound shipping and handling charge.

### Free Technical Support

Mosaic Industries provides free technical support to all our customers for the life-time of the products.