

# Kronos Robotics Product Line Card

## Microcontrollers and Software

Kronos Robotics sells 3 separate product lines. This product line card can help you determine which product best suits your needs.



### Dios Class Microcontroller

#### Features:

- Basic Language
- Full Functions and Library Support
- 16-bit Integer Variables
- 32-Bit Floating Point Variables
- String Variables
- Arrays
- Inline Assembly
- Totally Self Contained Computer
- Only 4 Components needed.
- Free Development Software

### Athena Class Microcontroller

#### Features:

- Basic Language
- Simple Global Command Structure
- 8-bit Integer Variables
- Ultra low cost. \$6.95
- Totally Self Contained Computer
- Only 3 Components needed.
- Free Development Software

### Zeus Desktop and Pocket PC Software Products

#### Features:

- Basic Language
- Full Functions and Library Support
- 32-bit Integer Variables
- 32-Bit Floating Point Variables
- String Variables
- Arrays
- Built-in GPSlibrary
- Database library
- Form Builder
- Compile your own applications



[www.KronosRobotics.com](http://www.KronosRobotics.com)

# Dios Microcontrollers

There are 2 Dios microcontrollers. Dios microcontrollers are the fastest in the industry.



DiosPro 28



DiosPro 40

## Features:

- 22 I O Ports (33 Dios40)
- 9 10-bit AtoD ports (12 DiosPro40)
- 64K Program Space (48K for user programs)
- 256 bytes Local Variables
- 256 bytes Global Variables
- 256 bytes String Space
- Other Ram 2432 Bytes
- 1024 bytes EEprom
- 2 Hardware signal generators
- Built-in Hardware interrupt driven UART
- I2c, SPI, 1Wire
- Firmware Upgradable
- 40Mhz Clock
- 4 Timers
- High Current I OSource/Sink 25ma
- Normal Operation Mode 13ma
- Sleep Mode 4ua

The Free Dios compiler features **KRCompression I Flash Technology**. This technology compresses code so that programs taking as much as 8K on other microcontrollers will use as little as 2K on the Dios.

The Dios supports a high level Basic language as well as an inline assembler. The Dios language is very similar to Visual Basic and supports functions and libraries so code reuse is a very simple process.

The compiler is free and can be downloaded here  
<http://www.kronosrobotics.com/downloads/DiosSetup.exe>

To program the Dios you need a simple RS232 driver for your PC. These are sold on the web site for under \$10. Some of our carrier boards have RS232 drivers built-in.

There are a couple components the Dios needs to operate. These consist of a 10K resistor, 10uf capacitor, .1uf Capacitor, and a 10Mhz resonator. We sell a components pack on the website as well. If you use any of our carrier boards you don't need these components.

## Dios Carriers



**Dios Carrier 1** - This carrier is the smallest of all the carriers. It supports the Dios28 and the DiosPro28. You will need one of our EZ232 drivers to program the chip as well as 3.5 to 5.5 volts.



**Dios WorkBoard Basic** - This carrier provides a on-board voltage regulator and built-in programmer/driver. The on-board driver/program port can also be jumpered to the Dios UART for DCE or DTE operation. Pads for character LCD. The board supports both the Dios40 and DiosPro40 chips and has a large prototyping area. You will need 7-16v AC or DC to operate this board.



**Dios WorkBoard Deluxe** - This carrier provides a on-board voltage regulator and built-in programmer/driver. The on-board driver/program port can also be jumpered to the Dios UART for DCE or DTE operation. Socket for Character LCD. The board supports both the Dios40 and DiosPro40 chips and has a prototyping bread board. This board also comes with a set of omponets to get yu started. You will need 7-16v AC or DC to operate this board.



**Dios Universal LCD Carrier** - This carrier provides a on-board voltage regulator and built-in programmer/driver. The board supports both the Dios40 and DiosPro40 chips. It has a socket for Character LCD and a socket for a graphic LCD. You will need 7-12v DC to operate this board.



**Dios Robot Carrier Board** - This is the ultimate sumo board. We call it Ares after the God of War. On board CoProc CPAres handles motor controller and 4 servos. Each of the 4 servos has its own ramp generator and goto engine. On board RS232 Driver and connector. Built in library with high level motor and servo commands such as botforward. Prototyping area for sensors. Two switches for main power and motor power

# Athena Microcontrollers

There are 5 Athena microcontrollers.



Athena  
AthenaHS



Perseus



Nemesis  
NemesisHS

## Features:

- 15 I O Ports (13 HS)
- 256 bytes Program Space
- 64 bytes Ram
- Onboard Clock
- Hardware PWM
- I 2c and SPI
- LCD interface
- Built-in interrupt driven UART
- X10 Support
- 1 Timer
- I OSource/Sink 25ma
- Sleep Mode <1ua
- 4 Mhz Clock (20Mhz HS)

## Features:

- 11 I O Ports
- 5 AtoD Ports
- 256 bytes Program Space
- 64 bytes Ram
- Onboard Clock
- Hardware PWM
- I 2c and SPI
- Built-in interrupt driven UART
- X10 Support
- 2 Timers
- I OSource/Sink 25ma
- Sleep Mode <.2ua
- 8 Mhz Clock

## Features:

- 15 I O Ports (13 HS)
- 2048 bytes Program Space
- 160 bytes Ram
- Onboard Clock
- Hardware PWM
- I 2c and SPI
- LCD interface
- Built-in interrupt driven UART
- X10 Support
- 2 Timers
- I OSource/Sink 25ma
- Sleep Mode <1ua
- 8 Mhz Clock (20Mhz HS)
- I nline Assembly

The Free Athena compiler features **KRCompression I and II Flash Technology**. This technology compresses code so that programs taking as much as 2K on other microcontrollers will use as little as 200 bytes on the Athena and 600 Bytes on the Nemesis.

These chips all support a high level Basic language. The Nemesis supports an inline assembler.

The compiler is free and can be downloaded here

<http://www.kronosrobotics.com/downloads/AthenaSetup.exe>

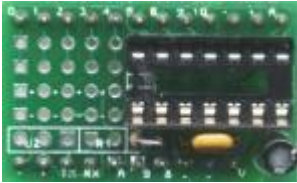
To program the Dios you need a simple RS232 driver for your PC. These are sold on the web site for under \$10. Some of our carrier boards have RS232 drivers built-in.

There are a couple components these chips need to operate. These consist of a 10K resistor, 10uf capacitor, .1uf Capacitor. If you use any of our carrier boards you don't need these components.

## Athena Carriers



**Athen/Nemesis Carrier** - This carrier supports the Athena, AthenaHS, Nemesis and the NemesisHS chips. You will need one of our EZ232 drivers to program the chip as well as 3.5 to 5.5 volts. For use with HSchips you will need a 20Mhz resonator.



**Perseus Carrier** - This carrier supports the Perseus chip. You will need one of our EZ232 drivers to program the chip as well as 3.5 to 5.5 volts.



**Athena WorkBoard Basic** - This carrier provides a on-board voltage regulator and built-in programmer/driver. The on-board driver/program port can also be jumpered for DCE or DTE operation. Pads for character LCD. The board supports all the Athena class chips consisting of the Athena, AthenaHS, Nemesis, NemesisHS, and Perseus chips and has a prototyping bread board. You will need 7-16v AC or DC to operate this board.



**Athena WorkBoard Basic** - This carrier provides a on-board voltage regulator and built-in programmer/driver. The on-board driver/program port can also be jumpered for DCE or DTE operation. Pads for character LCD. The board supports all the Athena class chips consisting of the Athena, AthenaHS, Nemesis, NemesisHS, and Perseus chips and comes with a bread board as well as a bag of componets to get you started.. You will need 7-16v AC or DC to operate this board.

# Zeus

Zeus is a PC and Pocket PC development environment for Microsoft Windows. It was designed to make interfacing your PC or Pocket PC to the outside world very easy. When coupled with the inexpensive Zeus Procs and boards you can control your world. Zeus also has powerful parsing features to make data conversion and display very easy. It even has a built-in GPS data stream parser.

There are 3 Zeus packages.



PocketZeus Lite



PocketZeus



ZeusPro

## Features:

- Runs Entirely on the Pocket PC
- No Cost Free Version
- Serial Port Support
- Form Support
- File IO Support
- Variable Watch
- Single Step

## Features:

- Runs Entirely on the Pocket PC
- Low Cost
- Serial Port Support
- Form and Bitmap Support
- File IO Support
- KRDBSupport
- GPSSupport
- Socket Support
- Variable Watch
- Single Step
- Create Standalone EXE Files

## Features:

- Runs on the Desktop
- Create Pocket PC exe's
- Create Desktop PCexe's
- Low Cost
- Serial Port Support
- Form and Bitmap Support
- File IO Support
- KRDBSupport
- GPSSupport
- Socket Support
- Variable Watch
- Single Step
- Variable Log
- FormBuilder Option

**PocketZeus Lite** is our entry level into the Zeus Line of software. PocketZeus Lite will let you code, compile, debug and run your program directly on the Pocket PC. There is no time limit to the software and with most of the function of Pocket Zeus it is the perfect product to learn to program on the pocket PC.

**Pocket Zeus** is a complete development system that runs on your Pocket PC. Pocket Zeus will let you code, compile, debug and run your program directly on the Pocket PC. You can even create a standalone exe. All but a couple Zeus commands are supported in this version.

**Zeus Pro** is our most advanced Zeus Product. Zeus Pro will let you code, compile, debug and run your programs. Once you debug them you may create an exe that will run on your Desktop, Laptop or an exe that will run on the Pocket PC. ZeusPro also has a formbuilder option that will let you build forms by drag and drop.

## Zeus Procs

Zeus procs are small chips with different features that allow you to control the world external to your PC or Pocket PC.



ZPIO1 allows ZeusPro software to control your world. It provides the following features:

### Features

19200 Baud Rate Interface

13 IO Ports that can be used for digital input or output

Pulsein Command

Pulseout Command

PWM Command

Vex Sonar Command

**Compatible with the Athena Workboard**

Upto 30 Zeus Proc Chips may be connected together so you can control many devices or 390 IO Ports.



ZPServo1 allows ZeusPro software to control your world. It provides the following features:

### Features

19200 Baud Rate Interface

13 IO Ports that can be used for digital input or output

Upto 8 Servos may be defined

**Compatible with the Athena Workboard**

Upto 30 ZPServo1 Chips may be connected together so you may control up to 240 servos or 390 IO Ports. You may also connect other Zeus Proc chips.



ZPAtoD allows ZeusPro and Pocket Zeus software to control your world. It provides the following features:

#### Features

19200 Baud Rate Interface

13 I/O Ports that can be used for digital input or output

7 10-Bit Analog Ports

PWM Command

Signal Command

**Compatible with the Athena Workboard**

Upto 30 Zeus Proc Chips may be connected together so you can control many devices or 390 I/O Ports.



#### Zeus Proc Ultimate

The Ultimate Zeus Proc. Firmware upgradeable. Features:

31 I/O pins

13 Analog to Digital Lines

Firmware Upgradeable Via Zeus Pro Software

1023 Bytes EEPROM space available for user

Hardware PWM signal generator

1Wire Interface on all I/O ports

I2C Interface on all I/O ports

Sony IR Module Interface ports

Sonar Interface (SFR04)

Sonar Interface Vex

Internal pullup option on ports 0-7

Remote Servo and I/O commands

**Compatible with the Dios Workboard**

The ZPIO, ZPServo and ZPAtoD can be plugged into the Athena Workboard to make connection to your PC or Pocket PC as simple as a single 9 pin cable.

The ZPU can be used with the Dios Workboard.

## Links

### Dios Information

<http://www.kronosrobotics.com/tuter.shtml>

### Athena Information

<http://www.kronosrobotics.com/atuter.shtml>

### PocketZeus Lite Information

<http://www.krmicros.com/Development/Pocket%20Zeus%20Lite/PocketZeusLite.htm>

### PocketZeus Information

<http://www.krmicros.com/Development/Pocket%20Zeus/PocketZeus.htm>

### ZeusPro Information

<http://www.krmicros.com/Development/ZeusPro/ZeusPro.htm>

### Forums

<http://www.kronosrobotics.com/forums/>

### Kronos Robotics Web Site

<http://www.kronosrobotics.com/xcart/customer/home.php>

### KRMicros Web Site

<http://www.krmicros.com/>

### ZeusProc Utilities

<http://www.kronosrobotics.com/Zeus/ZeusProcs.shtml>