

Athena Class Microcontrollers Features: Athena, AthenaHS, Athena485, Perseus, Nemesis

Want information on the Athena or Perseus microcontrollers? This is where it starts.

What is an Athena microcontroller?

Athena class microcontrollers are tiny computers complete with memory and IO ports that are capable of carrying out your commands with very simple programs.

There are currently 5 Athena class chips.

Athena
AthenaHS
Athena485
Perseus
Nemesis

Athena



The Athena is the perfect starting point into this class of microcontrollers. Its very low price point makes it the perfect choice for learning about microcontrollers.

Hardware Features

- 15 I/O ports
- 256 Bytes of very efficient program space with KRCompression II Flash Technology
- 64 bytes of ram
- 15,000 High level commands per second
- 3.5 - 5.5 volt power range
- 25ma load per IO port
- Ultra low power usage in sleep mode (Less than .2ua)
- Onboard clock
- Hardware PWM signal generator
- Interrupt driven serial UART with 80 byte buffer
- UART baud rate 9600-19200
- Can be programmed over and over 1,000,000 times
- Sleep mode
- IRQ Counter
- Timer
- Port 7 IRQ
- 2, 4-bit AtoD ports

Software features

- LCD Interface
- I2c and SPI commands
- Full X10 support
- IR input and output commands
- True if/then/else commands
- Special chip to chip commands like getpacket and cpslave
- Special port branch commands like onportgoto
- Simple and Complex Macro generator
- Software serial IO 1200 – 9600
- Shift register input and output commands
- Special commands arrayget and arrayset for sequential access to all variables
- Simulator Support

Supported Carrier Boards

- Athena Carrier 1
- Athena Carrier 1u
- Athena Carrier 3
- Athena EDU Carrier

AthenaHS



The AthenaHS is a high speed version of the Athena. It operates 5 times faster at the sacrifice of 2 IO ports and the addition of a 20Mhz resonator. This is the fastest of the Athena class microcontrollers

Hardware Features

- 13 I/O ports
- 256 Bytes of very efficient program space with KRCompression II Flash Technology
- 64 bytes of ram
- 75,000 High level commands per second
- 3.5 - 5.5 volt power range
- Ultra low power usage in sleep mode (Less Than 5ua)
- 25ma load per IO port
- Onboard clock
- Hardware PWM signal generator

- Interrupt driven serial UART with 80 byte buffer
- UART baud rate 9600 - 1250000
- Can be programmed over and over 1,000,000 times
- Sleep mode
- IRQ Counter
- Timer
- Port 7 IRQ
- 2, 4-bit AtoD ports

Software features

- LCD Interface
- I2c and SPI commands
- Full X10 support
- IR input and output commands
- True if/then/else commands
- Special chip to chip commands like getpacket and cpslave
- Special port branch commands like onportgoto
- Simple and Complex Macro generator
- Software serial IO 1200 –57600
- Shift register input and output commands
- Special commands arrayget and arrayset for sequential access to all variables
- Simulator Support

Supported Carrier Boards

- Athena Carrier 1
- Athena Carrier 1u
- Athena Carrier 3
- Athena EDU Carrier

Athena485

The Athena485 adds new chip to chip commands like the ap address packet protocol and RS485 support.



Hardware Features

- 15 I/O ports
- 256 Bytes of very efficient program space with KRCompression II Flash Technology
- 64 bytes of ram
- 15,000 High level commands per second
- 3.5 - 5.5 volt power range
- 25ma load per IO port
- Ultra low power usage in sleep mode (Less Than .2ua)
- Onboard clock
- Hardware PWM signal generator

- Interrupt driven serial UART with 80 byte buffer
- UART baud rate 9600-19200
- Can be programmed over and over 1,000,000 times
- Sleep mode
- IRQ Counter
- Timer
- Port 7 IRQ
- 2, 4-bit AtoD ports
- Address packet commands for RS485 support

Software features

- I2c and SPI commands
- 1Wire commands
- Full X10 support
- IR input and output commands
- True if/then/else commands
- Special chip to chip commands like getpacket, getvpacket, apinit and cpslave
- Special port branch commands like onportgoto
- Simple and Complex Macro generator
- Software serial IO 1200 – 9600
- Shift register input and output commands
- Special commands arrayget and arrayset for sequential access to all variables
- Simulator Support

Supported Carrier Boards

- Athena Carrier 1
- Athena Carrier 1u
- Athena Carrier 3
- Athena EDU Carrier

Perseus



The Perseus has the smallest form factor in this class of microcontrollers. It features 8 10-bit analog to digital ports. And an enhanced UART for extended baud ranges. It operates twice as fast as the Athena. The Perseus also supports the new ap address packet protocol.

Hardware Features

- 11 I/O ports
- 256 Bytes of very efficient program space with KRCompression II Flash Technology
- 64 bytes of ram
- 30,000 High level commands per second
- 3.5 - 5.5 volt power range
- 25ma load per IO port
- Ultra low power usage in sleep mode (Less Than

- .2ua)
- Onboard clock
- Interrupt driven serial UART with 80 byte buffer
- UART baud rate 1200-1250000
- Can be programmed over and over 1,000,000 times
- Sleep mode
- Timer
- IRQ Counter
- Port 2 IRQ
- WatchDog timer
- 8, 10-bit AtoD ports
- Built-in pullup resistors on ports 0,1,2,6,7
- Software selectable system clock speeds of 32Khz-8Mhz

Software features

- I2c and SPI commands
- 1Wire commands
- Full X10 support
- IR input commands
- True if/then/else commands
- Special chip to chip commands like getpacket, getvpacket, apinit and cpslave
- Special port branch commands like onportgoto
- Simple and Complex Macro generator
- Software serial IO 1200 – 19200
- Shift register input and output commands
- Special commands arrayget and arrayset for sequential access to all variables
- Simulator Support

Supported Carrier Boards

- Perseus Carrier 1

- 25ma load per IO port
- Ultra low power usage in sleep mode (Less than .2ua)
- Onboard clock
- Hardware PWM signal generator
- Interrupt driven serial UART with 80 byte buffer
- UART baud rate 9600-57600
- Can be programmed over and over 100,000 times
- Sleep mode
- IRQ Counter
- Timer
- WatchDog timer
- Port 7 IRQ
- Software selectable system clock speeds of 32Khz-8Mhz
- Firmware Upgradable

Software features

- LCD Interface
- I2c and SPI commands
- 1Wire commands
- Full X10 support
- IR input and output commands
- True if/then/else commands
- Special chip to chip commands like getpacket, getvpacket, apinit and cpslave
- Special port branch commands like onportgoto
- Simple and Complex Macro generator
- Software serial IO 1200 – 19200
- Shift register input and output commands
- Special commands arrayget and arrayset for sequential access to all variables
- Inline Assembly with Kronos Assembler Commands
- Special chipmaker feature that lets you create specialized chips.

Supported Carrier Boards

- Athena Carrier 1u

Nemesis



The Nemesis is the most powerful chip in the Athena class of microcontrollers.

Hardware Features

- 15 I/O ports
- 2048 Bytes of very efficient program space with KRCompression II Flash Technology
- 64 bytes of ram
- 7, 10-bit AtoD ports
- 30,000 High level commands per second
- 741,000 Low level commands per second
- 3.5 - 5.5 volt power range

Related Products

Athena<http://kronosrobotics.com/xcart/customer/product.php?productid=16276>
AthenaHS<http://kronosrobotics.com/xcart/customer/product.php?productid=16277>
Athena485<http://kronosrobotics.com/xcart/customer/product.php?productid=16381>
Perseus<http://kronosrobotics.com/xcart/customer/product.php?productid=16382>
Nemesis<http://kronosrobotics.com/xcart/customer/product.php?productid=16406>
EZRS232 Driver<http://kronosrobotics.com/xcart/customer/product.php?productid=16167>