



AMICUS - Amicus18 - Hardware/Board

Product Overview:

The Amicus18 hardware is based upon the world famous Arduino board; however, the Amicus18 board uses a Microchip PICmicro microcontroller instead of an Atmel AVR type. It has exactly the same dimensions as the Arduino, and all Arduino shields will physically fit on the Amicus18 board.

The microcontroller used on the Amicus18 is the Microchip PIC18F25K20, which has 32768 bytes of flash memory, 1536 bytes of RAM, and operates at 64MHz, which equates to 16 MIPS (Million Instructions per Second).

There are nine 10-bit ADC (Analogue to Digital Converter) inputs, and two 10-bit PWM (Pulse Width Modulation) outputs, as well as two comparators, a USART (Universal Synchronous Asynchronous Receiver Transmitter), SPI (Serial Peripheral Interface), I2C (Inter-Integrated Circuit), and four timers, each with various internal operations attached to them.

Communication with the Amicus18 board is through a USB interface, which presents itself as a standard serial port on the PC. The microcontroller can be programmed directly through this port so there is no need for a dedicated device programmer, however, if the need arises, there is an ICSP (In Circuit Serial Programming) interface suitable for all programmers, but tailored for the Microchip PICkit2™ programmer.



Kit Content:

- AMICUS18 board along with 8bit PIC MCU, PIC18F25K20
- 5V & 3V Linear Regulators,
- 16MHz Crystal Oscillator

Key Features:

- It has exactly the same dimensions as the Arduino, and all Arduino shields will physically fit on the Amicus18 board

- The microcontroller used on the Amicus18 is the Microchip PIC18F25K20, which has 32768 bytes of flash memory, 1536 bytes of RAM, and operates at 64MHz, which equates to 16 MIPS
- There are nine 10-bit ADC inputs, and two 10-bit PWM outputs, as well as two comparators, a USART, SPI, I2C, and four timers, each with various internal operations attached to them.
- 3.3 Volts output. 500mA when powered via USB, or 800mA when powered by an external 9 Volts source.

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
AMICUS18	AMICUS	1818281	79R5806

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
FT232RL	FTDI	IC, USB UART INTERFACE, SSOP-28	1146032	91K9918
PIC18F25K20	Microchip	8-Bit Microcontroller IC	1439578	88K5987

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
MC-MEGA	Multicomp	MC-MEGA Arduino Based Board	AT-MEGA	1813413	74R7633
MC-NANO	Multicomp	MC-NANO Arduino NANO Based Board	AT-MEGA	1813414	74R7634
MC-NOVE	Multicomp	MC-NOVE - BOARD, ATMEGA328, ARDUINO DUEMILANOVE CP	ATMEGA328	1813412	74R7635

Document List:

Datasheets:

Part Number	Description	Size
PIC18F25K20	8-Bit Microcontroller IC	6.93MB
FT232RL	USB UART INTERFACE, SSOP-28	768KB

Application Notes:

File Name	Size
Amicus18 Hardware Manual	5.02MB
Using the FT232R/FT245R with an External Crystal or Oscillator	154KB
Interfacing FT2232H Hi-Speed Devices To I2C Bus	655KB
User Guide For FT232B/R Factory Test Utility	423KB
AN1291 - Low Cost Shunt Power Meter using MCP3909 and PIC18F25K20	420KB

Hardware & Software:

File Name	Size
AMICUS18 COMPILER	46.7MB
Amicus Proton Compiler	46.7MB
MPLAB IDE	113MB

Others Resources:

File Name	Size
List of COM port drivers	-
List of Amicus Projects	-