Please note, this is our **OLD SITE!!!!** It should be used for reference only!
To purchase product, please go to our **new site** at www.modtronix.com!

Products

Netcruzer Boards
PIC MicroX Boards
- Bootloader Boards
- CAN Boards
- Display Boards
- RS232 Boards
- RS485 Boards
- USB Boards
- **SBC Main Boards**
- Prototype Boards
- Ethernet Boards
- I/O boards
- Interface Boards

Presto Boards
LCD Displays
Serial LCD Displays
1-Wire
CAN Bus
Ethernet
RS232
RS485 & RS422
USB
I/O Modules
Batteries & Chargers
Components
Connectors
Hardware
Microcontrollers
Terminal Blocks
PIC Programmers
Clearance Sale
Archive

Currencies

US Dollar

Shopping Cart

0 items

Notifications

Notify me of updates to **SBC44UC**

Bestsellers

01. SBC65EC
02. SBC68EC
03. SBC28PC-IR2
04. SBC44B
05. SBC44UC
06. SBC28PC-IR4
07. SBC28DC
08. SBC66EC

SBC44UC

~~US$49.95~~ **US$29.95**

Compact SBC with USB port and PIC18F4550, full assembled and tested. **Lead Free**, RoHS compliant! Quantity discounts up to 30% available, for details click here.

Click to enlarge
Click to enlarge

Introduction

The SBC44UC is an embedded (PIC based) Single Board Computer (SBC) with a full speed USB interface. It is assembled with the PIC18F4550 PIC chip from Microchip. It is programmed with the Microchip **Bootloader**, meaning no programmer is required to program it! It has been designed to work with the free Microchip USB Software. This includes software for developing:

- Human Interface Device (HID) class firmware
- Communication Device Class (CDC) firmware (virtual serial port)
- Mass Storage Class Firmware
- Microchip Bootloader
- Microchip Custom Driver

The SBC44UC can be powered by the USB bus, or an external power supply. A unique relay circuit is used to select between USB or external power. This ensures that the full USB voltage is available to the SBC board and possible user applications. Seeing that the voltage supplied by the USB bus is specified between 4.75V to 5.25V, it is very important that the full voltage is obtained, seeing that many electronic components require a minimum of 4.75V. Most USB applications that support external supplies use a diode/transistor based switching mechanism, which will drop the USB voltage by about 0.6 to 1V. Using this method would mean that the user could not use standard, 4.75V electronic components for custom expansion circuits.

The SBC44EC has sockets for inserting a MCP23008 I/O expander and external EEPROM. There is space on the PCB for an external FRAM chip, like the 32k byte FM25256 for example.

The *sbc44uc_boot_v100.exe* self extracting file that can be downloaded below contains all source code for the bootloader firmware, and example projects. These example projects can be uploaded to the SBC44UC via the bootloader PC program that is also contained in the download.

Features

- 33 general purpose user programmable I/O ports
- 13 user programmable, 10 bit Analog to Digital converters
- 2 user programmable, 10-bit CCP units that can be used for PWM or Capture/Compare functions.
- 1 USART
- 1 I2C/SPI serial interface

- 2 Comparitors
- 1 8-bit and 3 16-bit timers
- 32k Bytes of user programmable FLASH memory
- 2048 Bytes of RAM memory
- 256 Bytes of non-volotile internal EEPROM memory. Has socket for addition external EEPROM chip.
- Has space for a 8 pin Ramtron SPI FRAM chip (32Kbyte FM25256 chip for example) to be assembled.
- Micro Match socket with Power, I2C and SPI signals. The Micro Match connector can be used to daisy chain multiple I2C devices together, like our LCD2S Serial **LCD displays** with keyboard decoder. For details on the Micro Match connector, click here.
- Red user LED on PIC port RB6.
- Is part of our MicroX product range, and has a Frontend and Compact Daughter board connector for expansion. For details see oldsite.modtronix.com/microx.
- Compact size of 58mm x 54mm.
- Can be powered via USB bus, or external 9V to 12V power supply (via diode protected 2.1mm power connector)
- High quality machine assembly, with brand name, quality components:
  - All electrolytic capacitors used are extra long life Panasonic brand, which is 5 times more than standard!
  - PCB is Gold plated for best contact and no corrosion
  - All pin headers are gold plated for best possible contact
- Has an ICSP (In Circuit Serial Programming) connector (ICPC1 type) - CPU can be programmed in circuit. For details see Programming Modtronix PIC based boards.

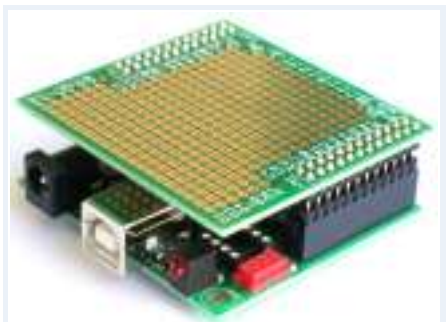
Expansion

Adding a Daughter Board to the SBC44UC

The SBC44UC can be used as a full functional Single Board Computer. It's Daughter Board connector can be used as an expansion port to add additional functionality. It contains all free CPU port pins, power, I2C, SPI, RS232 signal,..... For further details about the Compact Daughter Board connector, see oldsite.modtronix.com/microx/expansion.

The following Daughter Boards for the SBC44UC are currently available from Modtronix Engineering:

- DEV7TC - Seven Segment Display Daughter Board
- MXD2R - Input/Output/Relay Daughter Board
- PTO1TC-ASM - Compact Daughter Prototype Board



This pictures shows the SBC44UC board with a PT01TC-ASM prototype board.

Click on image to enlarge!

Adding a Frontend Board to the SBC44UC

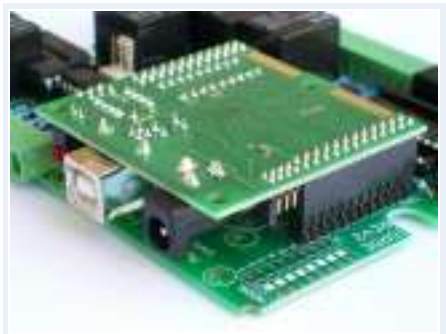
The SBC44UC can be used as a full functional Single Board Computer. It's Frontend Board connector can be used as an expansion port to add additional functionality. It contains many free CPU port pins, power, I2C, SPI, RS232 signal,.....

The following Frontend Boards for the SBC44UC are currently available from Modtronix Engineering:

- IOR44-222 - 2 Input, 2 Output, 2 Relay Frontend Board
- IOR44-42 - 4 Input, 2 Relay Frontend Board
- IOR44-241 - 2 Input, 4 Output, 1 Relay Frontend Board
- SER2S - Sub-D Connector Frontend Board
- IO8S - 8 port Analog/Digital I/O Frontend Board
- PTO1FC-ASM - Compact Frontend Prototype Board

Using the SBC44UC as a Daughter Board

The SBC44UC can be used to add USB capabilities to any board by using it as a daughter board. All connectors required to do this can be purchased from our web site. The board that is to take the SBC44UC as a daughter board needs to provide two 2x12 pin, 2.54mm pin headers for the SBC44UC to plug into. Additionally, 3 PCB supports can also be provided if additional stability is required - this is however not necessary seeing that the board is very stable when plugged into the two 2x10 pin connectors. The SBC44UC can provide the main board



This pictures shows the

SBC44UC used as a Daughter Board

Click on image to enlarge!

with unregulated (via it's 2.1mm power connector) and 5V regulated supplies. Or, the main board can supply the SBC44UC with 5V supply - in this case the 2.1mm power connector on the SBC44UC is not used.

The SBC44UC can be used as a daughter board on the following boards currently available from Modtronix Engineering:

- IOR5E - Input-Output-Relay Board with enclosure
- PT10E-ASM - Prototype Board with enclosure
- PT24E-ASM - Prototype Board with enclosure

Additionally, users can download PCB templates for creating their own Compact Daughter Boards from our Downloads page. The ***daughter_compact.brd*** PCB fits onto the SBC44UC. Compatible third party products are listed here.

Details, Schematics and Photos

Click here for preliminary **Product Datasheet** in PDF format.

Additional photos of SBC44UC:
Side View , Top View , Bottom View

Application Notes and Source Code

	Web	PDF	Data
Bootloader Source code, Example Projects, Drivers, Documentation, PC Bootloader application,....			
Full-Speed USB PIC18 Products with FREE USB Software			
Programming Modtronix PIC based boards.			
USB Forum and **additional documentation**			

Buy Online

This product consists of:

- SBC44UC SBC Main Board, fully assembled and programmed with bootloader. As shown in this photo.this photo.

The following is **NOT** included, and can be added below as "Available Options":

- MCP23008 I/O Expander
- External EEPROM

Select desired options, and then click on **Add to Cart** icon below!

Available Options:

Frontend Sockets (info): None

Memory: None

Micro Match Cable: None

Printed Documentation: None

This product was added to our catalog on Wednesday 16 May, 2007.

Reviews Add to Cart

Please note, this is our **OLD SITE!!!!** It should be used for reference only!
To purchase product, please go to our **new site** at www.modtronix.com!

Customers who bought this product also purchased


LCD204A-YHY-X8


TB12B-F254-R4


TB08B-F508-R4


TB10B-F254-R4


TB02B-F254-R4


TB04B-F254-R4

Please note, this is our **OLD SITE!!!!** It should be used for reference only!

To purchase product, please go to our **new site** at www.modtronix.com!

Monday 22 January, 2018