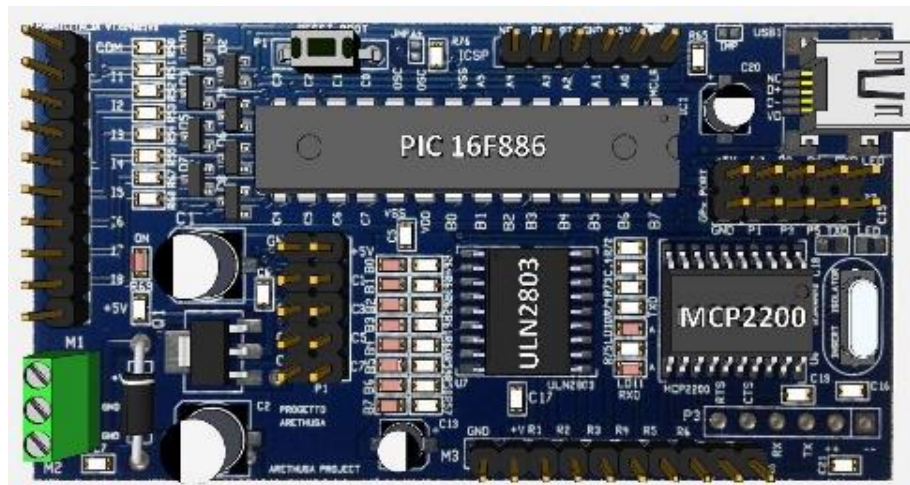


Arethusa V21 User Manual

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Arethusa V21

Arethusa V21, is a microcontroller board based on the PIC16F886.

The PICmicro, is a selectable 25 digital I/O pins, of which 11 can be used as analog 10 bit inputs. Other selectable I/O are 2 bipolar comparators, 14 interrupt sources, 3 timer counter, 2CCP section with 16 bit resolution featuring PWM channel, compare,etc.

On Arethusa V21, 24 digital I/O lines are available on a series of 8 channels connectors. A hardware USB-to-UART serial converter enables USB connectivity. UART consists of the TX and RX data signal and RTS/CTS flow control pins. The UART is configurable for several baud rate : 300-1000k baud. Other resources available, RS232 TTL level, I2C BUS and SPI, ICSP JTAG, push button reset, 3 status led (RX/TX/Vcc) . Internal FLASH and EEPROM can be managed trough In System Programming (ICSP). When the module is already powered by using USB port, is possible Bootloader programming. By means Visual Parsic compiler the card is directed programmable. The card is also programmable using other compilers as Basic, Assembler, C++, Pascal, Mikrobasic, etc. Long list of demo programs and use exemples supplied under source form. Arethusa V21 can be powered by USB port or with an external power supply. The power source is manually selectable by a jumper. The board can operate on an external supply of 9 to 12Vcc. Do not operate under 7 Vcc and upper 12Vcc. If using more than 12Vcc the voltage regulator may overheat and damage the board. This card may use a variety of 8 bit PIC microcontroller 28pin. This list are some of them : 16F737/767/883/886/913/916.

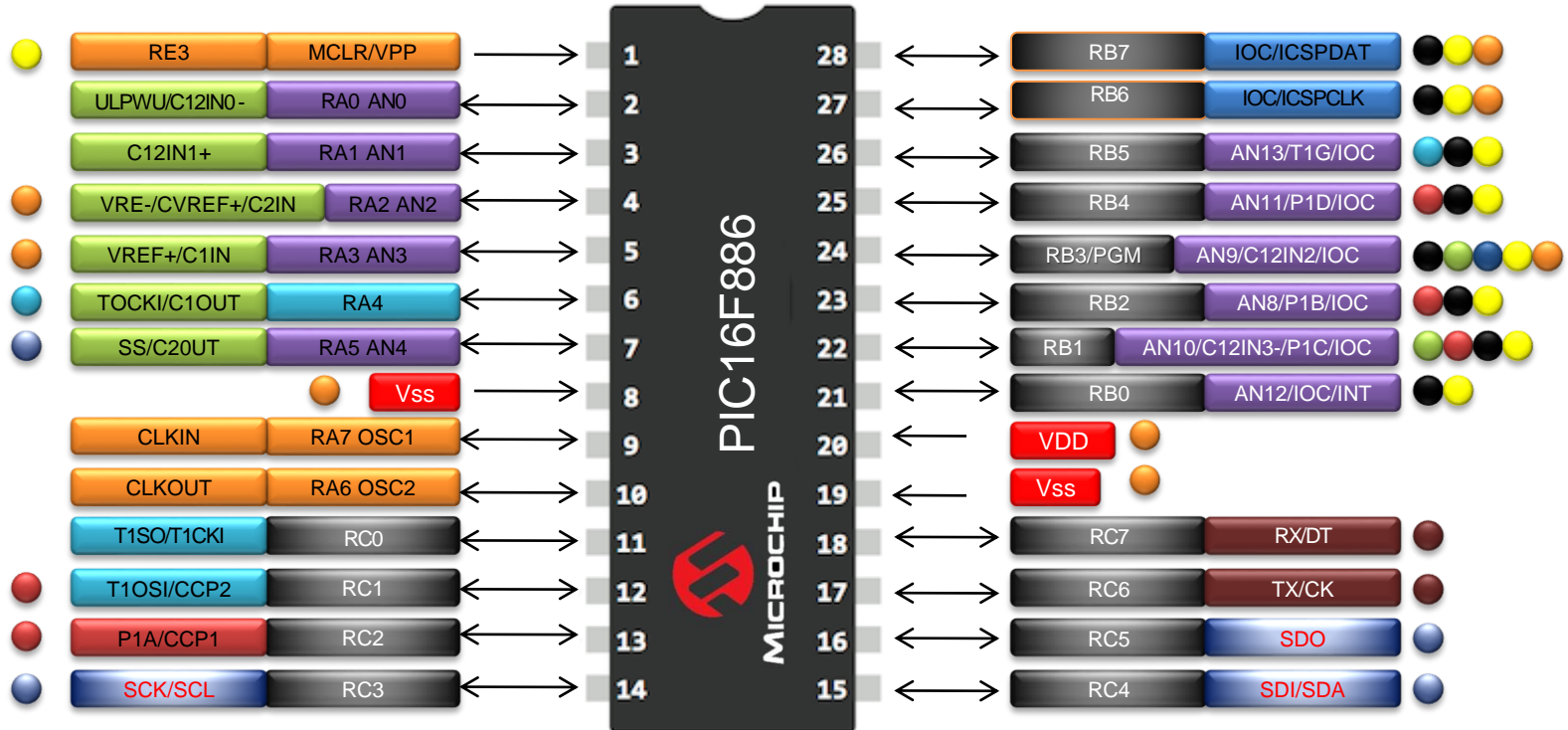
We suggest the employ as smart intelligent nodes whith local functionalities for controlling temperatures, motors, valves, decentralized system, robots, home automation, supervision of electric device, security access control system. Arethusa V21 card, offers a very low cost to learn how to program a pic 14 bit core CPU. For this purpose are likewise interesting the V22 board interface I/O, whith on board 8 protect digital I/O, 2 ADC inputs, 6 output relais, 2 PWM, LCD display, and other accessories.

Applications:

- Build Automation
- Burglar Alarm
- Automotive
- Development
- Didactic

PIC16F886

- ANALOG
- BASIC
- COMPARATORS
- TIMERS
- CCP PWM
- INTERRUPT
- I/O PORTS
- MSSP
- PGM
- PULL-UP
- EUSART



Elenco dei pin del PIC16F886 e funzioni dedicate

Visual Parsic V4 compiler

File Edit Settings Tools Window Help

Standard Various Enhanced Macro Bootloader

z 1:1 Z

Simple state-machines

Example 1

No next step without the previous step
The next step resets the previous step

Example 2

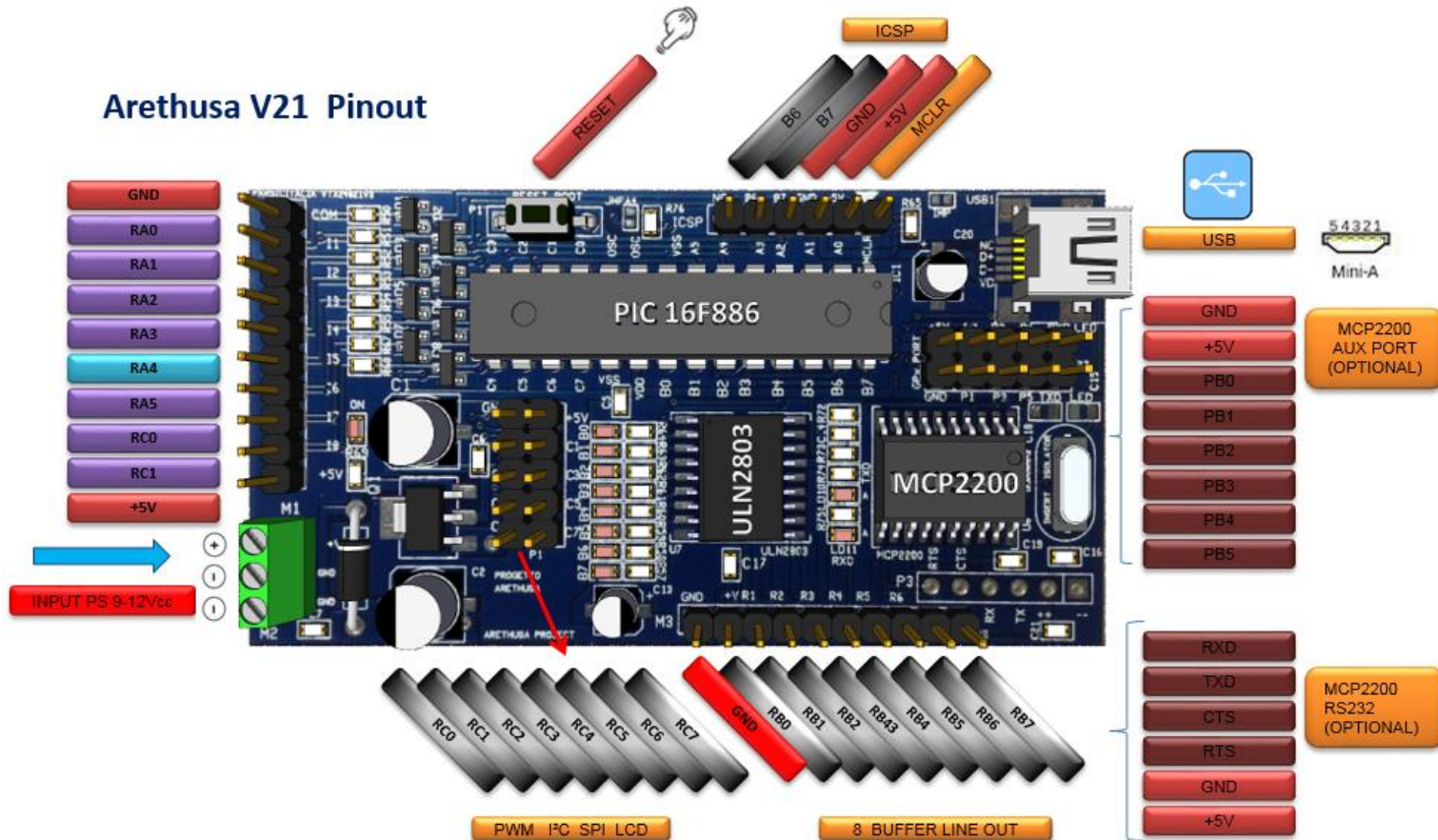
No next step without the previous step
the last step resets all the previous steps

Example 3

state-machine with a shifting register
Step 5 resets all previous steps

On-Board resorces::

- 8 mixed digital and analog inputs (4ADC + 4 DI) with led indication
- 8 digital lines on buffer ULN2803 with led indication
- 1 PortC 8 lines general purpose PWM, I2C, SPI, LCD, Wi-Fi, Bluetooth
- 1 USB Port use MCP2200
- 1 ICSP Port for PicKit or similar programmer
- 1 Reset pushbutton
- Power supply 9-12Vcc
- Dimensions 76 x 22 x 12 mm



Electric diagram Arethusa V21

