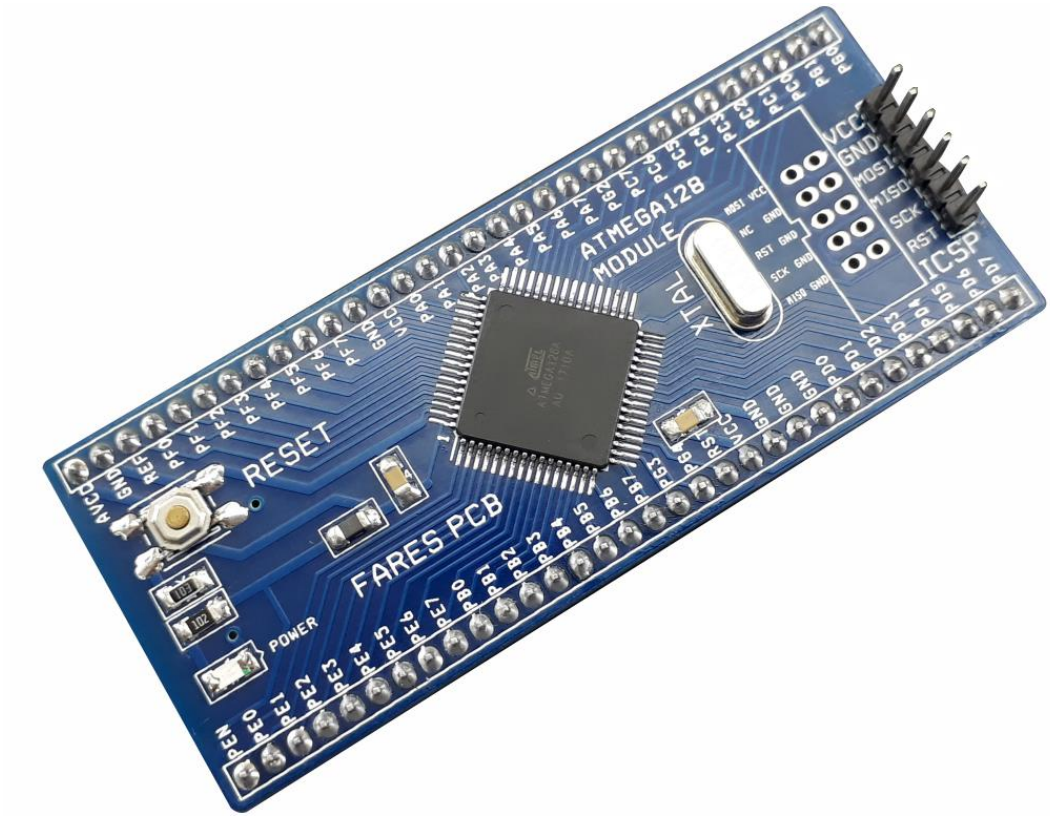


F128

ATMEGA128 Module

ATMEL AVR Microcontroller

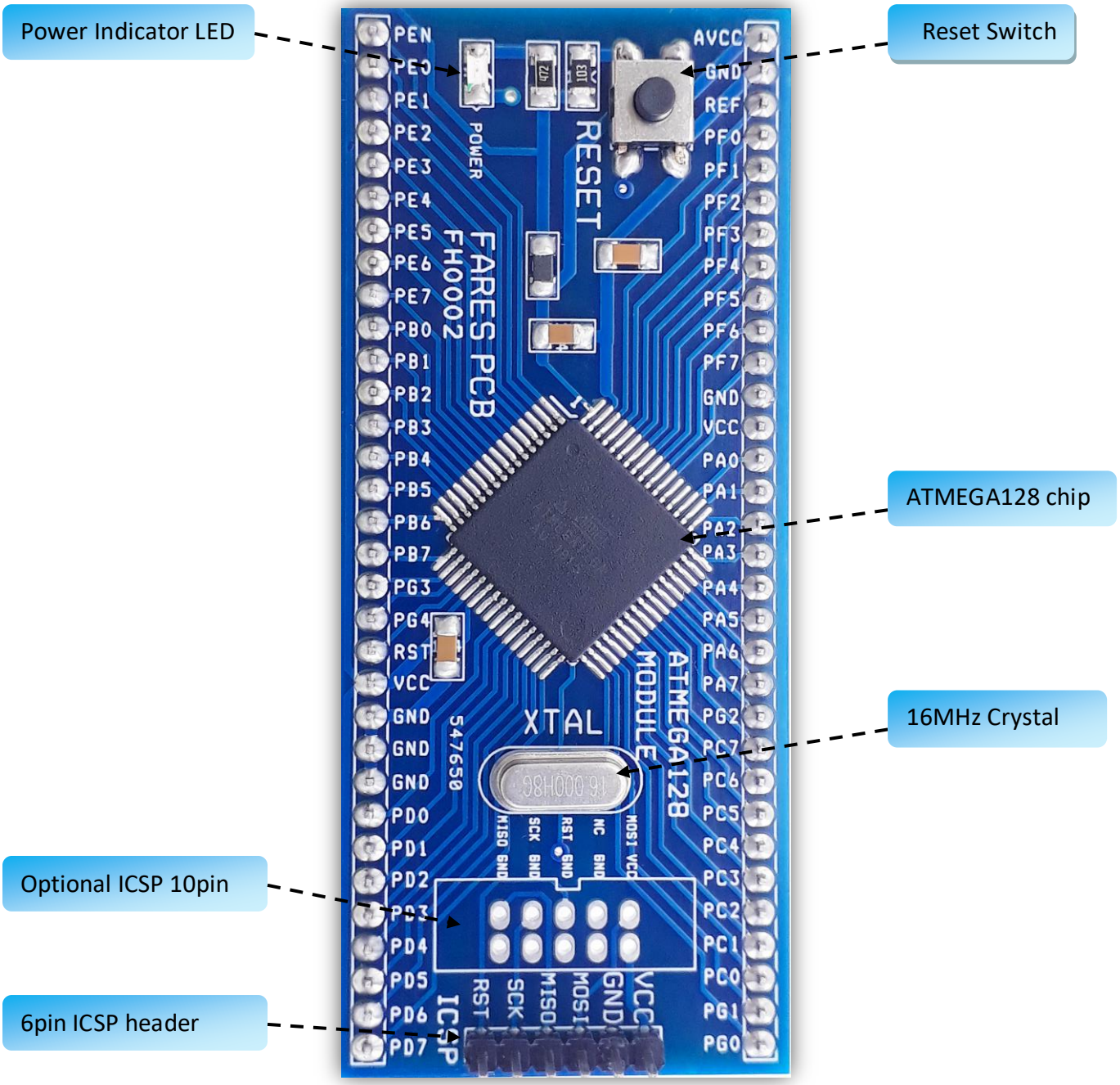
General Description

ATMEGA128A Microcontroller is a powerful 8 bit microcontroller from ATMEL. however, many embedded system designers specially those fresh graduated avoid using it in embedded projects because of its 64 pin TQFP package which complicate layout design and breadboard applications.

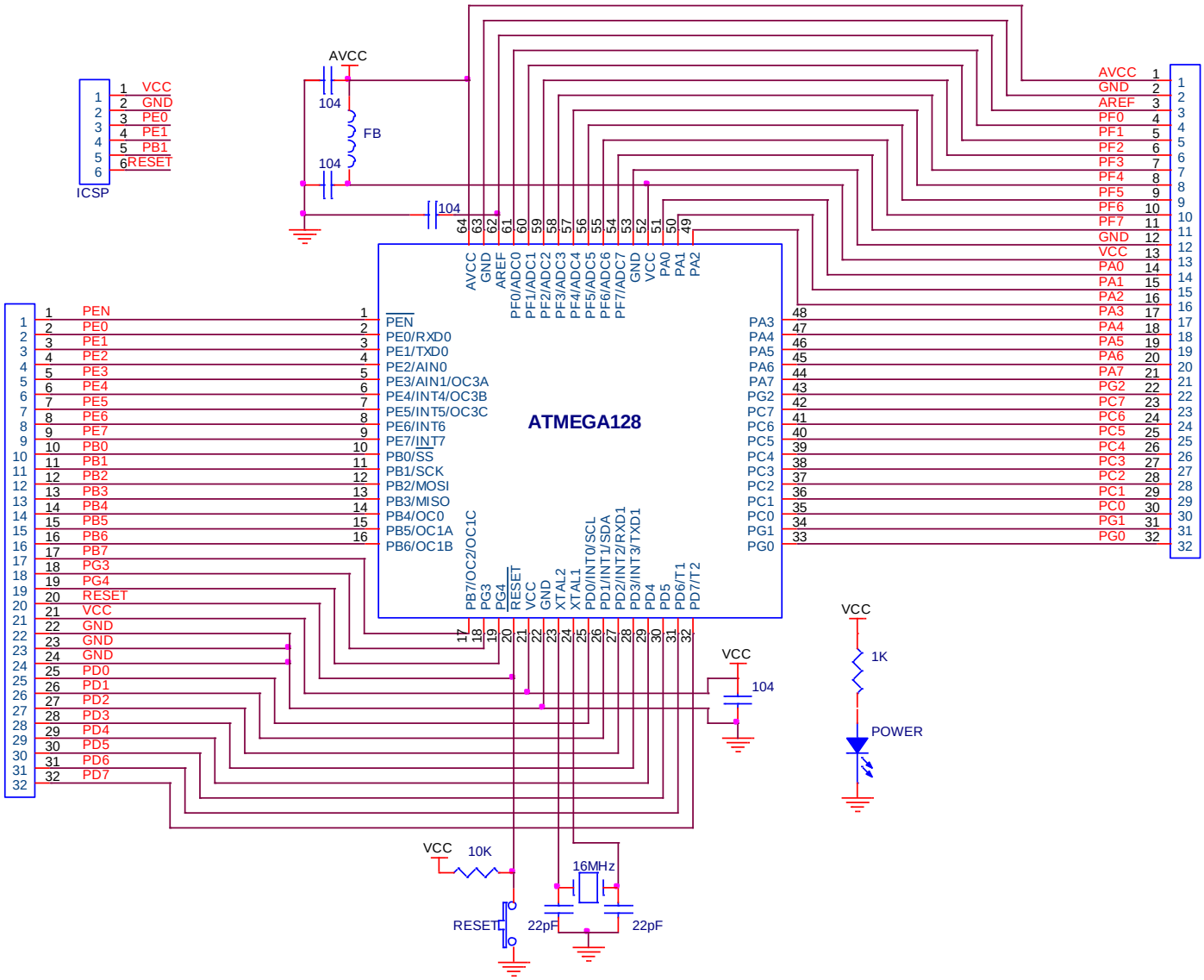
F128 Module is a versatile and cheap microcontroller module that make life easy to build your project using smd ATMEGA128A microcontroller chip.
F128 Module extends all I/O ports to male header pins to match bread board testing and wiring. also it can be plugged in a female header in your application.
F128 Module provides ICSP header for direct connection to external programmer such as USBasp programmer
Also F128 module contains reset switch , LED for power indication , filtration circuit for Analog supply is added , and bypass capacitors for power pins.

F128 Module key features

- ATMEGA128A microcontroller (128K Flash, 4K SRAM, 4K EEPROM).
- On board 16MHz crystal oscillator.
- Powered from 5V.
- 6 pin ICSP header socket .
- Power on reset circuit with reset switch.
- SMD LED for power indication.
- All microcontroller I/O pins are brought out via pin header. In addition to REF , RESET and power pins for both sides.
- Size 84mm X 35mm.



F128 Module



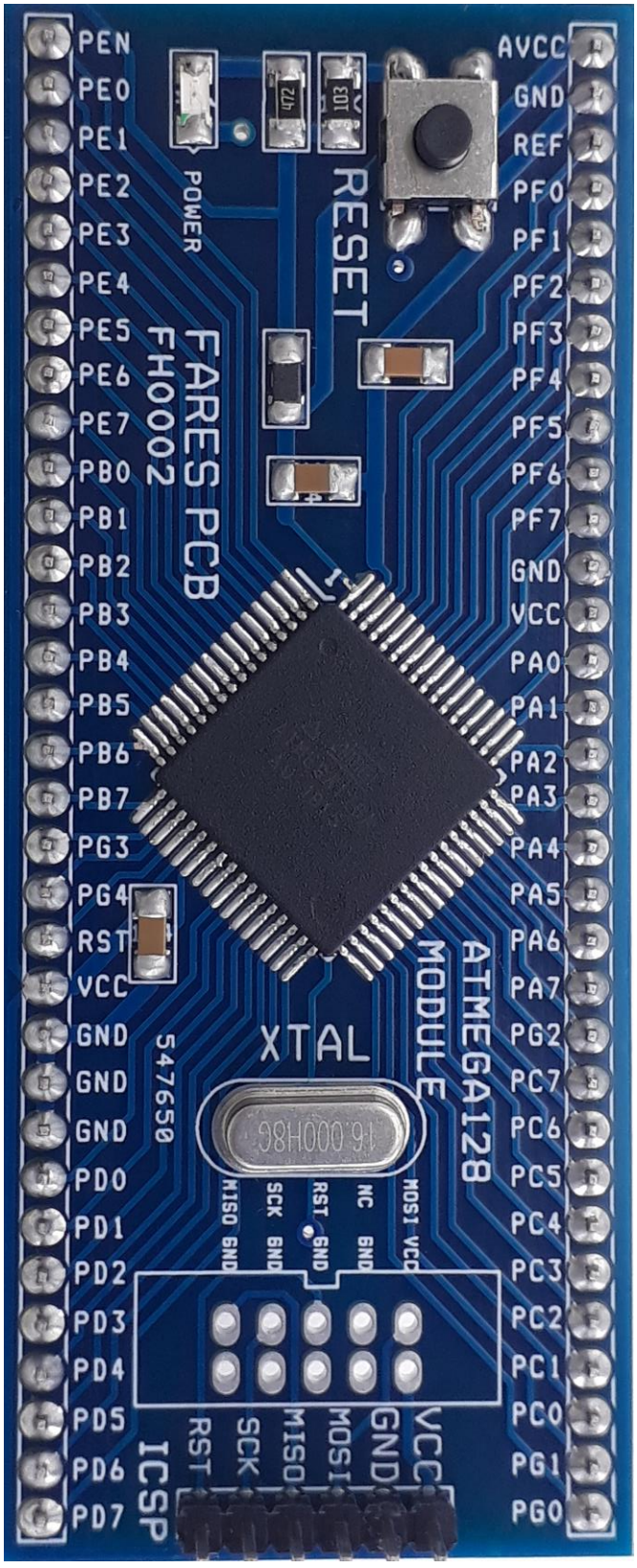
F128 Module (schematic)

ATMEGA128A features

- 128KB Flash program memory
- 4KB EEPROM data memory
- 4KB SRAM
- 53 Programmable I/O lines
- 8 channel 10bit A/D
- Dual Serial UART
- Two wire serial interface
- Master/Slave SPI Interface
- 6 PWM channels
- Two 8bit Timer/Counter and Two 16bit Timer/Counter
- Crystal speed up to 16MHz

Pin out function of F128 Module

1	PEN
2	PE0
3	PE1
4	PE2
5	PE3
6	PE4
7	PE5
8	PE6
9	PE7
10	PB0
11	PB1
12	PB2
13	PB3
14	PB4
15	PB5
16	PB6
17	PB7
18	PG3
19	PG4
20	RST
21	VCC
22	GND
23	GND
24	GND
25	PD0
26	PD1
27	PD2
28	PD3
29	PD4
30	PD5
31	PD6
32	PD7



AVCC	64
GND	63
REF	62
PF0	61
PF1	60
PF2	59
PF3	58
PF4	57
PF5	56
PF6	55
PF7	54
GND	53
VCC	52
PA0	51
PA1	50
PA2	49
PA3	48
PA4	47
PA5	46
PA6	45
PA7	44
PG2	43
PC7	42
PC6	41
PC5	40
PC4	39
PC3	38
PC2	37
PC1	36
PC0	35
PG1	34
PG0	33

***Note*:**

1 - Powering F128 module from VCC only with 5V. It's not recommended to power module from AVCC. AVCC is 5V analog output power created internally from VCC supply pin. Use AVCC to power external analog circuits such as voltage divider or operational amplifiers.

2 - F128 Module is shipped with fuse bytes set to ,

Low fuse : &H9F
High fuse : &HC9
Extended : &HFF

Brown-out Detection(BOD): Enabled (2.7V).
Clock Source: External crystal oscillator.
Boot reset vector is not selected.

Random fuse settings changing is risky. You should take special care while changing these settings. Incorrect fuse settings may cause incorrect microcontroller functioning.

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