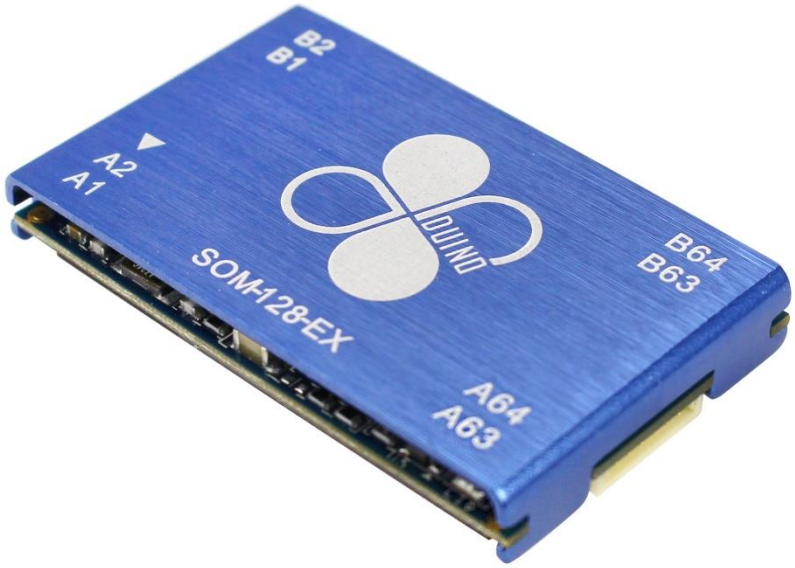
VORTEX86EX SOM-128-EX

subtype of an embedded system



86Duino Boards

a subtype of an embedded system and more likely an extension concept of system on chip

User's Manual

SOM-128-EX is a subtype of an embedded system and more likely an extension concept of system on chip. The reason we specially design this is that we understand what the difficult part of developing a new system is.

Usually, a tailored system for a special application would involve high overhead cost; however, if one adopts SOM, one can easily implement the already laid out pins of I/Os and connectors for consumers who want a customized system without committing months of design and paperwork.

Product Information

- Vortex86EX- 300MHz
- Onboard 128/1GB DDR
- Onboard 8MB SPI Flash Disk
- Ethernet MAC + PHY
- SATA Interface
- PCI-E Control Interface
- PCI-E Target Interface
- ADC Channel x 8
- USB 2.0 Port
- DMA Controller
- Interrupt Controller
- MTBF Counter
- xISA Bus Interface
- COM x 10 Ports
- GPIO x 80 bits
- 80 Pin selectable multi I/O
    - COM with TX/RX only
    - RS485 Auto Direction
        - SPI 1 or 2
        - Parallel Port
    - SD/eMMC
    - I2C, CAN, PS/2
    - Ethernet LED

- Clock Out WatchDog
- HD Audio
- MCM (Motin Control Module)

- Support DOS, Linux, Windows Compact 7.0, QNX and VxWorkx
- Support temperature range (+5℃ ~ +55℃)

Note before ordering：

This module is dedicated to 86Duino, preloaded 86Duino One/Zero firmware,suitable for advanced use.

Specifications

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- ADC Channel x 8
- USB 2.0 Port
- DMA Controller


SOM-128-EX REV:1.1
MADE IN TAIWAN
2013/08/13
DM205A
U1
DM&P
Vortex86EX


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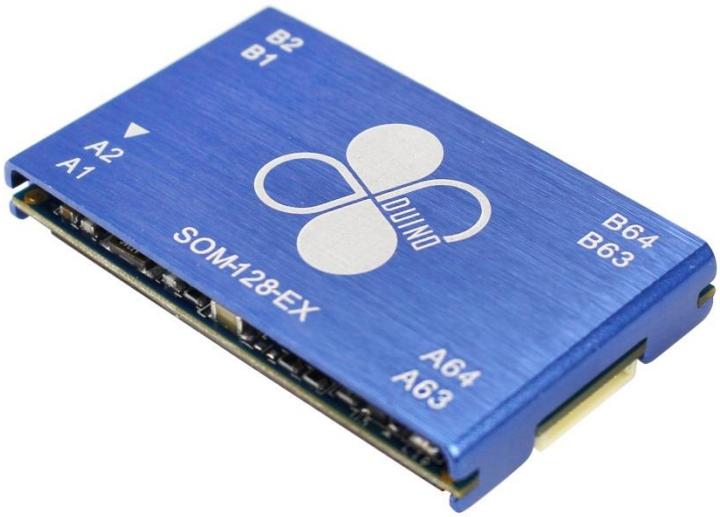
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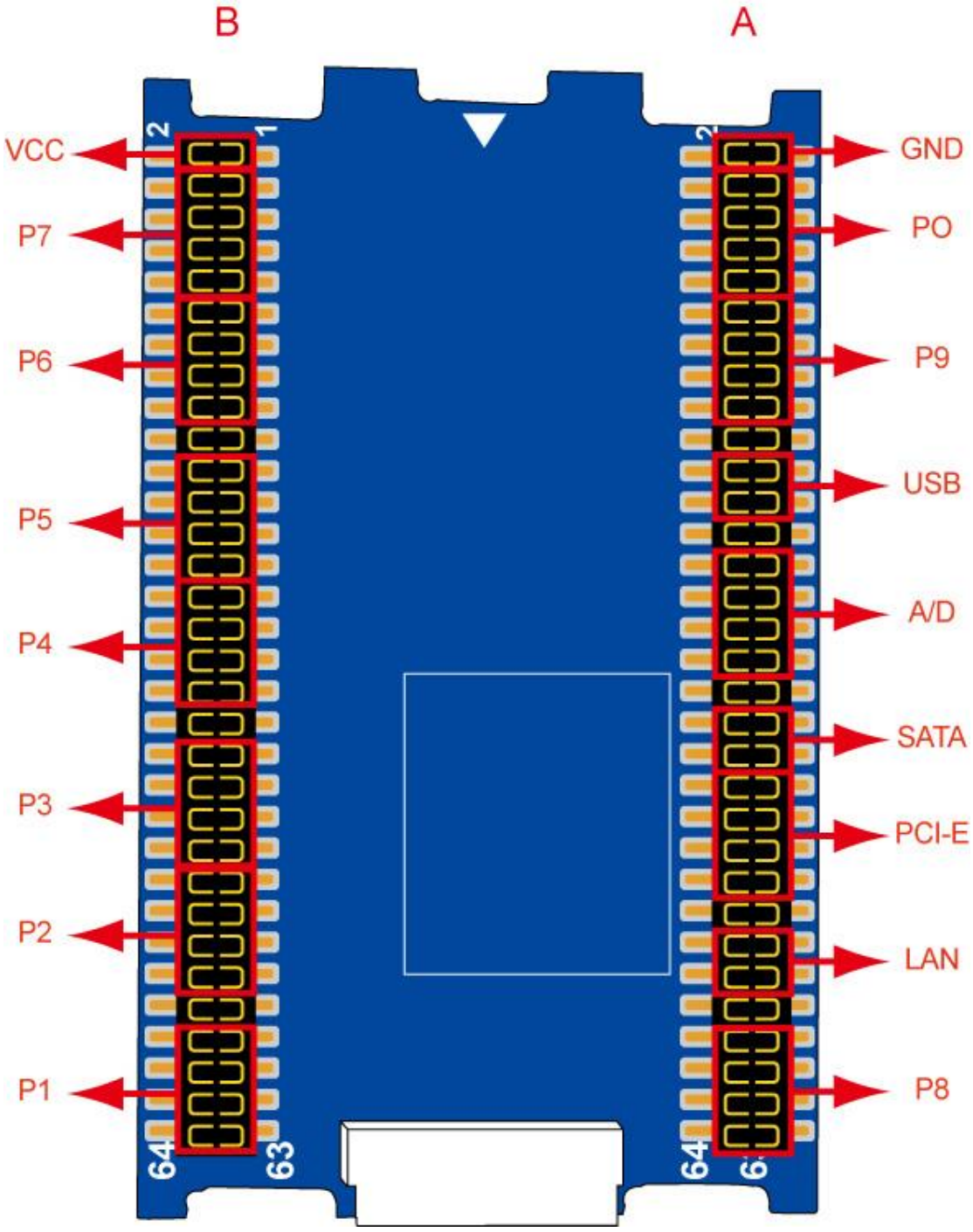
B1
A2
A1
SOM-128-EX
B64
B63
A64
A63


B
A
VCC
P7
P6
P5
P4
P3
P2
P1
GND
PO
P9
USB
A/D
SATA
PCI-E
LAN
P8
2
1
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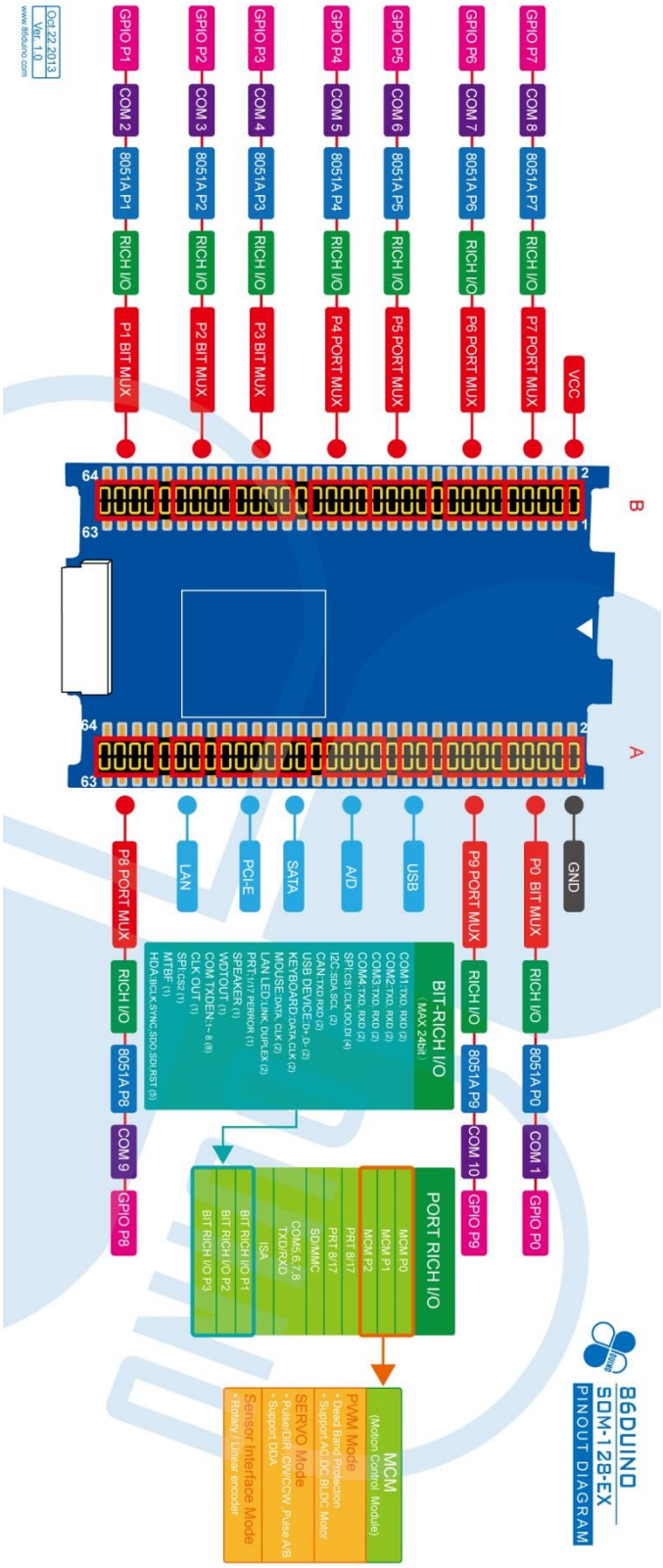
63


Oct.22.2013
Ver. 1.0
www.86duino.com
GPIO P1
GPIO P2
GPIO P3
GPIO P4
GPIO P5
GPIO P6
GPIO P7
COM 2
COM 3
COM 4
COM 5
COM 6
COM 7
COM 8
8051A P1
8051A P2
8051A P3
8051A P4
8051A P5
8051A P6
8051A P7
RICH I/O
P1 BIT MUX
P2 BIT MUX
P3 BIT MUX
P4 PORT MUX
P5 PORT MUX
P6 PORT MUX
P7 PORT MUX
VCC
64
63
2
1
B
A
P8 PORT MUX
LAN
PCI-E
SATA
A/D
USB
P9 PORT MUX
P0 BIT MUX
GND
BIT-RICH I/O
(MAX 24bit)
8051A P8
8051A P9
8051A P0
COM 9
COM 10
COM 1
GPIO P8
GPIO P9
GPIO P0
PORT RICH I/O
MCM
(Motion Control Module)
PWM Mode
SERVO Mode
Sensor Interface Mode
86DUINO
SOM-128-EX
PINOUT DIAGRAM