# Rugged Board

ruggedBOARD-A5D2x
Pico Industrial Computer

open source hardware

Highlights

- Off-the-shelf Single Board Computer for IIoT
- Freedom to modify Schematics and Layout sources of Carrier board & Sensor modules
- Proven process for Prototyping till Mass Manufacturing
- Feature rich & Highly cost optimized platform
- Simple & Powerful Open Source Software IoT Stack
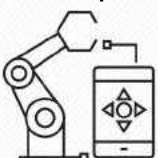
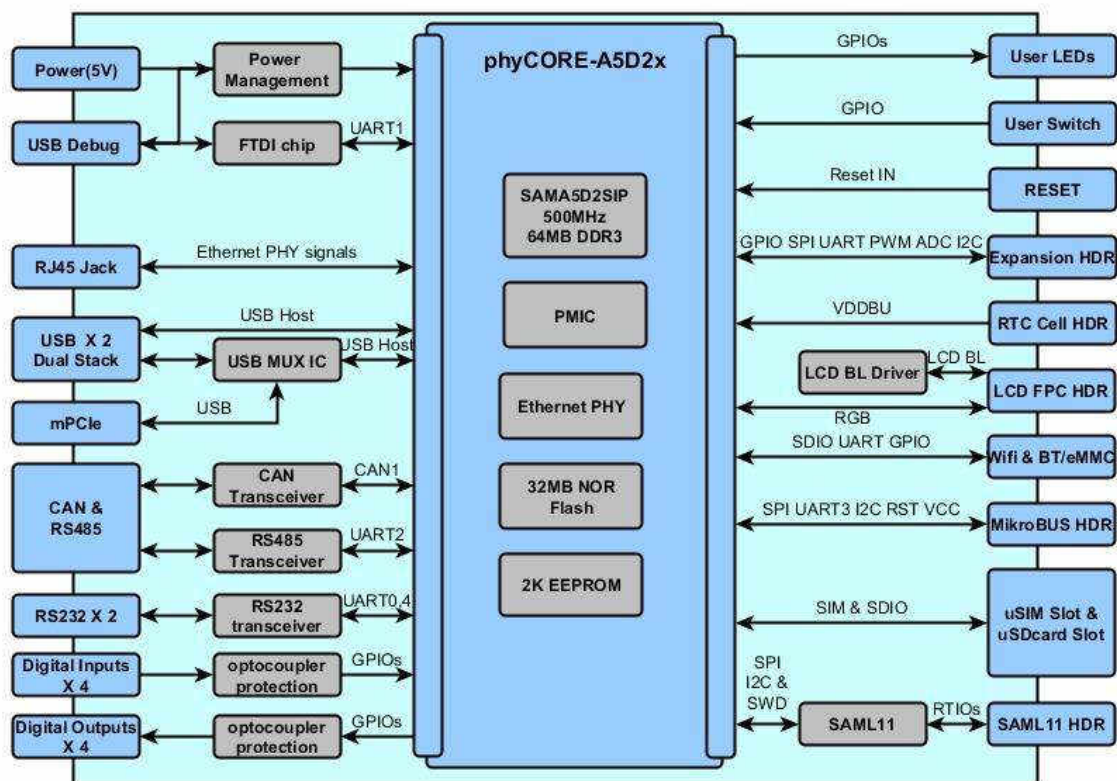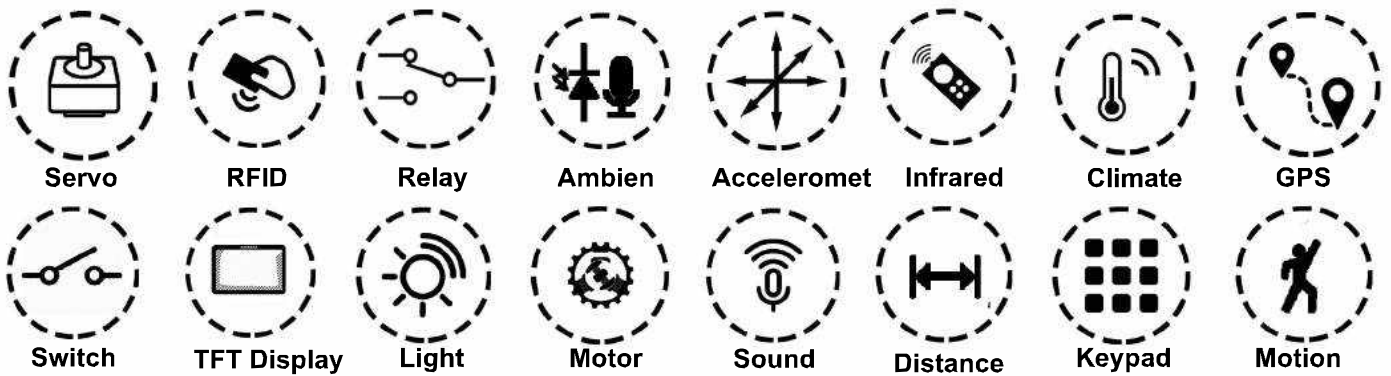Industry 4.0   Smart Transportation   Smart City   Smart Energy   Smart Agriculture   Smart Retail
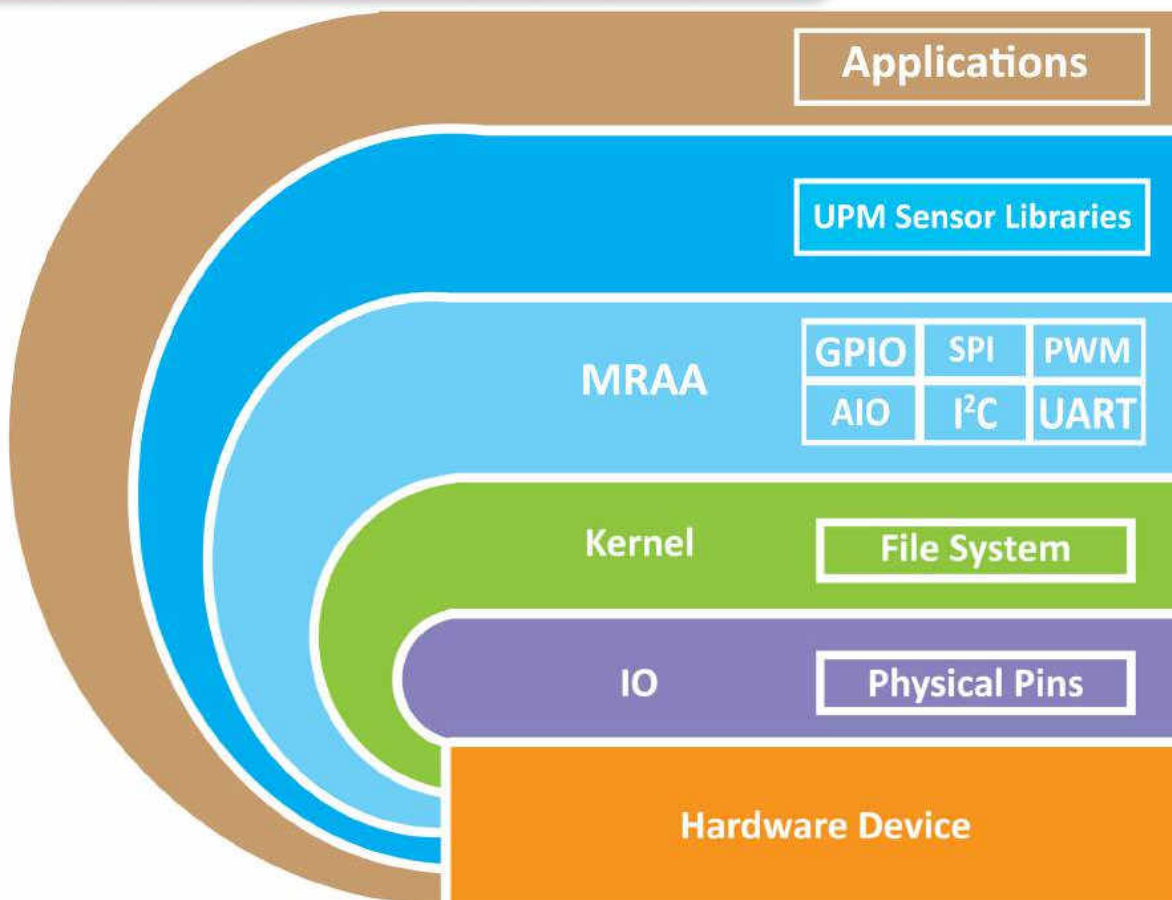
Product Specifications

SOM – RB- A5D2x	
SOC	Microchip ATSAMA5d2x Cortex-A5
Frequency	500MHz
RAM	64 MB DDR3
Flash	32 MB NOR flash
SD Card	SD Card Upto 8 GB
Software	
OS	Yocto Linux
Kernel Version	Linux Kernel 4.12
Industrial Interface	
RS232	2x RS232
RS485	1x RS485
USB	2 x USB*(1x Muxed with mPCIe)
CAN	1x CAN
Digital Input	4x DIN (Isolated ~ 24V)
Digital Output	4x DOUT (Isolated ~ 24V)
Display Interface	
Display Size	24bit RGB, Supports 3" to 5" TFT Display
Touch	Capacitive Touch
Internet Access	
Ethernet	1 x Ethernet 10/100
Wi-Fi/BT	Optional on Board Wi-Fi/BT
SIM Card	1 x SIM Slot (for mPCIe Based GSM Module)
Add-On Module Interfaces	
Mikro-BUS	Standard Mikro-BUS
mPCIe	1 x mPCIe* (Internally USB Signals is used)
Expansion Header	SPI, I^{2}C, UART, PWM, GPIO,ADC
Power	
Input Power	DC +5V or Micro USB Supply
Temperature Range	- 40^{0}C to + 85^{0}C

Add-On Sensor Modules

Servo	RFID	Relay	Ambien	Acceleromet	Infrared	Climate	GPS
Switch	TFT Display	Light	Motor	Sound	Distance	Keypad	Motion

Software Eco-System

Applications

UPM Sensor Libraries

MRAA — GPIO | SPI | PWM | AIO | I²C | UART

Kernel — File System

IO — Physical Pins

Hardware Device

RUGGED BOARD supports Python, C, C++ and enabled with industry standard MRAA & UPM IoT Stack which manages Sensors, Actuators, Radios & Protocols.

I/O protocol control:

- GPIO
- Analog (AIO)
- SPI
- I2C
- 1-Wire
- Firmata
- PWM
- UART

C C++ python node yocto PROJECT