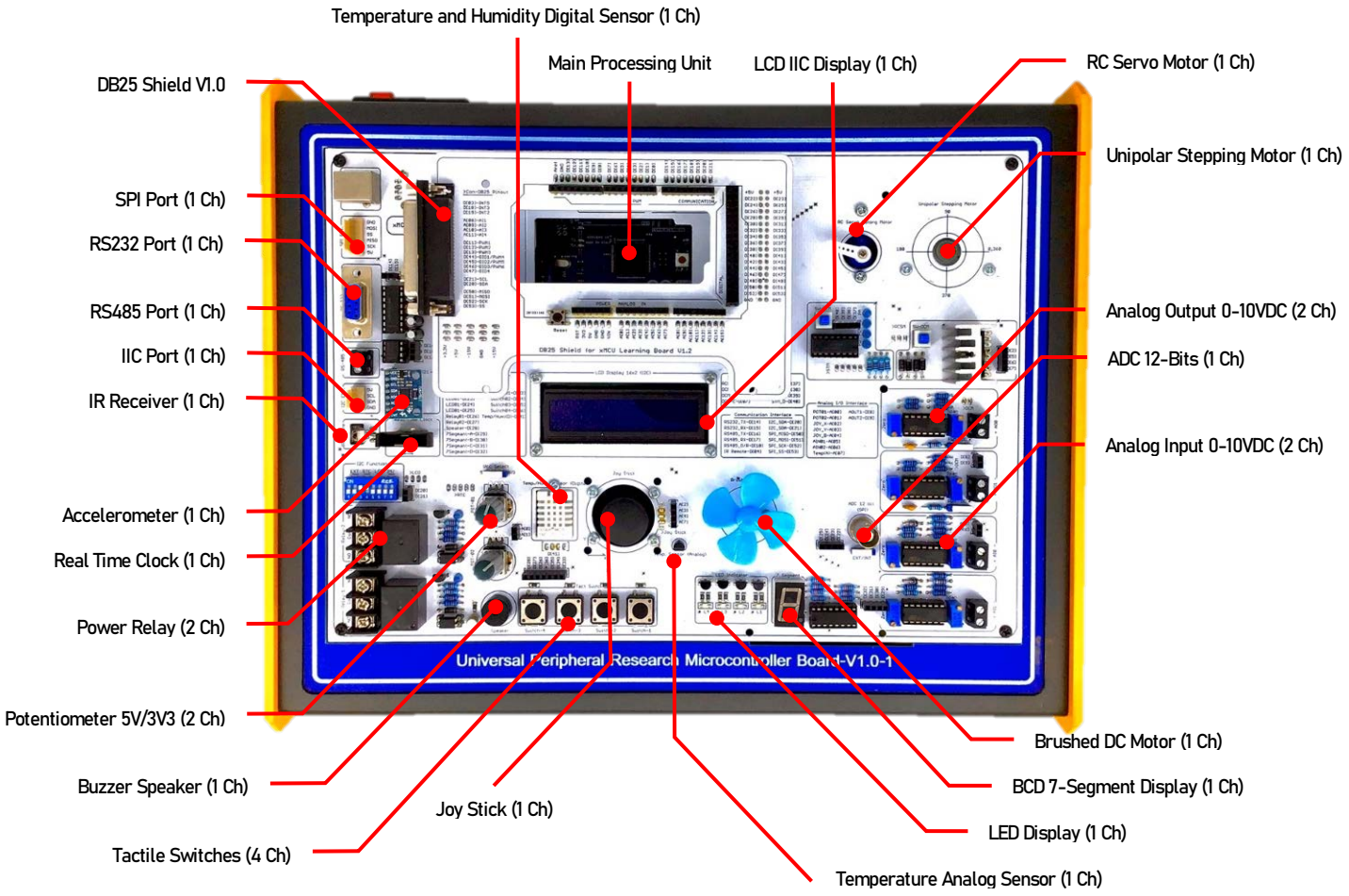
xMCU DEVELOPMENT BOARD V1.0

| FOR EDUCATION IN EMBEDDED CONTROL SYSTEM FIELDS

PTS Combination



FEATURE DETAIL

- xMCU Development Board V1.0 is designed as the multifunction embedded learning set so suitable undergraduate degree or vocational/diploma education.
- Cover the lesson comprehensive to analog input/output, digital input/output, I2C/SPI/RS232/RS485 communication and motors control interface.
- Easy to use, the pin's function modules are reserved by not wiring so just the coding and then upload into development board.
- Support for Arduino IDE, LabVIEW, MATLAB/Simulink, Software development and other (due to microcontrollers/processing unit series).
- Microcontroller/Processing unit support such as Arduino, PIC, MCS-51, ARM, STM and other (apart from Arduino processing should be use pin mapping adapt shield).
- In addition, xMCU Dev. BoardV1.0 can interface with control system lab kits (on next pages).
- The package is made from PVC material so portable, compact size, lightweight.

ACCESSORIES LAB KITS

- xMCU Development Board V1.0 .
- DB25 Shield V1.0.
- AC Power Cable.
- USB Communication Cable.
- DB25 Communication Cable.
- RS485 Communication Cable.
- IR Remote.
- Arduino IDE Software (Open source).
- C-Code Example (Only Arduino).
- Worksheet Document.

INSTANT QUOTE CONTACT: SALES@PTSCOMBINATION.CO.TH, TEL. (66) 2 501 5677, (66)2 501 5228

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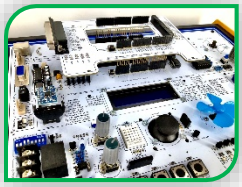

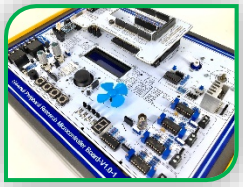

SYSTEM CONFIGURATIONS

Module Interface	Description	Channel
Processing Unit		
- Microcontroller	ATmega 2560	
- Clock Speed	16 MHz	
- Operating Voltage	5V	
- Input Voltage	7-12V (recommended)	
- Input Voltage	6-20V (limits)	
- Digital I/O	54 Pins (of which 14 provide PWM output)	
- Analog Input Pins	16 Pins	N/A
- DC Current per I/O Pin	40 mA	
- DC Current for 3.3V Pin	50 mA	
- Flash Memory used by bootloader	256 KB of which 8 KB	
- SRAM	8 KB	
- EEPROM	4 KB	
Digital Input/output Interface		
- Tactile switches	12x12 mm.	4 Ch.
- LED Displays	LED SMD	4 Ch.
- 7-Segment Display	BCD coder 1 Digit	1 Ch.
- Power Relay	220VAC/10A,	2 Ch.
- Buzzer Speaker	Magnetic, 2048 Hz	1 Ch.
Analog Input/output Interface		
- Potentiometer	0-5V and 0-3V3 VDC (select on board)	2 Ch.
- Joy Stick	X-Y Direction and button	1 Ch.
- Analog Input	Signal Condition 0-10 to 0-5 VDC	2 Ch.
- Analog Output	Signal Condition 0-5 to 0-10 VDC/PWM 0-5 VDC (select on board)	2 Ch.
Communication Interface		
- IIC Bus device	- LCD 16x2 with blue/green blacklight	1 Ch.
	- Real Time Clock (DS1307)	1 Ch.
	- Accelerometer (GY-521)	1 Ch.
	- IIC external port	1 Ch.
- SPI Bus device	- ADC 12-Bits (MCP3202)	1 Ch.
	- SPI external port	1 Ch.
- RS232 Bus device	- RS232 Interface (MAX232)	1 Ch.
	- RS232 external port	1 Ch.
- RS485 Bus device	- RS485 Interface (MAX485)	1 Ch.
- Temp./Humi. Digital sensor	- Digital sensor (DHT22)	1 Ch.
- Temp. Analog sensor	- Analog sensor (LM35)	1 Ch.
- IR Remote and Receiver	- Carrier Frequency 38 kHz	1 Ch.
Motor Control Interface		
- Brushed DC Motor	- 12VDC (L298 motor drive 3A)	1 Ch.
- Stepping Motor	- Operating Voltage 5VDC, 28BYJ-48 Unipolar type, 4 Phases	1 Ch.
- RC Servo Motor	- 3-6VDC, Torque 1.6 kg.cm, speed 0.12 s/60 degrees (at 4.8V)	1 Ch.