

#### Introduction

There are many expansion board and prototyping kits available in market, which are good for experimental purposes but it's hard to find the one which is designed for real world application or to be used as an end product. The SX142 is not only designed for prototyping but to cater most of real world applications for automation and control.

In a typical automation and control system there are some inputs and outputs which are connected to myriad of external sources: buttons, switches, sensors, relays, and communication devices, etc. In certain environments and situations, these sources can pose a threat to the electronics – especially if those electronics are designed without thought of protection. The SX142 is designed with adequate protection to connect with these sources and be used as an end product in real world industrial applications.

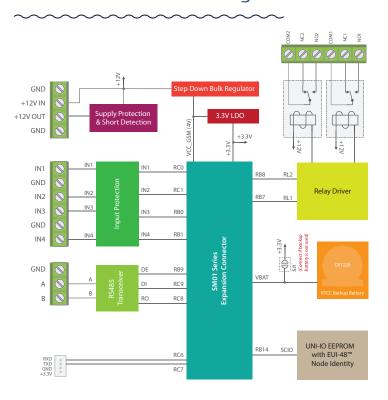
## **Expansion Board Features**

- Supports all SM01 Series Modules
- Prototyping area for additional functionalities.
- CR1220 battery holder for RTCC
- 2Kb UNI-IO EEPROM with EUI-48™ Node Identity
- Auxiliary supply output protected with resateable fuse and short detection.

# **Expansion Board Specification**

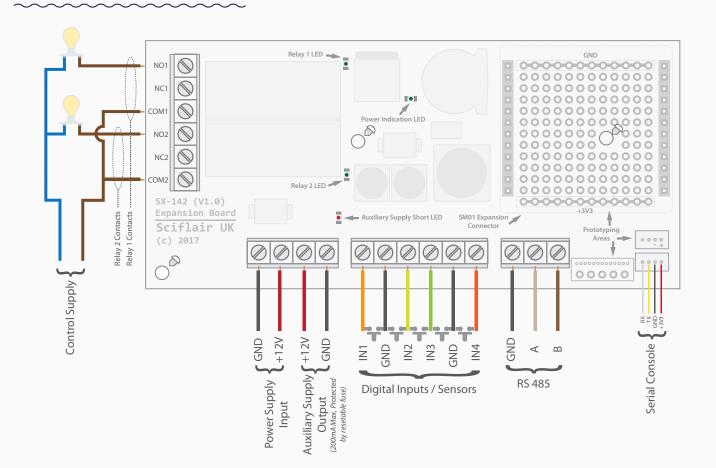
- 4 Digital Inputs
- 2x 10A Relay outputs
- 1x auxiliary supply output
- 1x RS485
- 1x console interface
- Dimension: 120x56mm
- Supply Voltage: 12V (24V Optional)

### SX-142 Hardware Block Diagram



SM01 to SX-142 Pin Mapping		
SM01	SX-142	Description
RA1	-	Free for prototype
RA0	-	Free for prototype
RB3	-	Free for prototype
RB2	-	Free for prototype
RB1	IN4	Digital Input4 (Internal pullup)
RB0	IN3	Digital Input3 (Internal pullup)
RC1	IN2	Digital Input2 (Internal pullup)
RC0	IN1	Digital Input1 (Internal pullup)
RC9	DI	RS485 Data In
RC8	RO	RS485 Data Out
RC7	TXD	Console TX
RC6	RXD	Console RX
RB9	DE	RS485 Data Enable
RB8	RL2	Relay 2 Output
RB7	RL1	Relay 1 Output
RB14	SCIO	Serial EEPROM SCIO Pin

### SX-142 Connection Diagram



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