

# XL6009 Step-up Power Module - Manual

## Max current 4A

This DC-DC Module is based on IC XL6009E1 which is a high-performance step-up switching current (BOOST) module. The module uses the second generation of high-frequency switching technology XL6009E1 core chip that offers superior performance over the first-generation technology LM2577. XL6009 replaces LM2577 module as LM2577 is about to be phased out.



## Features

- Wide input voltage range of 3V – 32V (optimum operating voltage range is 5 – 32V)
- Wide Output voltage range of 5V – 35V (Adjustable using on board preset)
- Built in 4A MOSFET switches enables efficiency of up to 94% (LM2577 current is 3A)
- High switching frequency of 400KHz, can use a small-capacity filter capacitor that can achieve very good results (LM2577 switching frequency is only 50KHz)
- Operating temperature:-40°C~+85°C

## Pins

- IN+ input positive
- IN- input negative!
- OUT+ output positive
- OUT- output negative

## How to increase input voltage using XL6009 Adjustable Step Up Voltage Booster DC to DC

- Connect positive and negative input of XL6009 module with input DC source.
- Connect the output of XL6009 module with Output load
- Adjust variable resistor (potentiometer) on XL6009 module.



Specifications	Value
Type	Non-Isolated Boost ( BOOST )
Rectification	Non-synchronous rectification
Input Range	3V ~ 32V
Output Range	5V ~ 35V
Input Current	4A (maximum), load 18mA ( 5V input, 8V output, no-load is less than 18mA . The higher the voltage, the no-load current increases.)
Conversion efficiency	<94% (the greater the current, the lower the efficiency)
Switching frequency	400KHz
Output ripple	50mV (the higher the voltage, the greater the current, the greater ripple)
Load Regulation	± 0.5%
Voltage Regulation	± 0.5%
Working temperature	-40 ° C ~ +85 ° C
Dimensions	43mm * 21mm * 14mm (length * width* height)