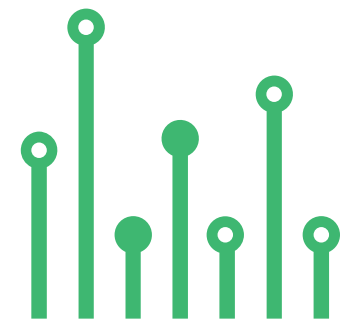


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POWER SUPPLY



# 12V Step-Up DC-DC Converter from 1.8V to 5V Input



SKU: EL145312

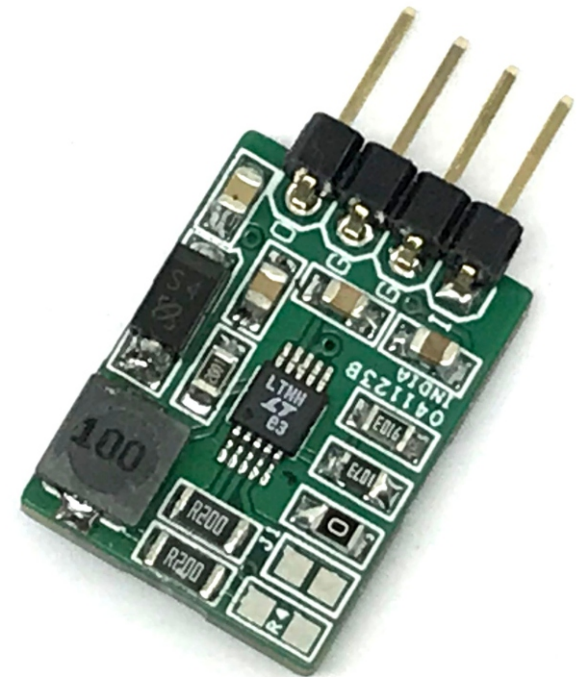
# 12V Step-Up DC-DC Converter from 1.8V to 5V Input



This is a DC/DC converter that combines a traditional voltage feedback loop and a unique current feedback loop to operate as a constant-current, constant-voltage source. The project has been designed using the LT1618 chip. The board provides 12V/150mA output, from input supply 1.8V to 5VDC. The LT1618 uses a constant frequency, current mode control scheme to provide excellent line and load regulation.

## FEATURES

- Input Supply 1.8V to 5V
- Output 12V @ 150mA
- Boost Converter with 500mA Input Current Limit
- Operating Frequency 1.4Mhz
- PCB Dimensions 18.89 X 14.13MM
- Efficiency up to 80%
- Header Connector for Input and Output
- Low Profile, small size PCB

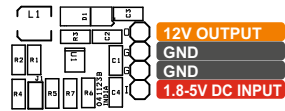


The LT1618 step-up DC/DC converter combines a traditional voltage feedback loop and a unique current feedback loop to operate as a constant-current, constant-voltage source. This fixed frequency, current mode switcher operates from a wide input voltage range of 1.6V to 18V, and the high switching frequency of 1.4MHz permits the use of tiny, low-profile inductors and capacitors. The current sense voltage is set at 50mV and can be adjusted using the IADJ pin.



# Connections

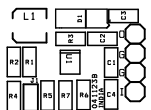
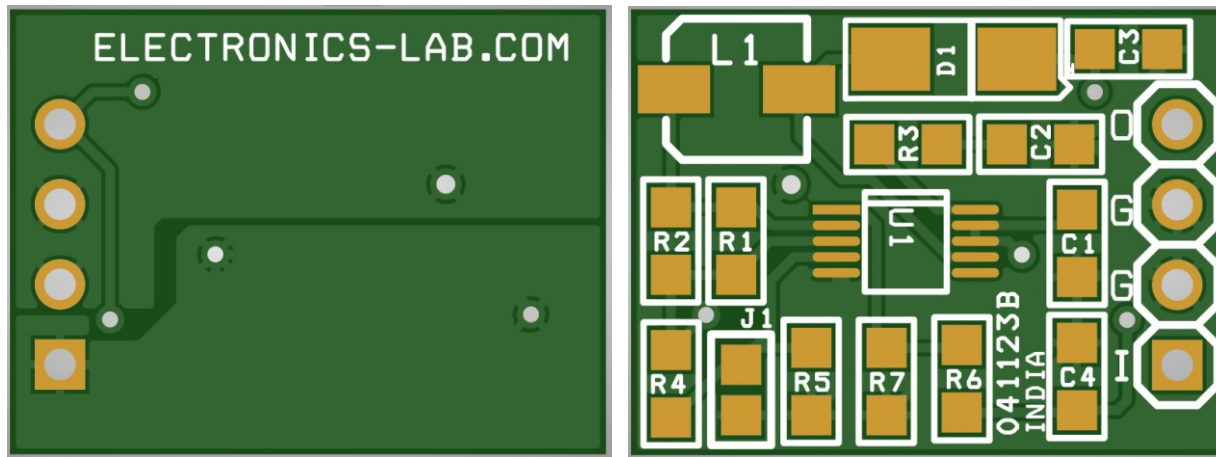
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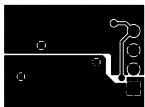
## Connections CN1

- Pin 1 = Input Supply 1.8V To 5V DC
- Pin 2 = GND
- Pin 3 = GND
- Pin 4 = Output 12V DC

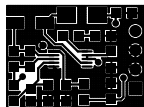
# PCB



SILK SCREEN TOP



BOTTOM LAYER



TOP LAYER

PCB DIMENSIONS 18.89 X 14.13MM

# Parts List

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BOM						
NO	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	4 PIN MALE HEADER PITCH 2.54MM	ADAM TECH	DIGIKEY	2057-PH1RB-04-UA-ND
2	2	C1,C3	4.7uF/16V X7R CERAMIC SMD SIZE 0805	SAMSUNG	DIGIKEY	1276-2970-1-ND
3	1	C2	10nF/50V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
4	1	C4	2.2uF/16V X7R CERAMIC SMD SIZE 0805	TDK	DIGIKEY	445-1420-1-ND
5	1	D1	SS14 FAST DIODE	ON SEMI	DIGIKEY	SS14CT-ND
6	1	J1	OPEN/SOLDER JUMPER			
7	1	L1	10uH	BOURNS	DIGIKEY	SRR4011-100YLCT-ND
8	2	R1,R2	0.2E 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
9	1	R3	2K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
10	1	R4	DNP			
11	1	R5	0E SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
12	1	R6	909K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
13	1	R7	107K 1% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
14	1	U1	LT1618 MSOP 10PIN	ANALOG DEVICES	DIGIKEY	LT1618EMS#TRPBFCT-ND







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