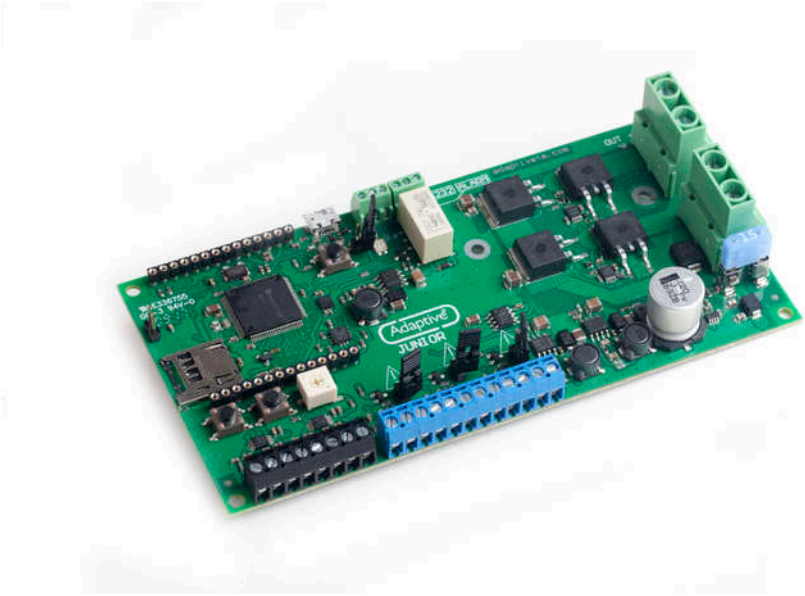
Adaptive® JUNIOR Controller
ADJ-48-450-UR



Features

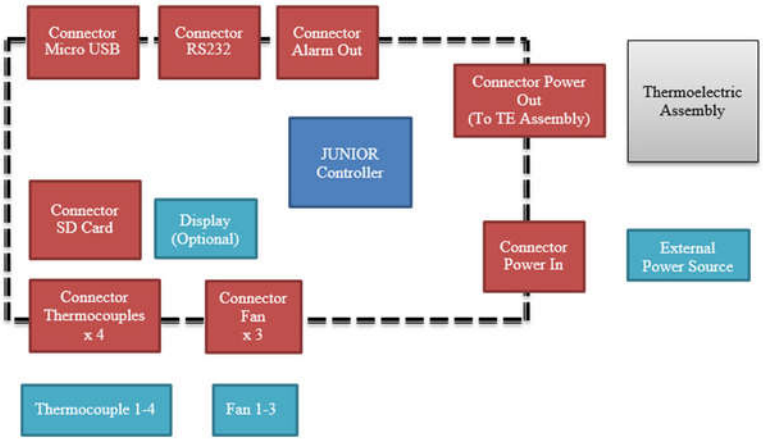
- High efficiency load driver
- 4 external thermocouple inputs
- 3 independent programmable fan outputs
- Alarm output
- USB 2.0 and RS232 communication interfaces

Description

The Adaptive® JUNIOR is a PID controlled pulse width modulator (PWM), intended for thermoelectric cooler or heater applications that require a uni or a bidirectional drive source for accurate temperature control. The controller is capable of operating in a standalone mode, it is also supported by user-friendly PC software. There are additional quick set-up options for manual setpoint adjustment and a selectable fan voltage available.

Optional extras -
- System parameters can be monitored through an LCD.
- Large number of datapoints can be logged on a micro SD card
- New features will be added (HVAC extension, executable user code)

System Architecture



PC Software

Download the user-friendly PC software from:
adaptivete.com/downloads

For more information visit: www.AdaptiveTE.com

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Specifications

Input voltage range (TEG harvester)	11V to 48V DC
Maximum load (Natural convection)	15A or 250W
Maximum load (Forced convection)	15A or 450W
Control temperature	-50^{0}C to +250^{0}C
Operating temperature	-25^{0}C to +85^{0}C
Compatible fans	2, 3 and 4 wire fans
Fan output voltage range	12V, 24V, 48V
Thermocouple type	K (More types to come)
Communication interface	USB, RS232
Storage	Micro SD, EEPROM
Temperature control accuracy	+/- 0.5^{0}C
Protection	Overcurrent, temperature, fan speed

Further information

- Application type - Fans & thermal management
- Application sub type - Electronics heating & cooling
- Contents: 1x controller board (heatsink and LCD display are optional extras)

Adaptive Thermal Controllers - Part Numbers

ADJ = Adaptive Junior Controller
24 / 48 = Voltage
450 = Wattage

Connection type
U – USB connection, R – RS232 connection

Suffix
No additional number - standard
Additional number : 001 – 999 – custom option

For more information visit: www.AdaptiveTE.com

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Web: www.etdyn.com Tel: +44(0)116 279 6899 E-mail: info@etdyn.com