

## Energy Harvesting Network

London, 19-03-2015

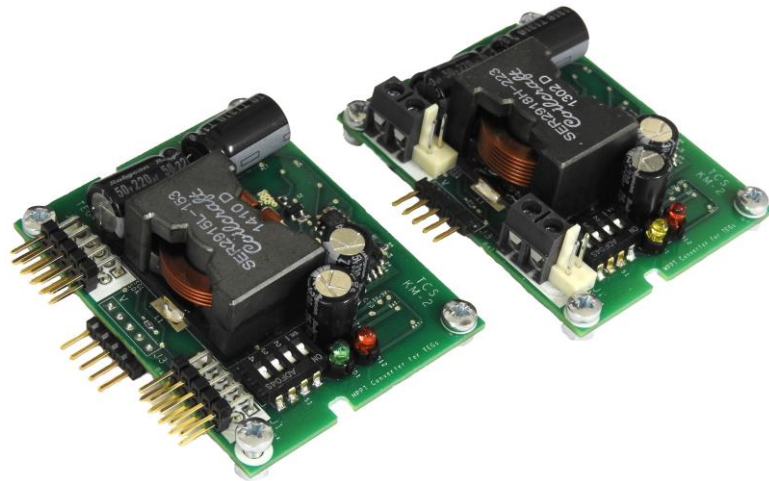
# Who, What, Why

- TCS is a spin-out from the University of Glasgow
- We have strong R&D focus and we sell products for thermoelectric systems and sensors
- We offer:
  - thermoelectric systems design and simulation
  - electronics for TEG power generation from milliWatts to hundreds of Watts.

# Thermoelectric Power Generation:

## KM2 Series

- High Electrical and MPPT efficiency
- Battery Interface
- Communication Interface
- Optional Measurements Interface
- 63 W, 2-50 V rating

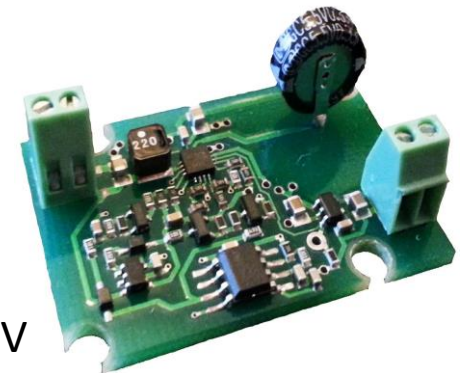


## AM2 Series

- 97% MPPT, every second
- Integrated 5V supercap and LDO
- 400 mW, 550 mA max input
- Vin from 80 mV to 5 V
- Also available for solar cells

## AM3 Series (available soon)

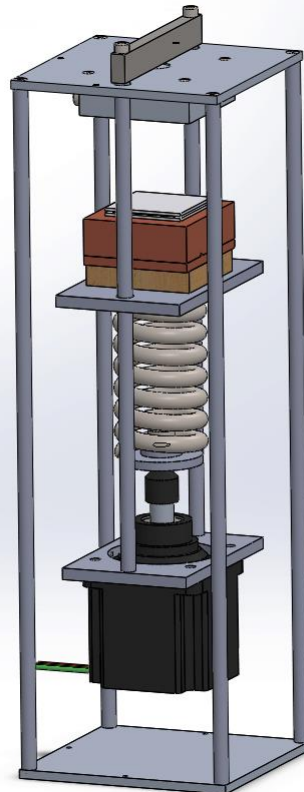
- $20 \text{ mV} < V_{in} < 0.5 \text{ V}$
- 2.2 V LDO output



# Other Products

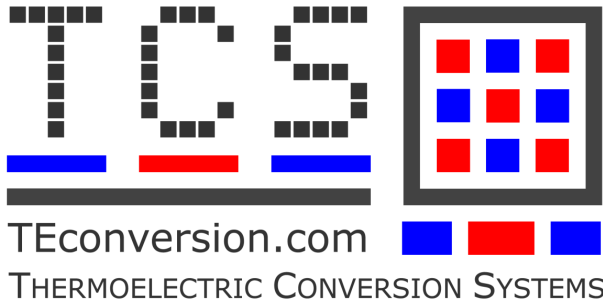
## Test Fixtures for Thermoelectric Generators and Heat Pumps

- Clamping force from 10 to 5000 N
- Hot-side temperature up to 700°C
- Water-cooled cold side
- Devices up to 80 mm x 80 mm
- Fully automatic, with pressure compensation
- Single or multi-channel
- Test multiple modules simultaneously under different operating conditions
- I-V curve and data in Excel
- Constant-power or temperature



## RO2 Series: Immediate TEG or PV I-V Curve Plotter

- Obtains the electrical characterisation instantaneously
- Entry-level: displays  $V_{oc}$ ,  $V_{MP}$ ,  $I_{MP}$ ,  $I_{sc}$
- High-end: provides the complete I-V curve and can be interfaced to SD cards or PCs.



# Services

- Customisation of any converter, controller and test fixture
- Advise on mechanical assembly and interface materials
- In-house test and characterisation
- Volume discounts available
- PCB and software design
- We are able to participate as a Partner or Subcontractor in large R&D projects.