

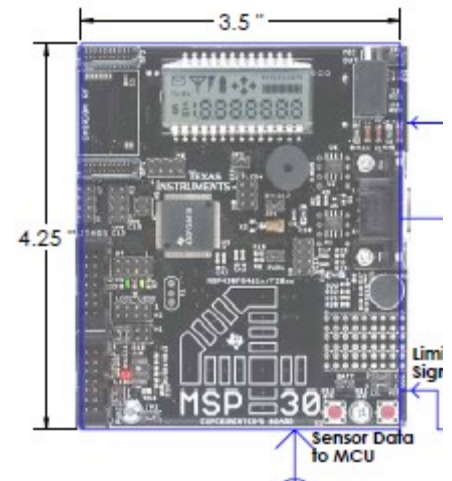


## FTEGS

### Fresnel Thermoelectric Generator System

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Our project consists of a self contained, automated solar tracking box that is designed to capture as much sunlight as possible and turn that into energy. We use an accurate beam collection process and thermoelectric materials to covert heat into electricity. Currently, we are using relatively cheap and widely available materials, but soon we hope to use newly developed materials which have a much higher efficiency and the possibility to overtake photovoltaic cells in production of electricity.



Using a microcontroller and custom software program, we determine if there is enough sun to turn on, and if so, direct the box to the angle that will have the most direct sunlight. The lens focuses the beam onto the thermoelectric material which causes current to flow.

Our unit strives to be a portable energy solution that can be deployed to anywhere in the world.

