



## ABOUT CAP-XX

CAP-XX develops high power, high energy supercapacitors in thin, flat, prismatic packages, which enable smaller, lighter, more functional and longer-running electronic products.

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# Nanotechnology at work

Nanotechnology is an emerging scientific field creating materials, devices, and systems at the molecular level. By being able to work at this ultra-small scale, nanotechnology is being used to deliver innovations in industries including clean energy, environment, health and personal care, electronics, transport, construction, telecommunications, manufacturing and mining.

## Digital power for mobile devices

Overcoming shortfalls in battery life has been a key driver of Australian firm CAP-XX. As the information revolution unfolds, there is a strong trend towards making consumer equipment smaller, portable and more highly functional. This, in turn, is greatly increasing demands for battery power systems to be light and small, but still provide long run times.

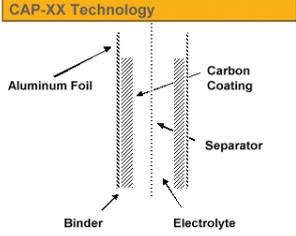
The old solution for mobile phones or personal digital devices was to design overly large batteries for peak power. But as size and weight play heavily in electronics design, a more innovative approach was required.

CAP-XX has focused on applying high energy supercapacitor solutions in small, thin, flat, prismatic packages that improve battery life and enable new products that have previously not been possible due to battery or other system limitations.

Supercapacitors are unique in that they are able to combine the energy storage properties of batteries with the power discharge characteristics of capacitors. Each CAP-XX supercapacitor device is manufactured from many layers of nano-structured carbon, separated by a porous polymer film and filled with a liquid electrolyte. The nano-scale of the device allows for lighter, more functional and longer-running electronic devices such as cameras, notebook PCs, digital music players, meter readers, and medical diagnostic devices. These capacitors have an extremely high energy density and are able to hold a very high charge which can be released in a controlled manner.

CAP-XX's breakthrough technology has a number of benefits for incorporation into new devices:

- Extends battery run time
- Provides backup power
- Allows low/high temperature operation
- Minimizes space requirements
- Reduces battery size, so lightweight devices
- Enhances load balancing when used in parallel with a battery
- Environmentally friendly



The CAP-XX supercapacitors are currently the fastest responding in the world. As the demand for energy hungry portable and wireless electronic equipment grows, CAP-XX have used nanotechnology to find a solution to meet this growing need.