



## Micro Hydrogen™ Systems for Portable Power

The convergence of voice, data and multimedia is driving an endless demand for more power/energy in cellphones and other portable devices. Angstrom's unique **Micro Hydrogen™** technology delivers "better than batteries" performance, including:

- Long run times
- High energy density
- Fast refueling (minutes rather than hours)
- Independence from electrical grid
- Clean, safe hydrogen fuel
- Environmental benefits, including no toxic elements
- Small form factor

## Better than Batteries™

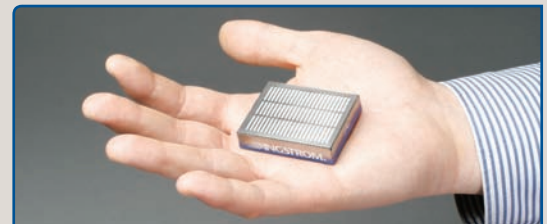
Angstrom Power is designing and producing the next generation of clean, safe portable power. Angstrom's innovative **Micro Hydrogen™** technology is competitive with incumbent battery technology and capable of powering tomorrow's multi-purpose communications devices. Angstrom solutions deliver long run-times, fast recharging and small size in addition to environmental benefits.

## Micro Hydrogen™ for Device Integration

Angstrom's record-breaking AXS is a complete, fully integrated fuel cell system that provides more than 3 Watts peak power and 1 Watt average power with an energy density of greater than 300Wh/l in a 25cc package. Angstrom's AXS fuel cell system can be configured to fit into cell phones, PDAs, two-way radios and other devices. Angstrom also offers a complete suite of hydrogen fuel cell, fuel storage and refueling solutions.



Angstrom's 1 watt LED hydrogen fuel cell flashlight provides continuous light for 24 hours on a single charge. Now available for purchase.



AXS fuel cell system. 300Wh/l in a 25cc form factor. Standalone power for portable electronics and handheld devices. Available for product integration.

## Demonstration Projects

Angstrom offers high-touch, high-visibility hydrogen fuel cell demonstration packages for public awareness, government outreach and fleet/industrial trials. Angstrom's suite of **Micro Hydrogen™** products maximize the impact of hydrogen power and fuel cell technology by deploying 'ready-today' devices that are instantly adaptable to real-world applications.



Angstrom is ready to provide you with a complete hydrogen demonstration project today, including user training, media outreach and full program support. Universities, search and rescue teams, airports, hospitals, transportation districts and private business have all benefited from Angstrom's demonstration projects.

## Angstrom Technology

Angstrom has amassed a substantial portfolio of technical and business model patents related to **Micro Hydrogen™** systems. Angstrom's novel architecture is well suited for volume manufacture and our fuel cells can be designed to almost any shape or size. The key to Angstrom's fuel cell technology is the ability to pack a large amount of surface area into a small volume using a proprietary micro-structured topology. This enables high power and long run-times within a very small package.

## Products

Angstrom's **Micro Hydrogen™** fuel cell products are available today.

- **A2 flashlight:** 1W LED flashlight delivers over 24 hours continuous run-time on a single refueling
- **G2 fuel cell charger:** 5 Volt, 2 Watt portable power source provides off-grid use and range extension for any battery operated device with a standard USB connection
- **B2 bicycle light:** LED bicycle light available for clean energy demonstrations
- **R1 refueling station:** portable hydrogen refueling stations for Angstrom devices



R1 Refueling Station



Hydrogen Bike Light



A2 Flashlight

Angstrom Power Incorporated | [www.angstrompower.com](http://www.angstrompower.com)  
#109 - 980 West 1st St, North Vancouver BC, Canada V7P 3N4  
T: 604.980.9936 F: 604.980.9937

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## Angstrom Power Benefits

### 1. Performance

**Micro Hydrogen™** fuel cells provide high on-board energy densities that enable longer run times and smaller devices.

### 2. Small Form Factor

Angstrom's **Micro Hydrogen™** fuel cell systems can be configured to fit into existing portable devices, including cell phones, PDAs and two-way radios.

### 3. Convenience

**Micro Hydrogen™** fuel cell systems can be "topped-up" (refueled) in minutes without the need for electric power. Backup batteries and complex battery management systems become a thing of the past.

### 4. Standards and Safety

Angstrom Power works with leading international standards bodies and government agencies, including the United Nations and US DoT, to advance hydrogen power and fuel cell technology.

### 5. Hydrogen

Hydrogen is the non-toxic, clean, safe fuel of the future.

