



# ADVENT

Technologies, LLC

Honey Badger™ & UltraCell™ Fuel Cells

MADE IN THE USA

## XX55

PN: SY011011

## EXTREME MOBILE POWER FOR DEMANDING APPLICATIONS

The **XX55™** reformed methanol fuel cell is the industry's newest ultra compact and highly portable fuel cell. The XX55 is designed to meet the rugged off-grid power needs of performance-demanding military and commercial users.

The fuel cell is powered by ultraclean, biodegradable methanol, providing quiet, nearly emissions-free operation. The system is the size of a typical hardbound book and four times lighter and six times smaller than the nearest production portable fuel cell system in its power class.

Scaled from UltraCell's award-winning and field-proven XX25™ fuel cell system, the XX55 delivers 50 watts of continuous power and up to 85 watts of peak power. It can run continuously off the grid for up to two weeks with a single hot swappable fuel tank. Its small size makes it inconspicuous, while its long life means that no servicing trips are needed for highly remote or covert surveillance applications.

The XX55 is ideal for a wide variety of higher-power electronic applications including radio and satellite communication gear, remote or mobile surveillance systems, and laptop computers and battery charging.



## FEATURES AND BENEFITS

- ❖ UltraCell Reformed Methanol Fuel Cell (RMFC) technology does not contain materials which are damaged at temperature extremes
- ❖ Only UltraCell's unique RMFC chemistry allows for a single fuel mixture which operates from -30 to +50C unlike other technologies which require desert and winter fuel mixtures
- ❖ Only UltraCell fuel cells can be stored in OFF mode between -30 to +80C without artificial heating unlike other technologies which require complex heating kits for storage below 0C.
- ❖ Only UltraCell fuel cells can startup from a -20C cold soak without additional thermal kits
- ❖ Autonomous operation with sleep mode functionality
- ❖ Safe for indoor and in-vehicle use: Emissions meet OSHA standards
- ❖ Reduces weight: 70% or more weight savings for a 72-hour mission
- ❖ Industry-leading performance: Operates at high-altitude and cold temperatures
- ❖ Operates anywhere: Quiet, rugged design for jungle, desert, and arctic environments
- ❖ Extended runtime: Hot swappable cartridges and optional long runtime external fuel tanks
- ❖ Simplifies logistics: Powers different devices at different voltages with application-specific tethers
- ❖ Unique hybrid battery system: Delivering 50 watts of continuous power and up to 85 watts peak power
- ❖ Unique clip-on and clip-off battery module design: Enables the use of a wide range of off-the-shelf batteries

# XX55 SYSTEM SPECIFICATIONS

## FUEL CELL SYSTEM

OPERATIONAL MODES	On/Off/Sleep
CONTINUOUS MAX POWER	50 W ( 80 watts peak with battery module)
OUTPUT VOLTAGE	12V-33V Specified at time of order
FUEL COMPOSITION	Methanol and water mixture

## PHYSICAL SPECIFICATIONS

LCD DISPLAY	MIL Spec NVG compatible, displays remaining runtime and fuel level
CABLES	Application-specific tethers available (See Accessory Data Sheet)
OUTPUT CONNECTOR	Military specified
DIMENSIONS	10.7" x 8.1" x 3.9" (27.2cm x 20.6cm x 9.9cm) Without Battery and Cables
WEIGHT	6.6lbs (3.0kg) Without Battery, Cartridge, and Cables
COLOR	Tan
BATTERY	Clip-on AA (Primary), Clip-on Li80, or Customer External

## ENVIRONMENTAL REQUIREMENTS

OPERATING TEMPERATURE	-4°F to +122°F (-20°C to +50°C)
STARTUP TEMPERATURE	Minimum -4°F (-20°C)
STORAGE TEMPERATURE	-40°F to +140°F (-40°C to +60°C)



## FUEL OPTIONS

Option	Part Number	Weight	Dimensions	Capacity (Whr)	Runtime (40W)
550cc Cartridge	CR011051	1.4lb (620g)	9.25" x 2.95" x 2.56" (23.50cm x 7.50cm x 6.50cm)	440	11 hours
XRT-75	CR011052	3.0lb (1.4kg)	10.50" x 7.00" x 1.50" (26.25cm x 17.50 x 3.75cm)	1200	30 hours
XRT-200	AC611000	7.9lb (3.6kg)	12.25" x 5.75" x 5.75" (30.63cm x 14.38cm x 14.38cm)	2,500	2.6 days
XRT-400	AC611004	13lb (5.9kg)	13.2" x 9.8" x 7.5" (33.5cm x 24.9cm x 19.0cm)	5,000	5.2 days
XRT-1000	AC611001	37lb (16.8kg)	18.00" x 9.50" x 10.00" (45.00cm x 23.75cm x 25.00cm)	12,500	13 days

A filling station, CliC-it, is available upon request to re-fill cartridges in the field  
UltraCell can assist in sourcing CliC-it certified fuel for onsite refilling



## ADVENT TECHNOLOGIES, LLC

5637 La Ribera Street Suite A Livermore CA 94550 USA  
Tel: (925) 455-9400 Fax: (925) 455-7750  
www.ultracell-llc.com sales@ultracell-llc.com