

# Modular Power Supply for novel HIFU medical device

## INDUSTRY

Medical  
Electrosurgery

## SOLUTION

Artesyn® uMP series  
GEN II and Excelsys™  
CoolIX®1800

## EQUIPMENT

High Intensity Focused  
Ultrasound (HIFU)

## CHALLENGE

High Intensity Focused Ultrasound (HIFU) is a rapidly emerging minimally invasive, non-ionizing technology used to treat breast, uterine, prostate, and other tumors. Diagnostic medical ultrasound is typically in the range of 3–20 MHz, while the majority of therapeutic ultrasound typically resides in the 0.54–2 MHz range.

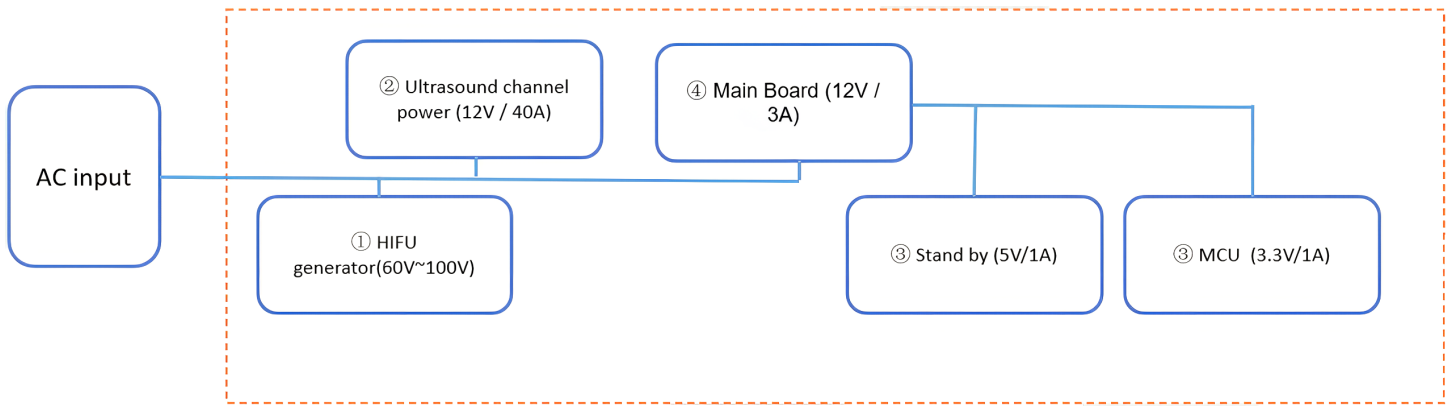
A major medical device company was designing a High Intensity Focused Ultrasound (HIFU) system for thermal ablation of cancer cells. They were seeking a power supply company with a broad medical portfolio, short lead times, and exceptional engineering support. The customer was looking for 60 V~100 V @1800 W for the generator and multi output modular power for control systems.

## SOLUTION

The AE team came up with two solutions for this HIFU end system to match the requirements and to ensure that the end customer would get optimal performance and the lowest total cost of ownership for their system design. The solutions were for the generator power: CX18S-DDDDDD-P5A-A and for the system power: uMP09C-S2L-SKL-03-A-440.

Advanced Energy's Artesyn  $\mu$ MP series GEN II power supply is a configurable power supply with market-leading density and efficiency. It features a very wide 85 to 264 VAC input voltage range and employs active power factor correction to minimize input harmonic current distortion and to ensure compliance with the international EN61000-3-2 standard while also having a power factor of 0.99. These power supplies also feature active AC inrush control to automatically limit inrush current at turn-on to 40 A maximum.





Advanced Energy's CoolX1800 series, part of our Excelsys product line, is an intelligent modular power supply. The CoolX1800 delivers an incredible 1800 W in a compact 1U high package with PMBus™ digital communications, control and reliability in addition to the most comprehensive feature set and specifications available.

## RESULT

Advanced Energy's proven and highly reliable medical power supply solutions and broadest medical power portfolio made us the most obvious choice for this medical device customer. Providing a reduced lead-time for initial samples and meeting medical safety requirements including 60601 4th edition EMC allowed for quick integration into the end system.

Our best-in-class quality management system coupled with our dedicated medical engineering and customer support allowed us to be the power solution provider of choice for this customer. We also have technical experts that provide world-class service and consulting that enhances our ability to collaborate on future requirements.



For international contact information, visit [advancedenergy.com](http://advancedenergy.com).

[powersales@aei.com](mailto:powersales@aei.com)

PRECISION | POWER | PERFORMANCE | TRUST

Specifications are subject to change without notice. Not responsible for errors or omissions.  
 ©2023 Advanced Energy Industries, Inc. All rights reserved. Advanced Energy and AE are U.S. trademarks of Advanced Energy Industries, Inc.