



# How Embedded Computers Can Save Lives - Mobile Stroke Treatment Units



Nearly 800,000 people suffer from strokes each year in the United States and administering an anti-blood clot drug called tissue-type plasminogen (tPA) must be done within minutes or else the consequences can be devastating. To combat this, new mobile stroke treatment units in Germany and the U.S. with mobile computed tomography (CT) scanners are available for emergencies and can take brain images within two minutes.

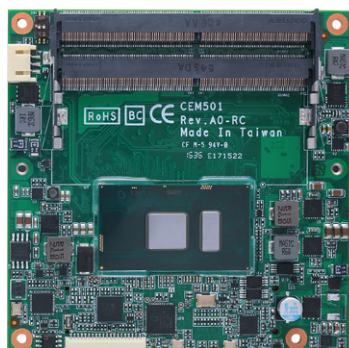
According to the Center for Disease Control, effective stroke treatments need to be administered within 3 hours of a patient's first symptoms – or else they could run the risk of losing millions of brain cells that can lead to long-term disability. Furthermore, strokes kill nearly 130, 000 people in the U.S. each year. However, delays in traffic, long waiting lines at the hospital and time-consuming brain scans mean that most stroke victims actually might miss this window of opportunity. With the help of a mobile stroke treatment unit with specialized medical equipment, patients can receive a speedy CT scan, have their data wirelessly sent to be analyzed by a trained neurologist and be given a specific treatment needed to ensure that lasting brain damage does not occur.

This new technology can be accomplished through the use of Pico-ITX (PICO500 and PICO843) or COM Express (CEM501) embedded motherboards with high performance Intel® Core™ I family processors – which provides these mobile units with the high processing power needed to perform demanding actions like initiating a brain scan in a short amount of time or wirelessly transmitting data for analysis back to a hospital. These embedded motherboard product lines are known for their small form factor, enabling them to work perfectly in a space constricting mobile stroke treatment unit. These embedded motherboards are also highly durable and robust, featuring extended operating temperature ranges for operational stability in hazardous environments. Furthermore, mobile stroke units can utilize medical-grade panel PCs or all-in-one touch panel PCs as human machine interfaces, allowing healthcare professionals to gain easy access to patient information and as a tool for showing diagnosis results.

## Product Showcase

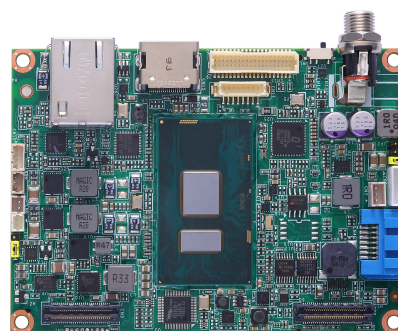
Axiomtek's advanced embedded motherboards and medical-grade touch panel PCs designed for use in medical industry applications. Axiomtek's embedded motherboards feature high performance CPUs, extensive storage capabilities, and various form factors to satisfy the complex needs of the medical industry. Axiomtek's MPC and touch panel PC products are designed for HMI use and feature options for resistive or capacitive touchscreens, enhanced graphical display, wireless communication options, water/dust-proof designs, and various screen sizes.

Axiomtek also provides design assistance services that can help many engineers and IT professionals who desire trouble-free turnkey solutions as well as quick and successful deployment of their projects. Axiomtek's design assistance team can help take away the various headaches associated with a project's development and deployment processes.



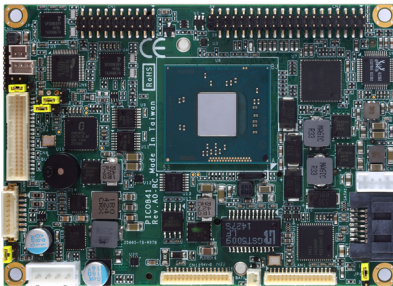
## CEM501

- High performance 6th Generation Intel® Core™ i7/i5/i3 processors
- Two DDR4-2133 SO-DIMM support max up to 32GB which allows high memory capacity and high rate data transfer speed
- Rich I/O options six PCIe x1, three SATA-600 interfaces, one Gigabit LAN port, four USB 3.0 ports, and 4-IN/OUT DIO for peripheral devices and data transfer
- Features Intel® Gen 9 HD Graphics provides LVDS and two DDI ports for supporting HDMI/DVI/DisplayPort, enabling it to drive multiple 4K HD displays without the need of a discrete graphics card



## PICO500

- High performance 6th Generation Intel® Core™ i7/i5/i3 processors
- Integrated Intel® HD graphic engine supports HDMI and 18/24-bit dual channel LVDS that delivers Ultra HD 4K visual experiences
- Flexible board-to-board connector that integrates HD audio, four USB 3.0 ports, one PCIe x1, one DDI, and two UARTs interfaces for high expandability options
- Easy maintenance with Intel® AMT 11 technology on Intel® Core™ i7 and i5 SKU for lower total cost of ownership



## PICO843

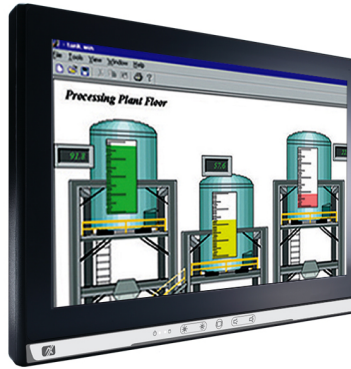
- High performance Intel® Celeron® J1900 quad core or N2807 processors
- Fanless design with an extended operating temperature range of -20°C to +70°C
- Rich I/O options including two RS-232/422/485 ports, four USB 2.0 ports, one Gigabit Ethernet port, HD audio, VGA, and one 18/24-bit single/dual channel LVDS
- One full-size PCI Express Mini Card slot with mSATA, one half-size PCI Express Mini Card slot, and one sim card slot for wireless communication options



## MPC153-834

- High performance Intel® Celeron® J1900 quad core processor
- 15.6-inch WXGA 300 nits brightness display with projected capacitive touch or 5-wire flat resistive touch screen
- EN60601-1/CE/FCC class B certifications for medical applications with antimicrobial plastic enclosure to prevent bacterial invasion
- Rugged IP65-rated front bezel and IPX1 full enclosure for system protection against dust/liquid spillage





## **GOT515W-834**

- High performance Intel® Celeron® J1900 quad core processor
- 15.6-inch WXGA wide screen TFT LCD display with LED backlight and 5-wire flat resistive touch
- Rich I/O options with two Gigabit Ethernet ports, four USB 3.0 ports and two COM ports
- Rugged IP65-rated front bezel and IPX1 full enclosure for system protection against dust/liquid spillage