

HeartBeam Awarded New U.S. Patent Expanding Acoustic Sensing and Fluid Monitoring Capabilities of Its Cable-Free ECG Device

- *Patent extends HeartBeam's ECG hardware platform with multi-modal sensing capabilities*
- *Acoustic sensors enable HeartBeam's device to function as a "digital stethoscope" to assess heart valve function*
- *Thoracic impedance capability opens the door to heart failure monitoring without a surgical procedure*
- *HeartBeam now holds 26 issued patents worldwide, reflecting continued investment in building a durable IP moat around its platform*

SANTA CLARA, Calif.--(BUSINESS WIRE)-- [HeartBeam, Inc.](#) (NASDAQ: BEAT), a medical technology company focused on transforming cardiac care by providing powerful cardiac insights, today announced the allowance of a new U.S. patent that significantly expands the capabilities of its credit card-sized, cable-free ECG device. The patent covers the integration of acoustic sensing and thoracic impedance measurement into the existing ECG hardware platform, supporting future applications in structural heart disease and heart failure monitoring.

The new capabilities protected by the patent are promising for enabling earlier identification of structural irregularities in the heart valves and signs of fluid accumulation for heart failure patients without requiring a new form factor. The patent covers the integration of acoustic sensors into the foldable arms of the HeartBeam device, enabling the use of the device as a "digital stethoscope." The sensors are intended to capture the sounds produced when the heart's valves open and close, including the mitral and tricuspid valves, which generate characteristic sounds that reflect how the heart is functioning mechanically and structurally.

The patent also covers thoracic impedance measurement — the ability to inject a small, imperceptible current through the device's finger electrodes and measure the resulting voltage across the chest electrodes to assess how much fluid is present in the chest. HeartBeam's patent protects this capability in the Company's portable, patient-operated device. Unlike wrist- or finger-worn wearables, HeartBeam's device is used at the chest — the anatomically relevant location for both heart-sound and thoracic-impedance measurement. The allowed patent claims protect this capability as built into HeartBeam's device, positioning the platform where these signals are physiologically accessible.

Heart failure affects nearly 6.7 million adults in the U.S., costs an estimated \$30,000 per patient annually, and is one of the leading causes of hospitalization. One of the biggest challenges is that patients accumulate fluid over days before symptoms become severe enough to prompt a hospital visit. Earlier detection of fluid buildup could enable physicians to

intervene with diuretics or medication adjustments before hospitalization becomes necessary, improving patient outcomes while reducing healthcare costs.

“Continuous fluid monitoring remains a major challenge in heart failure care,” said John L. Jefferies, MD, MBA, MPH, FACC, FAHA, Professor, School of Public Health, University of Memphis. “While implantable pulmonary artery pressure sensors and implanted defibrillators with impedance sensing may be effective, they require procedures that many patients cannot or will not undergo. A non-invasive, patient-operated approach to thoracic impedance measurement could broaden access to meaningful home monitoring for a much larger population of heart failure patients. HeartBeam's work in this area is an encouraging step toward more accessible monitoring.”

“Heart failure is one of the most costly and devastating conditions in cardiovascular medicine, and one of the hardest to manage because fluid builds up silently over days before a crisis occurs,” said Branislav Vajdic, Ph.D., President and Founder of HeartBeam. “This patent not only deepens our IP foundation but also advances our strategy of building a multi-modal ambulatory cardiac sensing platform. The ability to detect fluid congestion and assess heart valve function from the same credit card-sized device patients already use for ECG rhythm monitoring may support future reimbursement pathways and broader clinical adoption.”

With this addition, HeartBeam now holds 26 issued patents worldwide, spanning signal acquisition, ECG synthesis algorithms, diagnostic applications, and device hardware across both the HeartBeam System and its investigational on-demand 12-lead patch. Moreover, the new patent reinforces the company's vision and leadership position in delivering patient-centric solutions to advance remote cardiac care.

About HeartBeam, Inc.

HeartBeam, Inc. (NASDAQ: BEAT) is a medical technology company dedicated to transforming the detection and monitoring of critical cardiac conditions. The Company has developed the first-ever cable-free device capable of collecting ECG signals in 3D, from three non-coplanar directions, and synthesizing the signals into a 12-lead ECG. This platform technology is designed for portable devices that can be used wherever the patient is to deliver actionable heart intelligence. Physicians will be able to identify cardiac health trends and acute conditions and direct patients to the appropriate care – all outside of a medical facility, thus redefining the future of cardiac health management. HeartBeam's 3D ECG technology received FDA clearance for arrhythmia assessment in December 2024, and the 12-Lead ECG synthesis software received FDA clearance for arrhythmia assessment in December 2025¹. The Company holds over 25 issued patents related to technology enablement. For additional information, visit HeartBeam.com.

Forward-Looking Statements

All statements in this release that are not based on historical fact are "forward-looking statements" While management has based any forward-looking statements included in this release on its current expectations, the information on which such expectations were based may change. Forward-looking statements involve inherent risks and uncertainties which could cause actual results to differ materially from those in the forward-looking statements, as a result of various factors including those risks and uncertainties described in the Risk

Factors and in Management's Discussion and Analysis of Financial Condition and Results of Operations sections of our Forms 10-K, 10-Q and other reports filed with the SEC and available at www.sec.gov. We urge you to consider those risks and uncertainties in evaluating our forward-looking statements. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. Except as otherwise required by the federal securities laws, we disclaim any obligation or undertaking to publicly release any updates or revisions to any forward-looking statement contained herein (or elsewhere) to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

¹Cleared Indications for Use

The HeartBeam System with 12-Lead ECG synthesis software is FDA cleared for arrhythmia assessment only. Refer to the Company's Cleared Indications for Use at <https://www.heartbeam.com/indications> for details on the intended use of its technology.

The acoustic sensing and thoracic impedance capabilities described are investigational and not FDA cleared.

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