

PROSPECTUS SUPPLEMENT

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**2,000,000 Units** □**Sensus Healthcare, Inc.**

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This Prospectus Supplement (this “Supplement”) amends and supplements the information contained in our Prospectus dated June 2, 2016 (the “Prospectus”). The Prospectus forms a part of our Registration Statement on Form S-1, Registration No. 333-209451, which we filed with the Securities and Exchange Commission (the “SEC”) on February 10, 2016, as subsequently amended on March 10, 2016, March 25, 2016, May 13, 2016 and May 19, 2016, and which was declared effective on June 2, 2016.

This Supplement should be read in conjunction with the Prospectus and is qualified by reference to the Prospectus. This Supplement is not complete without, and may only be delivered or used in conjunction with, the Prospectus and any future amendments or supplements thereto.

This Supplement forms a part of the Prospectus. Except as specifically amended by this Supplement, all portions of the Prospectus remain in full force and effect.

On June 3, 2016, we filed the Prospectus in accordance with Rule 424(b)(4) of the Securities Act of 1933, as amended (the “Securities Act”). Pursuant to the Prospectus, we offered 2,000,000 units in an initial public offering (the “Initial Public Offering”), each unit consisting of one share of common stock of Sensus Healthcare, Inc. and a three-year warrant to purchase one share of common stock at an initial exercise price of \$6.75 per share. Our Initial Public Offering closed on June 8, 2016.

The purpose of this Supplement is to disclose that on June 4, 2019, Sensus Healthcare, Inc. entered into an amendment to the Warrant Agreement with American Stock Transfer & Trust Company, LLC, as warrant agent, to extend the expiration date of the warrants issued as part of the units in our Initial Public Offering from June 8, 2019 until June 8, 2020. Accordingly, the Prospectus is amended to the extent described in the preceding sentence.

**Investing in our securities involves a high degree of risk. Please read the “Risk Factors” contained in the Prospectus and in the documents incorporated by reference into the Prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this Supplement or the Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

**The date of this Prospectus Supplement is June 4, 2019**

