CAP-XX Supercaps Power Spire Health's Remote Respiratory Monitoring for Patients with Chronic Respiratory Diseases

Supercapacitors handle peak power role to keep Spire Health Tag's battery small and form factor thin

Spire Health Tags adhere to a patient's clothing, can be washed and dried as normal, need no charging and last up to 12 months. They continuously measure a patient's respiratory effort, pulse rate and activity.

SYDNEY, AUSTRALIA, September 8, 2021 /EINPresswire.com/ -- CAP-XX Limited (LSE:CPX), the leading manufacturer of ultra-thin prismatic and cylindrical supercapacitors, announced that Spire Health, the leading provider of respiratory remote patient monitoring (RPM), has selected the CAP-XX supercap to provide the peak power needed to deliver respiratory and pulse rate monitoring for pulmonary patients in the company's new Health Tag garment-adhered sensor. The company's original Health Tags used CAP-XX supercapacitors to deliver wellness alerts to consumers. The new Health Tag's core focus is now healthcare, where the CAP-XX supercapacitors are used to notify a patient's care team of changes in their health in an effort to enable early interventions and prevent hospital admissions.

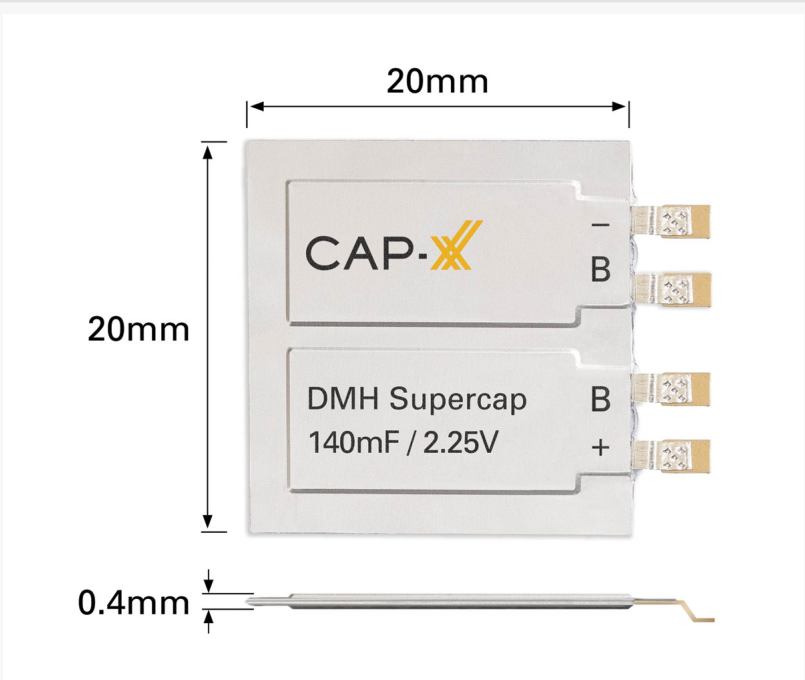
> CAP-XX's thin, prismatic supercaps address the size, weight and cost challenges of designing thin, sometimes disposable electronic IoT devices like wearables and portables."
>
> *Alex Bilyk, VP, Research and Development at CAP-XX*

Offloading the peak power role to the thin, flat supercapacitor allows Spire to keep the battery small to achieve the ultra-thin form factor of its wearable biosensor. The tag's 3V coin cell battery continuously trickle charges the CAP-XX HA114T supercapacitor (0.7mm thin, 120 millifarads, 130 milli-Ohms), which then provides the pulses of 660mW to power LED pulse rate notifications.

Spire Health Tags adhere to a patient's existing clothing, can be washed and dried as normal,

need no charging and last up to 12 months. The Health Tags use advanced algorithms and proprietary respiratory sensors to continuously measure, with medical grade accuracy, a patient's respiratory effort, pulse rate and activity. This data is displayed on the patient's mobile app. Deviations from clinical baselines are automatically detected and shared with the patient's care team through the healthcare professional dashboard. Changes in patient health are often detected many days before a patient reports symptoms or experiences physiological decline.

[View a video of Spire's remote respiratory monitoring solution here.]



CAP-XX supercap provides the peak power needed to send alerts to a patient's care team of changes in their health in an effort to enable early interventions and prevent hospitalizations.

"Spire Health Tags are the only commercial solution for remote long term, continuous monitoring of respiratory effort," said Phil Golz, Vice President, Spire Health. "The 100% passive sensor requires no interaction or engagement from patients, and research has shown that our algorithms can detect subtle changes in respiratory patterns days before patients are hospitalized due to acute exacerbations. This is tremendously exciting for the future of care for patients living with chronic respiratory conditions."

The CAP-XX HA114T supercapacitor's features include:
• 120 mF / 2.75 Volt
• 20 x 20 x 0.7 mm
• Very low ESR of 130 mΩ
• Up to 10 year life

"CAP-XX's thin, prismatic supercaps address the size, weight and cost challenges of designing thin, sometimes disposable electronic IoT devices like wearables and portables," said Alex Bilyk, VP, Research and Development at CAP-XX. "They help IoT device manufacturers add peak-power features, extend battery life, avoid oversized batteries, or even replace batteries when paired with an energy harvester."

About CAP-XX
CAP-XX (LSE:CPX) is a world leader in the design and manufacture of ultra-thin prismatic and compact cylindrical supercapacitors. Its prismatic supercapacitors are manufactured in Australia

and Malaysia and its cylindrical supercapacitors are manufactured in China. The company's strong intellectual property (IP) portfolio includes 21 patents worldwide. CAP-XX's ultra-thin prismatic supercapacitors are ideal for space-constrained electronics applications where small energy storage device size and thickness are important. The unique feature of CAP-XX supercapacitors is their very high-power density and high-energy storage capacity in space-efficient thin prismatic and compact cylindrical packages. For more information about CAP-XX, visit https://www.cap-xx.com/ or email sales@cap-xx.com.

About Spire Health
Spire Health is the leading digital healthcare company for continuous respiratory monitoring and actionable feedback. The Spire Health Tag enables remote patient monitoring with unparalleled adherence and clinical-grade accuracy. Spire Health's remote patient monitoring approach has the potential to identify and predict health events, enable early interventions, and prevent hospital admissions. Spire is backed by leading medical health investors and has received a grant from the US Department of Health and Human Services. For more information visit: www.spirehealth.com.

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