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PRESS RELEASE

September 14, 2015

Pi Innovo welcomes Proterra as an OpenECU[®] development customer

Pi Innovo is proud to announce that Proterra Inc. of Greenville, South Carolina, is using the OpenECU toolchain and M220 embedded controller hardware to develop new control capabilities for its growing portfolio of electric buses.

The Proterra engineering team was looking for a highly capable and flexible hardware and software development platform that could be used to develop its next generation of vehicle technologies. The OpenECU embedded control toolchain offered the capabilities it was seeking for the development phase of new technology introduction, while also providing a robust solution for full production.

Pi Innovo's OpenECU technology is based around a family of electronic controllers that are designed and tested to automotive production standards. Significantly however, they also offer flexibility to be modified to suit the control needs of different vehicle components, making it an ideal platform for rapid prototyping that can quickly be deployed in production.

"What was attractive to us about OpenECU was the fact that we could develop on a hardware and low-level driver and operating system software platform that was robust and already proven in production," said Matt Simonini, Controls Engineer at Proterra. "This left us free to develop our own control applications in Simulink[®] using OpenECU on the bench and on test vehicles. In doing so we had knew that once we were satisfied with the performance of our control strategies we could use the same proven hardware to put the system on production vehicles. We needed some I/O changes so that the controller hardware would interface well with our technology, and the team at Pi Innovo was able to deliver this. We're very happy with the performance of the system and the support we get from the Pi team."

The OpenECU M220 controller has shown itself to be the workhorse of the OpenECU family, supporting a wide range of production applications including hybrid-electric and pure electric vehicles, alternative fuel controls for combustion engines, and conventional engine control for engines from 1 to 4 cylinders.

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“Proterra is the type of organization that we love working with,” said Dr. Walter Lucking, CEO of Pi Innovo. “It is at the leading edge of its industry and is developing innovative technology for current and next generation electric buses. We’re very proud to be working with such a forward thinking organization.”

Pi Innovo will be exhibiting its OpenECU technology – including the M220 controller – at the Electric & Hybrid Vehicle Technology Expo, Novi, Michigan, USA, September 15-17, 2015, booth #1238, while Matt Horton, Proterra VP - Sales and Marketing, will participate in the keynote plenary session ‘The Evolving EV and Hybrid Roadmap’ on the morning of September 15.

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Picture available for download with this release: **Proterra Catalyst™ Electric Bus**

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Notes to editors

Pi Innovo is a world leader in the development and manufacture of electronics for the automotive, transportation, military and industrial markets. Using its OpenECU® platform, the same proven, robust, reliable and reusable ECU hardware can be applied in successive rapid prototyping development projects and fleet trials, or in niche production vehicles. Because all OpenECU modules are designed and manufactured by Pi Innovo, the company can meet individual customer’s needs by creating custom variants from prototyping to production applications. For more information visit: www.pi-innovo.com

Proterra Inc. is a leader in the design and manufacture of zero-emission vehicles that enable bus fleet operators to significantly reduce operating costs while delivering clean, quiet transportation to the community. Proterra has sold over 100 vehicles to 14 different transit agencies throughout North America. Proterra’s configurable EV platform, battery and charging options make its buses well suited for a wide range of transit and campus routes. With unmatched durability and energy efficiency based on rigorous U.S. certification testing, Proterra products are proudly designed, engineered and manufactured in America,



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with offices in South Carolina and Silicon Valley. For more information visit: www.proterra.com and follow them on Twitter @Proterra_Inc.

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Visit us at booth #1238 during the Electric & Hybrid Vehicle Technology Expo, Novi, Michigan, USA, September 15-17, 2015. Alternatively contact one of the regional business development contacts:

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