**Press information**

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**BVM is at the heart of level crossing safety updates**

There are more than 6000 level crossings in the UK’s rail network, and in 2017-2018 there were over 400 collisions or near misses between trains, vehicles and pedestrians. To improve performance and reliability of locally installed detection and monitoring systems, BVM was asked to upgrade and future-proof existing technology. The system is designed to detect obstacles on the ground and around the edge of the crossing barrier lines, with a LIDAR (Light Detection and Ranging) solution working as a complimentary obstacle detector to the existing RADAR system and managing a CCTV monitoring system recording the whole crossing and the road traffic lights. Given the installation location, vibration and temperature extremes were a significant consideration for a technically demanding system.

The physical size of the bespoke embedded computer was constrained by the existing solution. The new system is based on a Micro-ATX motherboard with an Intel i5 CPU processing a digital I/O card, a PCIe video card and 3G connectivity. After selecting the key system elements, 3D CAD models were created to design the aesthetics, i/o positioning and the thermal dynamics of the system before building prototypes. The system runs on a bespoke version of Windows Embedded Standard 7, with McAfee Application Control restricting running to listed applications only and protecting against malware. The BVM solution is a robust, stable embedded computer designed to run 24/7/365 in a safety critical environment under challenging environmental conditions.

By supplying a software and hardware integrated solution, the customer receives an ‘out of the box’ ready to run solution that is unpacked, plugged in and turned on with minimal set up required. BVM also provided in-house training around the embedded operating system to enable the customer’s engineers to be fully conversant with the details of the system.

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**Notes to Editors.**

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