



AHEAD OF WHAT'S POSSIBLE™

May 10, 2016

## Analog Devices and Cambridge Consultants Collaborate on Cost-Effective Monitoring System to Reduce Parking Frustrations

NORWOOD, Mass.--(BUSINESS WIRE)-- Analog Devices, Inc. and Cambridge Consultants today announced a cost-effective, smart monitoring system that helps ease parking frustrations for drivers. The innovative system saves drivers time and makes parking easier by monitoring space occupancy for on-street and indoor garage parking spaces without adding expensive infrastructure. This enables a number of significant parking improvements. For example, drivers can be assigned a parking space as they enter a car garage, enabling them to go straight to their allotted spot. Or they can request a specific space in advance if they plan to shop at a particular store. If the data from the occupancy sensor is combined with number plate recognition, drivers can also be offered automated payment and help with locating their parked car.

This Smart News Release features multimedia. View the full release here:

<http://www.businesswire.com/news/home/20160510006505/en/>



Analog Devices and Cambridge Consultants Collaborate on Cost-Effective Monitoring System to Reduce Parking Frustrations (Graphic: Business Wire).

The new smart system is enabled by Analog Devices' award-winning Blackfin® Low Power Imaging Platform (BLIP), which is a low-cost, low-power embedded computer vision platform targeting a vast array of real-time sensing applications. Using a highly sophisticated algorithm designed by Cambridge Consultants, BLIP can visually detect which parking spaces are occupied or empty. This is a significant improvement over costly alternative solutions, which involve digging up roads and parking lots to install individual sensors under each parking space.

Learn more about BLIP:

<http://www.analog.com/BLIP>

"The BLIP platform allows Analog Devices to make significant contributions in emerging IoT spaces such as smart building and cities where this is a radical shift from passive to real-time intelligent sensing nodes," said Michael Murray, general manager, Industrial IoT and Sensing, Analog Devices. "We're excited to collaborate with Cambridge Consultants on this project. The company's world-class expertise in complex algorithm development allowed us to algorithmically enable BLIP for an application space that would create a unique solution to relieve a major source of frustration for drivers everywhere."

Parking surveys regularly report that the search for a parking space can often take up to 20 minutes with the average motorist wasting thousands of hours during their lifetime trying to find a vacant spot. In addition to the economic cost of this wasted time, it also adds to pollution and congestion on the roads.

"Our unique smart system uses machine vision to establish whether each space is free or occupied with no need for expensive infrastructure," said Dipak Raval, a commercial director at Cambridge Consultants. "It's an excellent example of how machine vision can provide a cost-effective way of monitoring occupancy over a wide area, since the camera is able to 'see' multiple bays.

"Our deep expertise in algorithm development has enabled us to ensure the technology works in a variety of lighting conditions and can cope with different sizes of cars, trucks and motorcycles without giving misleading results if pedestrians are standing in a parking space, for example, or shopping trolleys are left behind."

**Cambridge Consultants** develops breakthrough products, creates and licenses intellectual property, and provides business consultancy in technology-critical issues for clients worldwide. For more than 50 years, the company has been helping its clients turn business opportunities into commercial successes, whether they are launching first-to-market products, entering new markets or expanding existing markets through the introduction of new technologies. With a team of more than 550 staff, including engineers, scientists, mathematicians and designers, in offices in Cambridge (UK), Boston (USA) and Singapore, Cambridge Consultants offers solutions across a diverse range of industries including medical technology, industrial and consumer products, digital health, energy and wireless communications. For more information, visit: [www.CambridgeConsultants.com](http://www.CambridgeConsultants.com).

Cambridge Consultants is part of Altran, a global leader in innovation and high-tech engineering consulting which offers its clients a new way to innovate. The Group develops with, or for, its clients the products and services of tomorrow. Altran works along with its clients on every link in the value chain of their project, from conception to industrialisation. With a staff of nearly 26,000 employees in more than 20 countries, the Group generated revenues of €1.945bn in 2015. For more information, visit: [www.altran.com](http://www.altran.com).

**Analog Devices** (NASDAQ: ADI) designs and manufactures semiconductor products and solutions. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure and connect. Visit <http://www.analog.com>.

Blackfin is a registered trademark of Analog Devices, Inc.

View source version on [businesswire.com](http://www.businesswire.com): <http://www.businesswire.com/news/home/20160510006505/en/>

Analog Devices, Inc.  
Mike DelRossi, 781-937-1429  
[michael.delrossi@analog.com](mailto:michael.delrossi@analog.com)  
or  
Linda Kincaid, 781-937-1472  
[linda.kincaid@analog.com](mailto:linda.kincaid@analog.com)

Source: Analog Devices, Inc.

News Provided by Acquire Media