



NEC Space Systems Division Awards Contract To Headwall For Hyperspectral Payload On Japanese Satellite Project

Hyperspec™ Sensors Cover Broad Spectral Wavelength Range of 400 to 2500 nanometers

Fitchburg, MA; September 1, 2009 – Headwall Photonics, a leading supplier of high performance spectral imaging solutions, has been selected by NEC Corporation of Japan to develop the hyperspectral instrument payload for a Japanese remote sensing satellite. With this contract, Headwall will introduce a new class of hyperspectral imaging sensors specifically designed for small satellite payloads that offer the industry's highest optical efficiency and widest field of view.



With many years as an instrument supplier to NASA, Headwall was selected by NEC to manufacture spectral imaging instruments that provide the industry's highest optical efficiency and incorporate the company's patented, aberration-corrected imaging technology.

With a rich heritage of success in the area of space technology, NEC Space Systems Division is partnering with Headwall to develop a custom hyperspectral solution offering the highest performance spectral imaging capabilities available.

Headwall has very unique engineering capabilities which are well-suited for critical satellite and airborne applications. Headwall was selected as result of the company's proven hyperspectral technology designs that offer a very tall image slit without introducing image distortions. This allows researchers to utilize a very wide field of view on the ground with exceptional spectral and spatial resolution – these are critical performance attributes for any satellite deployment.

For over fifteen years, Headwall's patented hyperspectral sensing and Raman imaging instrument products have been consistently deployed in critical application environments ranging from space and satellite missions to military airborne instruments to the in-line inspection of food products. "The company is uniquely positioned in that we design and manufacture the high efficiency diffractive optics which are the strategic element of our reflective imaging spectrometer designs" said David Bannon, Headwall's Chief Executive Officer. "Headwall's ability to manufacture application-specific sensors for broad spectral regions of interest offers our customers well-differentiated instrument capabilities".

Providing industry-leading spectral and spatial resolution, Headwall's patented Hyperspec™ platform offers imaging sensors optimized for the following spectral regions:

- Visible 380 to 780 nanometers
- Visible – Near Infrared 400 to 1000 nanometers
- Extended VNIR 600 to 1700 nanometers
- Near Infrared 900 to 1700 nanometers
- Short Wave Infrared 1000 to 2500 nanometers

In addition, Headwall offers custom solutions for mid-wave and long wave infrared spectral regions.

About Headwall Photonics

Headwall Photonics is the leading designer and manufacturer of imaging spectrometers and spectral instrumentation for industrial, commercial, and government markets. Headwall's high performance spectrometers, spectral engines, and holographic diffraction gratings have been selected by OEM and end-user customers around the world for use in critical application environments. As a pioneer in the development of innovative spectrographs and imaging spectrometers based on optical technologies, Headwall enjoys a market leadership position through the design and manufacture of patented spectral instrumentation that is customized for application-specific performance. Headwall Photonics was formed in 2003 as the result of a management buy-out from Agilent Technologies.

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About NEC's Space Systems

NEC is a pioneer of Japan's space exploration program. It has been engaged in development of more than 60 satellites since Japan's first satellite "Ohsumi" launched in 1970. NEC's recent achievement includes development and production of a control system and robotic arm deployed in the Japanese Experimental Module "KIBO" of the International Space Station as well as system integration of HAYABUSA.

About NEC Corporation

NEC Corporation is one of the world's leading providers of Internet, broadband network and enterprise business solutions dedicated to meeting the specialized needs of a diversified global base of customers. NEC delivers tailored solutions in the key fields of computer, networking and electron devices, by integrating its technical strengths in IT and Networks, and by providing advanced semiconductor solutions through NEC Electronics Corporation. The NEC Group employs more than 140,000 people worldwide. For additional information, please visit the NEC Web site at: <http://www.nec.com>.