SpaceDev Introduces Low Cost Plug and Play Linux Microsatellite

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SpaceDev announced a new high performance microsatellite product program named the SpaceDev Modular Microsat Bus. The SpaceDev MMB-100 microsat is a highly capable modular 100 kg (220 pound) microsatellite based on industry standard “Plug-n-Play” interfaces. In addition to standard Ethernet and USB interfaces, the SpaceDev MMB-100 uses a real-time Linux operating system, and uses CORBA-based object oriented interfaces for subsystems as well as commanding from the ground via the Internet.

The basic SpaceDev MMB-100 Bus is expected to price at less than $10 million, not including the payload and payload integration.

The SpaceDev MMB-100 is designed to be a secondary payload on Boeing Delta IV or Lockheed Atlas V launch vehicles flying the EELV Secondary Payload Adapter ring (ESPA). The SpaceDev MMB-100 is also designed to be launched as multiple primary payloads on such small launch vehicles as the SpaceX Falcon I and Orbital Sciences Pegasus.

In 2003, NASA launched its standalone high performance Internet-based CHIPSat 40 kg microsat, designed and produced by SpaceDev for UC Berkeley and funded by NASA. SpaceDev is currently developing multiple 100 kg microsats with vastly increased capabilities beyond CHIPSat. Like CHIPSat, the SpaceDev MMB family will be Internet-based, and mission control and operations can take place from PCs or laptop computers from anywhere in the world. The three-axis stabilized SpaceDev MMB-100, includes a high performance flight computer,

GPS, star tracker, S-band transceiver, and power conditioning and distribution subsystems. The basic SpaceDev MMB-100 is designed for payloads of up to 40 kg, and can deliver up to 80 watts of power to payloads while providing accurate and rapid pointing, slewing and tracking. Expanded capability models can be made available.

"SpaceDev is continuing to revolutionize the space industry," said Jim Benson, founding Chairman and Chief Executive of SpaceDev. "By introducing a standards-based high performance microsatellite at a fraction of the cost of traditional satellites, we hope to increase sales and continue providing higher performance at a lower cost per pound, as we did with CHIPSat, and are now doing with our Missile Defense Agency DSE microsats."

"This new product is a great deal for our customers," said Benson. "SpaceDev
engineers have put a significant effort into developing a standards-based, high performance, modular, low-cost microsatellite. It uses existing industry standards like Ethernet, USB and RS-422 for its hardware interfaces, and reusable software modules for its subsystems. The SpaceDev MMB-100 provides a true plug and play capability, resulting in mission flexibility and reliability, at a very low price."

Source: SpaceDev

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