First Ethernet Switch Arrives In Space
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Off the shelf switch passes three years of Swiss particle accelerator tests.

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The first commercial Ethernet switch has been successfully deployed in space aboard the Columbus module research laboratory.

The switch will form part of a half duplex 10Mbps local area network (LAN) on board the International Space Station (ISS), which has previously used a mix of IT technology dating back as far as the 1980's.

Switches from Cisco, D-Link, Avaya, 3Com, NetGear and Hewlett Packard were exposed to extreme levels of radiation in a particle accelerator in Villigen, Switzerland under conditions similar to space.

Two redundant LAN switches, developed by the European Aeronautic Defence and Space Company (EADS) Astrium, already operate in the ISS network core and now have been joined by HP's ProCurve 2524 switch. The HP switch has a lifespan of 10 years.

The switch was taken straight off the conveyor belt without modification.

"It proved much more advantageous to us [that the switch] used fewer chips on the circuit board, as the fewer components present, the lower the susceptibility to radiation and mechanical duress during the launch into space," said EADS Astrium Space Transportation Columbus Data Management System Engineer, Rolf Schmidhuber.

The switch underwent three years of development, configuration and qualification testing before it journeyed into space.

HP said it was the "most unusual and demanding" projects that Procurve has experienced.

It is now some 400km above the Earth.