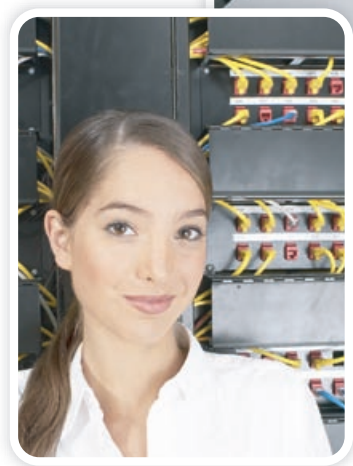


# WIRELESS BROADBAND WITH THE CISCO IP VSAT SATELLITE WAN MODULE & SPACENET SERVICES



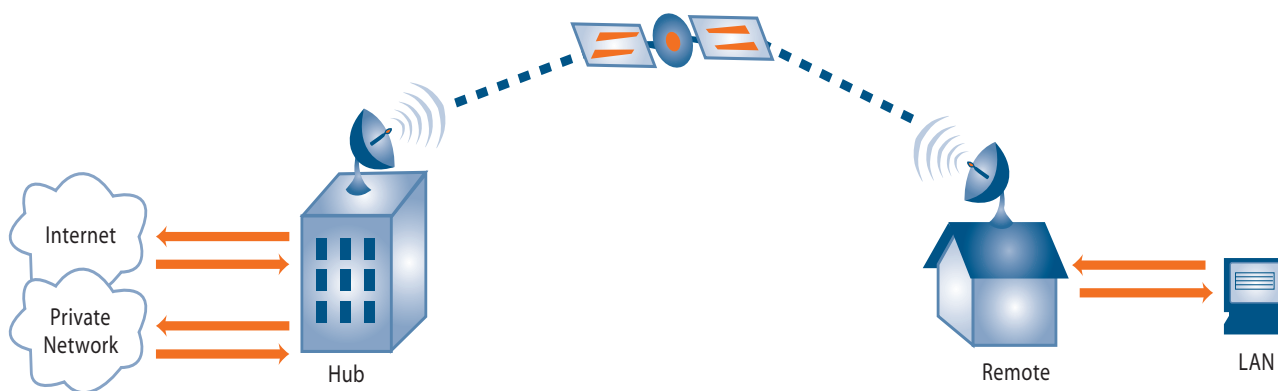
## What Is It?

The Cisco® IP VSAT Satellite WAN Module (Cisco IP VSAT Module) with Spacenet® services provides a unique solution for mission-critical disaster recovery/backup networking and other applications, integrated directly with your existing Cisco router equipment. Leveraging the industry's most advanced satellite technology, it delivers available-anywhere broadband capabilities that can be used for digital content delivery, IP telephony, Internet/VPN access, backup/disaster recovery WAN service, instant mobile communications and more.

The Cisco IP VSAT Module solution is composed of a Cisco hardware component and a network services subscription offered by Spacenet. Taken together, these two provide a complete package for integrated on-demand networking.

## Why Satellite Connectivity?

VSAT (Very Small Aperture Terminal) satellite networks send and receive data at broadband speeds by bouncing high-frequency radio signals off of satellites in geosynchronous orbit above the equator. At the customer premises, a small (about 1 meter) dish and transmitter are installed in an outdoor location and are connected to the Cisco IP VSAT Module and attached to the LAN. This VSAT “remote” system connects over the satellite link to a VSAT “hub” that uses large (9+ meter) high-power dishes to communicate with one or thousands of remote sites. The hub facility connects to the Internet and private networks via redundant high-speed terrestrial links, relaying data over the wireless satellite link to the remote VSATs.



For more than 20 years, VSAT satellite connectivity has served WAN requirements ranging from single locations to more than 10,000 nodes. Satellite network services are available virtually anywhere, and provide a wireless, physically diverse “last mile” connection path – which is absolutely critical for 100% uptime and disaster recovery applications. Satellite networks are also the preferred delivery method for true multicast data distribution, and are available in narrowband or broadband configurations.



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## What Is the Cisco IP VSAT Module?

The Cisco IP VSAT Module is a Cisco network module compatible with the Cisco 2800 (except 2801) and 3800 series Integrated Services Routers as well as the Cisco 2600XM, 2691, and 3700 series access routers. The Cisco IP VSAT Module incorporates the functionality of a VSAT modem, allowing the VSAT to be configured and managed from the familiar Cisco IOS interface. This enables the unit to be used for advanced services such as automatic network failover or application routing without additional third-party equipment or software.

The Cisco IP VSAT Module is compatible with the industry's most advanced VSAT technology platform, the Gilat® SkyEdge™ system. The Cisco IP VSAT module features include high bandwidth capabilities, strong security (with Cisco VPN compatibility), STET, and TCP + HTTP acceleration for optimal performance.

## What Are Spacenet's Services?

Spacenet provides a wide range of network service packages for use with the Cisco IP VSAT Module. Spacenet's Connexstar™ CI full-time services deliver always-on broadband at speeds up to 2 Mbps, perfect for private network applications, multicast or content delivery. Connexstar CI On-Demand services provide a low monthly base cost with usage-based billing, ideal for WAN backup and disaster recovery tasks. Connexstar CI VoIP services offer voice-optimized bandwidth available in full-time or on-demand configurations. Spacenet can help customers with service selection, VSAT network architecture and optimization to ensure optimal performance.

Spacenet has 25 years of experience providing WAN services to government and Fortune® 1000 customers, including some of the world's largest networks. Spacenet is focused on enterprise solutions, delivering VSAT/hybrid terrestrial connectivity and network management services to more than 50,000 business VSAT nodes across North America. Customers rely on Spacenet's experience with both large-scale and small-scale network implementation, as well as its unmatched expertise in VSAT network acceleration and optimization.

### Key Advantages

- Provides a physically diverse path for backup – ensuring your network stays up even in the case of a significant terrestrial network outage
- Integrates directly into Cisco infrastructure for easy management and delivery of add-on services
- On-demand bandwidth or always-on connectivity for Internet/private network IP data, voice telephony, video content and more
- Based on the most advanced satellite broadband technology available, with data acceleration, strong security and advanced QoS capabilities
- Supports native multicast for easy distribution of data to tens, hundreds or thousands of sites simultaneously from a single server
- Available anywhere with a view of the southern sky, or on self-pointing transportable units
- Services delivered by the leader in enterprise and government satellite solutions

## What Applications Can the Service Be Used For?

The Cisco IP VSAT Module solution is well suited to nearly all popular IP applications including Internet access and private network access. Backup/disaster recovery connectivity is available through the VSAT wireless link, with near-instantaneous switchover time. Multicast data delivery for file updates or digital content distribution is easily implemented. VoIP and video are also readily supported with excellent performance. When combined with a Cisco Integrated Services Router, the IP VSAT Module can further enable a host of combined applications such as secure data, voice, switching, wireless LAN (WLAN) access point service, Content Engine and Land Mobile Radio (LMR) base station usage.

Due to the physics of satellite communications, approximately ½ second of latency is present in each satellite round-trip for data packets. On-board transparent acceleration of TCP and HTTP provides a high-quality user experience for most applications. However, certain applications which require constant exchange of large datasets or break the acceleration through IPsec encryption or tunneling require special considerations to achieve optimal performance. Consult your Cisco or Spacenet representative for more information on these applications.

Contact your Cisco/Cisco Authorized Partner or Spacenet at 888.424.9910.

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