



Skystar™ 360E

For Corporate Networks, Broadband IP over DVB

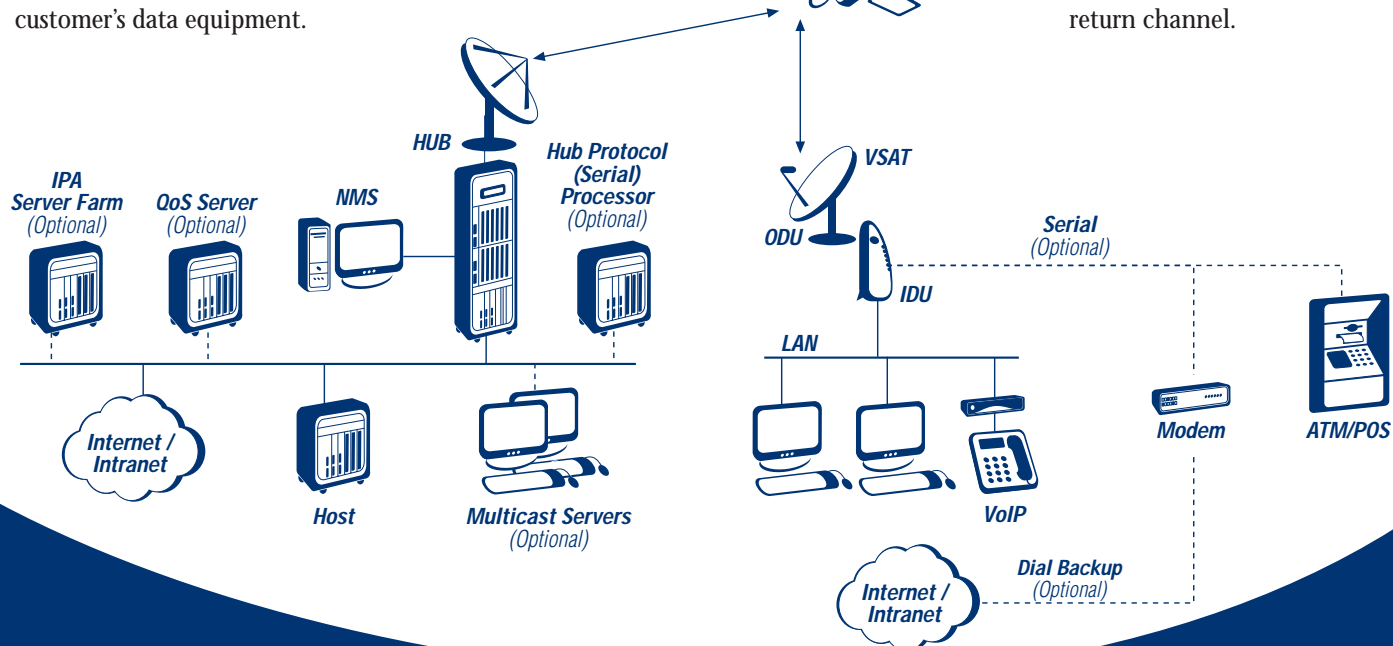
The ability to deliver Broadband content to all your business locations with increasing speed, quality and reliability leads to increased operational efficiency and provides a competitive advantage. The Skystar 360E offers a flexible two-way satellite-based solution enabling interactive Broadband IP and multicasting applications. With DVB standards and extensive IP capabilities, the Skystar 360E supports virtually any data and IP multicast application. The high-speed IP platform is ideal for small office/home office (SOHO), small/medium enterprise (SME) and large corporations.

Now with
Higher Bit Rates



Architecture

A Skystar 360E network consists of a central hub, many VSAT terminals based in dispersed locations, and a satellite channel. The hub consists of base band equipment and an RF terminal (RFT). Remote terminals are composed of a small outdoor antenna, an outdoor unit (ODU) and an indoor unit (IDU). The indoor unit is a stand-alone box that connects to the user's PC (or different data device) via an Ethernet LAN or an optional serial port. At the hub, the base band equipment controls the satellite transmission and interfaces with the customer's data equipment.



A user friendly Network Management System (NMS) provides centralized monitoring and control, using statistics, alarms, network configuration and report generation. Corporate content is sent from the company's headquarters to the hub where it is up-linked and distributed to remote locations via satellite. Information can be sent to a single location, a group of locations or all locations. Delivery confirmation and other data, including file uploads, are sent back to headquarters via the satellite return channel.

Key Features

- **DVB Outbound** - Complies with DVB standards with encryption support
- **Superior Inbound Coding** - Intelligent coding algorithms and modulation for efficient usage of satellite bandwidth
- **TCP Acceleration** - Enables effective management of the TCP overhead traffic
- **Embedded Software** - Routing and client software already embedded in the IDU
- **Extensive IP Capabilities** - Supports a wide range of IP protocols and applications
- **Centralized Network Management** - Remote terminals can be monitored from the hub
- **Enhanced Capabilities** - Optional remote site serial port (for X.25 or Async support) or four port Ethernet switch
- **Rapid Deployment** - Fast and easy enterprise-wide deployment
- **Proven Technology** - Gilat's VSATs are operating successfully in hundreds of thousands of locations worldwide
- **Automatic Dial Backup** - Utilize terrestrial lines to restore connectivity in the event of satellite link interrupts



Point of Sale



Education & Training



Voice Over IP



SOHO / SME

Applications

Two-Way Interactive Data Communications

A typical package fully supports interactive applications and may include PoS or financial transactions, FTP, e-mail and E-commerce. Additional interactive data applications can be utilized on the same platform to carry X.25 or Async traffic.

Broadband Internet/Intranet Access

The Skystar 360E provides an "always-on" connection for instant access to the Internet and corporate Intranet. With outbound bit rates of up to 60 Mbps, users enjoy high-speed connectivity. The product embedded TCP/IP implementation coupled with unique Internet browsing acceleration technologies provides high performance and an enhanced user experience.

Voice over IP (VoIP)

VoIP overlay can be easily added to the Skystar 360E data infrastructure, thus, providing a converged telephony and data solution over the same platform.

IP Multicast

IP Multicasting, the delivery of data to a defined subscriber base, is useful for applications such as file distribution and software downloads. Data can be targeted at a specific group, whether they are employees or customers. Information is delivered simultaneously, without sending multiple copies.

Video Conferencing

The Skystar 360E supports interactive video conferencing between the hub and the remote offices. In this way, internal corporate meetings can take place between headquarters and various branch offices. Participants can see and hear each other from TV screens or monitors and can benefit from realistic and interactive communication.

Corporate Education and Training

Distance learning over satellite in rural and remote sites provides students with the opportunity to attain the same quality education, as would be achieved from a physical classroom in an urban area. Corporate training allows employees, regardless of their location, to be updated with the latest developments, without incurring travel costs. These networks benefit as well from simultaneous support of video Multicast, interactive data and VoIP.

Business Enhancement Options

The Skystar 360E is a flexible platform which enables corporate networks to leverage their VSATs by adding revenue-generating applications and supporting customer modular solutions, all in one box.

Additional LAN Ports

Provides additional flexibility for the Internet/Intranet users in a SOHO/SME environment. Embedded four port Ethernet LAN Switch is integrated in the VSAT to provide additional user ports.

Additional Serial Port

Connecting to X.25 or Async enables additional business services such as PoS, ATM and credit card readers or dial back up via an external modem.

Enhanced IP

Enhanced IP features can be added to the VSAT in order to receive higher operability within complex IP environments. Features in this package include: RIP, IRDP, DHCP, NAT, IGMP and more.

Internet Page Accelerator™ (IPA)

The IPA feature improves the performance of Web browsing and Web applications. With IPA, users surf the Web, using a standard commercial Web browser. IPA retrieves complete Web pages with a single satellite network request resulting in enhanced user experience and improved space segment utilization.

Reverse Modem

Addresses the need of retailers that are currently using dial-up based PoS devices. Enables using the always-on satellite channel without replacing the existing equipment.



Serial Port

4 Port Ethernet LAN Switch

Reverse Modem



Satellite Access

The Skystar 360E uses superior technologies for bandwidth assignment in order to increase efficiency and improve network throughput.

Inbound Access Scheme

The unique Frequency and Time Division Multiple Access (FTDMA) scheme is designed to maximize return path bandwidth efficiency. It automatically distributes traffic across the channel spectrum by allowing individual remote sites to transmit on any

channel at any time. Consequently, the traffic load is balanced across the channels.

Turbo Coding & Collision Reduction Application (CRA)

Inbound Turbo Coding enables the operator to better utilize the space segment, increasing inbound channel speed.

CRA is a sophisticated, patented inbound traffic load detection algorithm. When activated, it reduces the collision rate in the FTDMA access scheme.

Technical Specifications

Network	Architecture	Two-Way, Star Topology		
	Frequency Bands	Ku, Extended Ku, C or Extended C-band		
	Protocols Supported	TCP, UDP, ARP, ICMP, Static Routing		
	Other Protocols (Optional)	X.25, Async (X.3/X.28/X.29)		
	IP Addressing	Classes (A,B,C,D), Subnetting and classless addressing		
	IP Multicast	UDP		
	Enhanced IP (Optional)	RIP V1, V2, IRDP, DHCP, NAT, IGMP, multiple VoIP sessions support		
	Features (Optional)	QoS, Reliable IP Multicast (Surecast™), embedded IPAT™		
Hub Station	<i>Outbound Carrier</i>	Standard	DVB-S	
		Carrier Bit Rate	2.5 to 60 Mbps	
		Modulation	QPSK	
		Coding	Viterbi and Reed-Solomon	
		FEC rate	1/2, 2/3, 3/4, 5/6, 7/8	
	<i>Inbound Carrier</i>	Access Scheme	Proprietary FTDMA	
		Data Rate	38.4 Kbps to 900 kbps	
		Symbol Rate	38.4, 76.8, 153.6, 307.2, 384, 512 ksp/s	
			Dual bit rate, multiple workgroups support	
		Modulation	MSK	
	Coding	Turbo coding FEC ~3/4, ~7/8 or Viterbi FEC 1/2		
Remote Terminal	<i>Outdoor Unit</i>	Antenna Size (typical)	Ku-band: 0.55 m to 1.2 m C-band: 1.8 m	
		Operating Temperature	-40° to +60°C	
		Humidity	Up to 100%	
		Transmitter ODU	0.5 W, 1 W or 2 W Ku-band, 1 W Extended Ku-band 2 W C or Extended C-band	
			LNB	Standard TVRO type
			UP - Converter	Proprietary SSPA
	<i>Indoor-Unit</i>	RF Input/Output	Two F connectors, 75Ω female	
		Data Interface	10BaseT	
		Other Interfaces (optional)	Serial, Four port Ethernet 10/100BaseT or Reverse Modem	
		Size	213 mm x 220 mm x 88 mm	
		Weight	1.35 kg	
	<i>Environmental Conditions</i>	Operating Temperature	0° to +50°C	
		Relative Humidity	10% to 90%	

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