



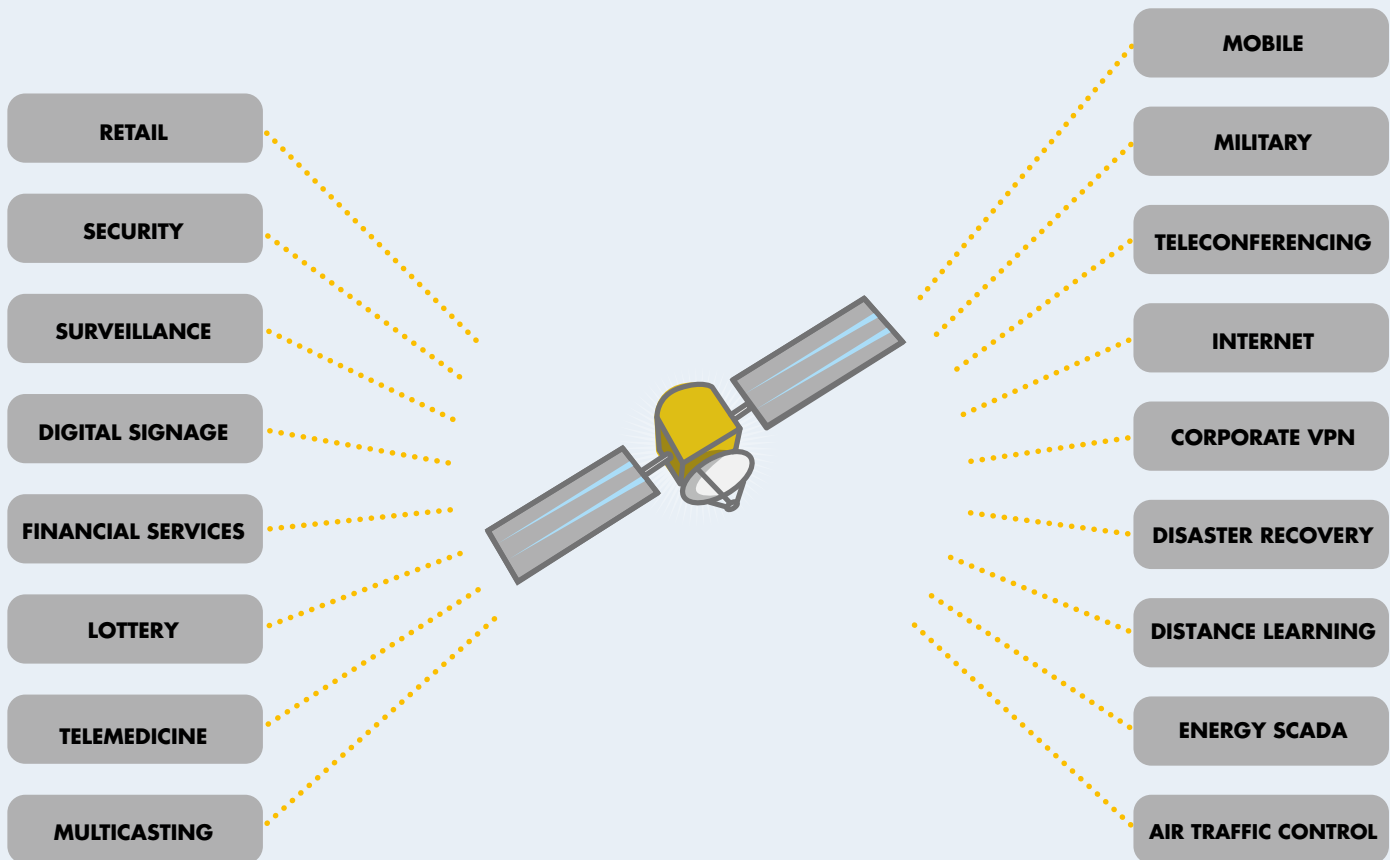
KEY FEATURES

- › STAR/MESH
- › INCREASE NETWORK CAPACITY
- › LOWER OPERATIONAL COSTS

The *LinkStar_{s2}*[®] and *LinkWay_{s2}*[®] systems bring you an unparalleled combination of satellite communications technology, advanced IP routing, quality of service, data acceleration, and compression in two complementary platforms. Your IP applications will seamlessly integrate via satellite through the use of industry standards such as DVB-S, DVB-S2, and DVB-RCS.

Enterprise applications benefit most from the hub-spoke (star) *LinkStar_{s2}*[®] system, while the *LinkWay_{s2}*[®] system is best for applications requiring single-hop, mesh connections directly between remote sites.





LinkStar_{s2} and LinkWay_{s2} Terminals Operate in the Same Network

Since both systems are based on the same TDMA core technology, you get interoperable networking for star, mesh, or hybrid topologies, providing you with flexibility for a multitude of enterprise applications in one integrated network.

LinkStar_{s2} and LinkWay_{s2} VSATs build on the technology leadership and growing worldwide installed base of the LINKWAY and LinkStar products from ViaSat. Designed at the Comsat Laboratories division of ViaSat by some of the brightest minds in digital satellite communications, these new products represent eighth-generation TDMA technology.

DVB-S2 Efficiency Improves Operating Profits

The DVB-S2 open standard delivers up to 30% more efficiency compared to the DVB-S standard, through advanced modulation and coding schemes. You benefit from higher data throughput and/or lower space segment costs.

LinkStar_{s2} and LinkWay_{s2} terminals can interoperate in the same network. Hub-based and mesh terminals can receive the same DVB-S2 carrier, offering one of the most flexible, scalable, and efficient satellite networks available. Additional routing functions in the new LinkStar_{s2} hub aggregate outbound and inbound traffic from both systems.

Both LinkStar_{s2} and LinkWay_{s2} are operable in existing networks, enabling a simple and cost-effective migration path to DVB-S2 operation.

LinkStar_{S2}



INTEROPERABLE
NETWORK ARCHITECTURE



MESH & STAR
CONNECTIVITY

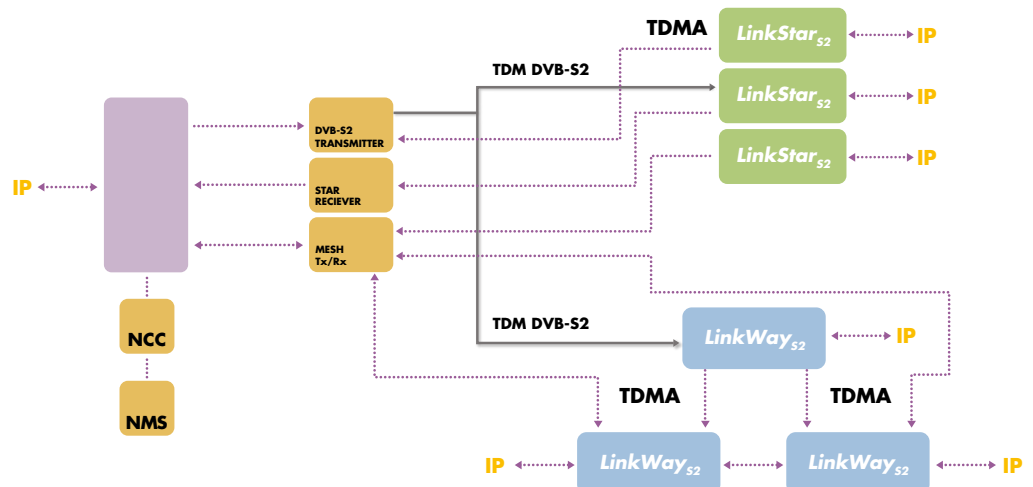
LinkWay_{S2}



- Hub-spoke topology
- Multimedia broadband connections
- High-speed DVB-S2 TDM outlink
- High-speed TDMA returnlink up to 4.2 Mbps
- Multiple application optimized returnlink access schemes
- Automatic bandwidth allocation
- RIP, IGMP, UDP, TCP protocols
- Built-in TCP acceleration
- Multilevel IP QoS with VoIP prioritization
- Network-wide QoS
- User groups
- Web-based network management
- IPSec-transparent with control plane security
- IP header compression
- VLAN tagging
- DHCP relay
- Intelligent power conservation
- HTTP acceleration (optional)
- Downloadable interoperable DVB-RCS software (optional)
- Mesh connectivity (optional)
- Interoperability with LinkWay_{S2}

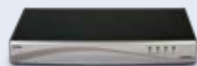
- Peer-to-peer mesh topology
- Multimedia broadband connections
- High-speed DVB-S2 and DVB-S TDM receiver
- High-speed TDMA link up to 13 Mbps
- Automatic bandwidth allocation
- RIP, UDP, TCP protocols
- Frame Relay PVC and SVC protocols
- Built-in TCP acceleration
- Multilevel IP QoS with VoIP prioritization
- Network-wide QoS
- User groups
- Web-based network management
- IPSec-transparent
- IP header compression
- Interoperability with LinkStar_{S2}

LinkStar_{S2} and LinkWay_{S2} Interoperability



SPECIFICATIONS

LinkStar_{s2}



RETURN/INBOUND CHANNEL (remote to hub)

Format	MF-TDMA
Carrier Sizes	156, 312, 625, 1250, 2500 Ksps
Modulation	QPSK
Turbo Coding	DVB-RCS compliant
Transmit IF Frequency	950 to 1525 MHz

OUTBOUND CHANNEL (hub to remote)

Format	DVB-S, DVB-S2, DVB-MPE for IP data
Carrier Sizes	DVB-S: Up to 36 Msps DVB-S2: Up to 30 Msps
Data Rates	DVB-S: Up to 58 Msps DVB-S2: Up to 70 Msps
FEC and Modulation	DVB-S: R/S (204, 188) Convolutional QPSK @ 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2: LDPC QPSK @ 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK @ 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
BER	Quasi-error-free per DVB standards
Receive IF Frequency	950 to 1750 MHz

PHYSICAL INTERFACES

L-band Transmit and Receive	(2) Type-F, 75 Ohm
Network	(1) 10/100BT IEEE 802.2 Ethernet (RJ45)

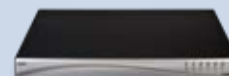
NETWORK MANAGEMENT AND CONTROL

Network Management System (NMS)	Java Web-based, standard PC
Network Control Center (NCC):	SUN Solaris Workstation; SNMP agent

PERFORMANCE

TCP Acceleration	10 Mbps throughput to LAN
Scalability	500 nodes with C series Hub; 8,000 nodes with single Hub/NCC; 80,000 nodes with multiple Hubs/NCC
Protocols	TCP/IP, UDP/IP, IGMP, RIP 1&2, IP QoS support

LinkWay_{s2}



MF-TDMA MODEM

Modulation	QPSK, 8PSK
Symbol Rates	156Ksps to 5Msps
Forward Error Correction	Turbo Coding
FEC Rates	1/2, 2/3, 3/4, 7/8

DVB-S2 RECEIVER

Modulation	QPSK, 8PSK
Symbol Rates	2.5Msps to 30Msps
Forward Error Correction	LDPC Turbo Coding per EN 302 307
FEC Rates	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10

L-BAND INTERFACE

Tx	F-type, 75 Ohm; 950-1750 MHz range
Rx	F-type, 75 Ohm; 950-1750 MHz range

PHYSICAL INTERFACES: IP and Frame Relay

Expansion	2 PMC interface slots
Console Port	RS-232 electrical, RJ-11 physical

NETWORK INTERFACES

IP	10/100BT IEEE 802.2 Ethernet (RJ45)
Frame Relay	SCSI-26pin synchronous serial interface, with transition cables to RS-449, RS-530, and V.35

ENVIRONMENTAL

Temperature Range	Operational: 0°C to +50°C; Storage: 0°C to +70°C
Relative Humidity	Operational: 0 to 95%; Storage: 0 to 95% (non-condensing)

MECHANICAL

Dimensions (H x W x D)	1.75 x 17 x 15 in. (4.45 x 43.2 x 38.1 cm)
Weight	~6 lb (~2.8 kg)

OUTDOOR UNITS

Ku-Band Antennas	1.2, 1.8, or 2.4 meter
Ku-Band RFTs	2, 4, or 16 Watt
C-Band Antennas	1.8, 2.4, 3.8 meter
C-Band RFTs	5, 10, or 20 Watt
Interfacility Link	L-band
Certification	CE, FCC, R&TTE, ANATEL

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