**LinkStar**\textsubscript{s2} and **LinkWay**\textsubscript{s2} **TDMA Systems**

The LinkStar\textsubscript{s2} and LinkWay\textsubscript{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\textsubscript{s2} system, while the LinkWay\textsubscript{s2} system is best for applications requiring single-hop, mesh connections directly between remote sites.

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**ENTERPRISE VSAT APPLICATIONS**

- **RETAIL**
- **SECURITY**
- **SURVEILLANCE**
- **DIGITAL SIGNAGE**
- **FINANCIAL SERVICES**
- **LOTTERY**
- **TELEMEDICINE**
- **MULTICASTING**
- **MOBILE**
- **MILITARY**
- **TELECONFERENCING**
- **INTERNET**
- **CORPORATE VPN**
- **DISASTER RECOVERY**
- **DISTANCE LEARNING**
- **ENERGY SCADA**
- **AIR TRAFFIC CONTROL**

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**LinkStar**\textsubscript{s2} and **LinkWay**\textsubscript{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*\textsubscript{s2} and *LinkWay*\textsubscript{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<sub>S2</sub> and LinkWay<sub>S2</sub> 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<sub>S2</sub> hub aggregate outbound and inbound traffic from both systems.

Both LinkStar<sub>S2</sub> and LinkWay<sub>S2</sub> are operable in existing networks, enabling a simple and cost-effective migration path to DVB-S2 operation.
### 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

### 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. (44.5 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

*Specifications subject to change without notice.

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[www.viasat.com](http://www.viasat.com)

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