



SkyEdge II-c Libra

Satellite-Cellular Hybrid Terminal



Home Broadband Service within Reach

You've invested a great deal in keeping your network strong and robust because you naturally want to get the most out of it, both for your customer base and your profit margin. But how can you easily expand the portfolio of services that you offer your customers, while leveraging the existing infrastructure?

Gilat's SkyEdge II-c Libra is a hybrid terminal that combines satellite and cellular or terrestrial technologies. Libra empowers Direct-To-Home (DTH) service providers (SPs) and Mobile Network Operators (MNOs) with an innovative, lower-cost solution for high-speed broadband Internet to underserved areas. With Libra, DTH SPs can provide broadband services using their existing install base equipment, and MNOs can provide faster broadband using the cellular network for the return path.

The terminal offers satellite download speeds as fast as 20 Mbps. Upload traffic can be transmitted via the customer's existing terrestrial or cellular network. Libra operates over Gilat's SkyEdge II-c hub delivering carrier-grade redundancy, resiliency and Network Management System functionality. To easily and affordably expand Internet reach to the home, Libra has been designed with the end user in mind. Its modem/router operates over a standard receive-only antenna, dramatically reducing deployment-related expenses.

As an affordable terminal solution that vastly improves the user experience, Libra is an ideal solution for mass market consumer broadband.

Expand DTH Operators' Interactive TV Services

Since DTH operators already have the infrastructure in place to support satellite subscribers and manage a subscriber base, all they need is a Libra router in the home to complete the circuit, by establishing a return-path link via a cellular network or the subscriber's existing low-speed terrestrial connection. The enhanced two-way connection enables operators to offer triple-play services, as well as broadcast capabilities that require high speed, two-way broadband, such as Smart TV, OTT and Video on Demand, elevating the portfolio offered by DTH providers.



Benefits

- Enables MNOs and DTH providers to leverage their existing infrastructure to provide broadband service to the home
- Provides fixed broadband service via unique hybrid subscriber terminal
- Innovative cost-effective solution requires minimal customer investment
- Increases ARPU and reduces churn while relieving network congestion
- Integrated with SkyEdge II-c platform as part of Gilat's carrier grade Network Management System



Leverage the Existing Mobile Network

Libra gives MNOs the opportunity to expand their service portfolio and offer a reliable fixed-site high speed broadband Internet connection in areas where cellular connectivity is weak or jittery. As such, Libra offers an opportunity to increase ARPU, while leveraging the existing cellular network and reducing mobile operators' network congestion.

Technical Specifications

Forward Channel

- **Standard:** DVB-S2 Adaptive Coding and Modulation (ACM)
- **Carrier rate:** 1.5Msps-67Msps
- **Modulation:** QPSK, 8PSK, 16APSK, 32APSK
- **Coding:** LDPC, BCH
- **FEC:** 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

Return Channel

- **Cellular USB Dongle**
- **ADSL**

Modem Interfaces

- **RF Input:**
Female F connector, 75 Ω
RF in frequency - 950-2150MHz
- **Data interfaces:**
Ethernet 10/100/BaseT RJ-45
USB 2.0
- **Management interface:**
Web based local management
Full FCAPS management
Remote software upgrades over the air
SNMP

Advanced ISP Management Platform

Libra is managed by Gilat's comprehensive and flexible ISP management platform. The TotalNMS Network Management System supports advanced usage-based service plans, data quota management, automatic service activation and provisioning, and can be integrated into existing billing systems.

Enhanced Features

- **IP Features:**
DHCP, NAT/PAT, DNS caching, SIP-Aware, QoS, DiffServ
- **Security:**
ACL Firewall
X.509 Terminal Authentication
AES-256 encryption (optional)
- **Application Acceleration and Protocol Optimization**
TCP acceleration
HTTP web pre-fetch acceleration
Data Compression

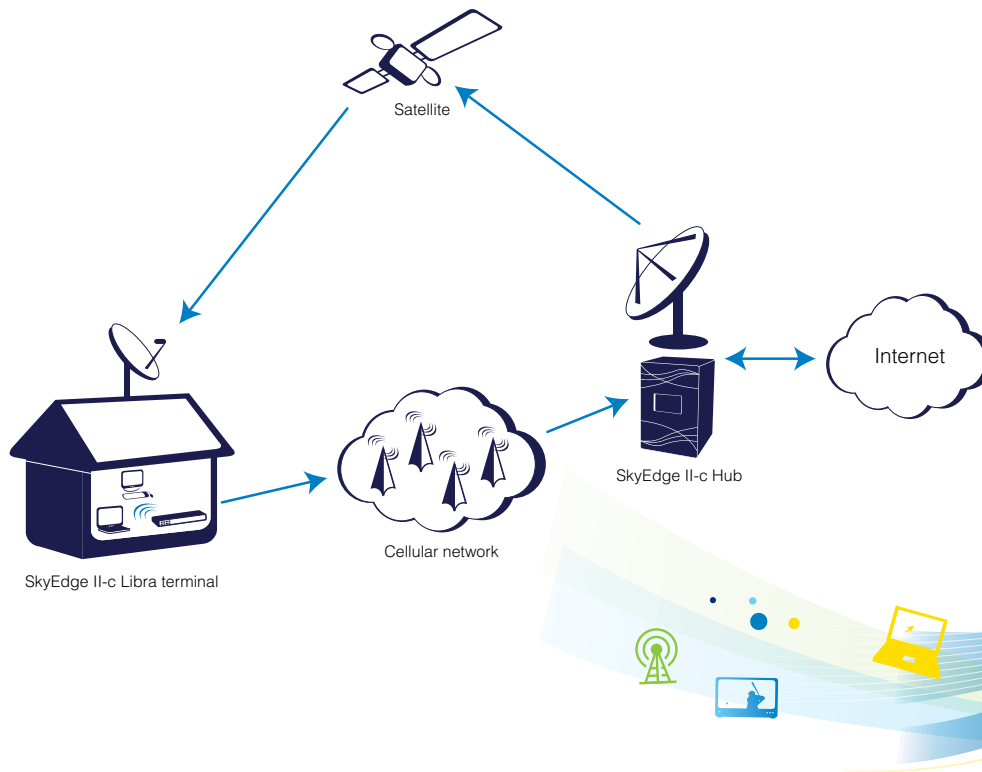
Environmental and Mechanical

- **Size:** 190x145x40 mm (WxDxH)
- **Operating Voltage:** 100V-240V AC
- **Operating Temperature:** 0°C to +50°C

Outdoor Unit (ODU)

- **Antenna size:** 0.6m and higher
- **LNB:** Ku or Ka-band (FSS and BSS)
- **Operating temperature:** -40°C to +60°C

Hybrid Network Diagram



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www.gilat.com | info@gilat.com | Gilat Satellite Networks