GLT1000

High-performance, Centrally Managed Satellite Modem

HIGH AVAILABILITY SATELLITE COMMUNICATIONS

Fast, secure access to voice, data, and video is no longer a luxury; organizations with quick, reliable connections gain a significant edge over the competition.

Gilat's GLT1000 satellite modem delivers superior performance, high availability, bandwidth efficiency and unified BUC and antenna power supply for on-the-move, point-to-point (SCPC) or point-to-multipoint operations.

GILAT'S GLT1000 MODEM: SELF-CONTAINED, INTEGRATED MANAGEMENT

Gilat's GLT1000 modem provides cost-effective, secure, seamless connectivity across land, sea, and air on C, X, Ku and Ka bands. Users can run the full range of applications, protocols and tasks, simultaneously. Spread spectrum support, with a spreading factor of up to 16, makes it easy to support verysmall antennas, operating at a high bit rate to deliver effortless operation anytime, anywhere. Minimal setup by non-technical personnel facilitates launch of point-to-point satellite communications.

The GLT1000 flexibly supports data rates from 32kbps to 80Mbps with modulation, FEC and selectable frame size, minimizing high-speed overhead and low speed delay. This modem also supports adaptive spreading code and modulation (ASCM) in MCPC mode, providing significant bandwidth savings along with QoS capabilities in graceful degradation conditions.

MANAGED SCPC OR MCPC

The GLT1000 can be managed via standard SNMP or via the web: both provide status information and allow operational parameter configuration. Optional GLTMNG networking tool manages an MCPC or hybrid star/mesh network from a single control center, eliminating the need to manage SCPC modems as individual nodes.

UNIFIED SOTM TERMINAL

Internal high power supply drives both the RaySat ER7000 antenna and the 40W Wavestream BUC, creating one unified SOTM terminal, minimizing the number of power units and cables.

BENEFITS

- **Patent-pending ASCM waveform: low SNR threshold, reduced space segment costs, increased availability**
- **Low latency**
- **Integrated IP routing**
- **Integrated TCP/IP acceleration**
- **High-speed modem: up to 80 Mbps**
- **Multiple topologies support: point-to-point, mesh, star, hybrid**
- **Unified SOTM terminal: integrated antenna and BUC power supply (optional)**

TECHNICAL SPECIFICATIONS

Adaptive spreading, code, and modulation (ASCM), patent-pending
Data rates:
32 kbps - 80 Mbps
Baud rates:
128 ks/s - 30 Ms/s, step=1ks/s
Modulations:
BPSK, QPSK, 8PSK, 16QAM
Spectral shaping:
SRRC, roll-off=0.2
Spread Spectrum:
spreading factor 1 to 12
SNR support: -13 to +13 dB
Coding: 27 LDPC codes
Supported rates:
1/4, 1/3, 2/5, 1/2, 2/3, 3/4, 5/6, 8/9
Block length:
4032, 6048, 8064, 12096 bits

BER PERFORMANCE

Typical Eb/N0 (dB) for BER =10-8: 0.8dB
(BPSK 1/3 LDPC 12K block length)

DATA COMMUNICATIONS

Dynamic routing mode or bridge mode
TCP acceleration
VLAN support
QoS
Encryption - AES 256 (optional)

TRANSMIT PORT

Frequency range:
950 - 2150 MHz
Tuning step: 1kHz
Impedance: 50 Ω
Connector type: N-Type
Return loss: better than -10 dB
Tx power:
- 0 to -30 dBm, 0.1 dB resolution
- Automatic uplink power control
Reference: 10 MHz, switchable
Communication: FSK
BUC Power:
24VDC, 70W, switchable (optional)

RECEIVE PORT

Frequency range:
950 - 2150 MHz
Tuning step: 1 kHz
Impedance: 50 Ω
Connector type: N-Type
Return loss: better than -10 dB
Max input level: -10 dBm
Input noise level:
-145 dBm/Hz to -115 dBm/Hz
Noise figure (at maximal gain):
8 dB
Reference: 10MHz, switchable
Communication: FSK
LNB Power:
13/14, 18/19, 24VDC, switchable
10 MHz Reference

Internal or external
Internal reference: OCXO
Frequency accuracy:
up to 2 PPM (1 PPM optional)
Including base accuracy, temperature and 10 years aging
Warm up time:
up to 5 minutes @ 25º
Phase noise:
- 10Hz: -115 dBc/Hz
- 100Hz: -130 dBc/Hz
- 1kHz: -145 dBc/Hz
- 10kHz: -145 dBc/Hz

MONITOR AND CONTROL

Built-in web management
Remote or local software upgrade
SNMP-based management
Central NMS (optional)
Antenna and BUC monitor and control (optional)

INTERFACES

Dual Ethernet 10/100/1000 Base-T
RS232 serial interface auxiliary port x2
USB 2.0 Host

POWER

Operating voltage:
100 to 240VAC, 50/60Hz, 50W (@25˚C, without loads)
Power to the antenna:
300W (optional)
Power to the BUC:
300W (optional)

ENVIRONMENTAL AND STANDARDS

Operating temperature: -20˚C to + 50˚C
Storage temperature:
-40˚C to + 85˚C
CE Mark:
- EN 55022 Radio Frequency Interference
- EN 60950 Safety
FCC: Part 15 Class B

MECHANICAL

Dimensions:
1.75 H x 19 W x 17.5 D in
(4.4 x 48 x 44 cm), 1 rack unit
Weight: 9.9 lbs (4.5 Kg)

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GILAT SATELLITE NETWORKS