SKYEDGE II-C CAPRICORN-4 S2X

Ultra-High-Performance VSAT

ENABLING HIGH-SPEED BROADBAND SERVICES

SkyEdge II-c Capricorn-4 S2X is an ultra-high-performance VSAT designed to enable corporate services, 3G/LTE cellular backhauling and mobility services. For mobility, Capricorn-4 S2X delivers acceleration and packet-per-second performances that support hundreds of users per VSAT. For 3G and LTE cellular backhauling, Capricorn-4 S2X includes Gilat's patent-pending cellular data acceleration technology that enables full LTE speeds of up to 150Mbps for cellular handheld devices. To reach these high return speeds, Capricorn-4 S2X supports both TDMA and SCPC transmission.

FLEXIBILITY X 4

The four-port Gb Ethernet LAN eliminates the need for an external switch. Each port can be individually managed, including assigning VLANs, monitoring, and configuring Ethernet link parameters.

COMPLETE FEATURE SET

Capricorn-4 is a full-featured IP router, with advanced application-based QoS, VLANs, and next-generation IPv6 networking.

To ensure fast running of applications, web browsing and a high-quality user experience, Capricorn-4 contains a full set of protocol optimization and application acceleration features, including TCP, HTTP and GTP protocol acceleration, compression and embedded web caching technologies.

Capricorn-4 provides the highest level of transmission security, supporting X.509 terminal authentication and AES-256 bit link layer encryption with dynamic key rotation to protect all user traffic.

ADVANCED VSAT PLATFORM FOR CORPORATE AND ENTERPRISES

Based on the latest generation, multi-core ARM technology, Capricorn-4 enables high-speed services up to 200Mbps in the forward direction and 100Mbps in the return direction. The ultra-high speed exhibited by this VSAT platform, combined with built-in TCP and HTTP acceleration technologies, is ideal for vertical markets that demand high bandwidth and high packets-per-second performances such as Cellular Backhaul, Mobility services, ISP PoP Locations, Oil & Gas, Video Contribution and Corporate Networking.

BENEFITS

- **Up to 200Mbps service for 3G/LTE cellular backhauling and mobility services**
- **Integrated, managed 4-port GbE LAN switch**
- **Built-in data acceleration for 3G and LTE cellular data services**
- **On-demand inbound switchover between TDMA and high-speed SCPC carrier**
- **Fast web browsing with web acceleration and compression**
- **Forward and return channel adaptive transmission technologies**
- **Central monitoring and service management**
- **C, Ku and Ka band support**

ENHANCED CENTRAL SERVICE MANAGEMENT INTERFACE FOR VNOS

The Capricorn-4 VSAT is part of a complete VSAT ground system that includes an advanced Network Management System (NMS) and facilitates service management available to VNOs via an electronic B2B interface.

SkyEdge II-c Service Management enables VNOs to manage their services totally independent of the satellite network operator, providing a complete management suite. This includes real-time viewing of the service status, events, alarms and statistics, as well as historic/trend analysis of the service over longer periods.

This system also provides VNOs with an automated and easy-to-use interface for simple creation, activation and management of end-to-end services with a high level of flexibility.

SUPERIOR VSAT TECHNOLOGY

Designed to support the latest standard and high throughput satellites, Capricorn-4's advanced adaptive transmission technologies maximize performance and improve service availability. Capricorn-4 is based on Gilat's VSAT technologies, which power over a million terminals worldwide.

MAXIMUM SPECTRAL EFFICIENCY

Gilat's innovative transmission technologies deliver exceptional performance and space segment efficiencies. Adaptive transmission in the return direction, enables high on-the-move service availability and maximum bandwidth efficiency at any condition – at beam peak, beam edge, at fade and at different traffic demands. This is achieved by adaptive power control and changes to the carrier symbol rate and ModCod per VSAT on a per time-slot basis.

TECHNICAL SPECIFICATIONS

FORWARD CHANNEL

Standard:
DVB-S2X Adaptive Coding and Modulation (ACM)
Carrier Rate:
1.5Msps-500Msps
Roll-Off: 0.05, 0.1, 0.2
Modulation:
QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 256APSK
Coding: LDPC, BCH
FEC:
All DVB-S2X FECs

RETURN CHANNEL (TDMA)

Access Scheme:
MF-TDMA, Dynamic Channels
Inbound Rates:
Symbol rate - 128Ksps-30Msps
Modulation:
BPSK, QPSK, 16QAM
Coding: LDPC
FEC: 1/4, 1/3, 2/5, 1/2, 2/3, 3/4, 5/6, 8/9
Spread Spectrum FEC:
Spreading Factor: 2,4,6,8,12
BPSK: 1/4, 1/3, 2/5, 1/2

RETURN CHANNEL (SCPC)

Standard:
DVB-S2 Adaptive Coding and Modulation (ACM)
Carrier Rate: 1.5Msps - 40Msps
Modulation:
QPSK, 8PSK, 16APSK
Coding: LDPC
FEC:
1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

MODEM INTERFACES

RF Input / Output:
- Two female F connectors, 75 Ω
- RF in frequency - 950-2150MHz
- RF out frequency - 950-2400MHz
- DISEqC

Data Interfaces:
- 4 x Ethernet 10/100/1000BaseT RJ-45, 802.1q VLAN
- 1 x Serial Interface RJ-45

Management Interface:
- Web-based local management
- Full FCAPS management
- Remote software upgrades over the air
- SNMP

ENHANCED FEATURES

IP Features:
IPv4/IPv6, TCP, UDP, ICMP, DHCP, NAT/PAT, DNS Caching, cRTP, IGMPv2, SIP, DiffServ, VLANs, RIPv2, Static Routes
QoS:
Per VSAT and per Managed Group, CIR, MIR, CBR, DiffServ and priority-based queuing, application-based priority
Security:
- AES-256 bit link encryption
- IPSEC Client
- ACL Firewall
- x.509 Terminal Authentication

Application Acceleration and Protocol Optimization
- TCP acceleration
- HTTP web pre-fetch acceleration and compression
- GTP cellular data acceleration

Mobility – Antenna Interface:
- Gilat ICD (Serial)
- OpenAMIP (IP)

ENVIRONMENTAL AND MECHANICAL

Dimensions:
201 x 176.5 x 36mm (WxDxH)
Weight: 0.35 Kg
Operating Voltage:
- 100V-240V AC Auto Range
- 11V - 60V DC Auto Range

Operating Temperature:
0°C to +50°C
Certifications: CE, FCC, EMC

OUTDOOR UNIT (ODU)

Frequency Bands: C, Ku, Ka
Transmit Power:
Via IDU 24V or 48V DC insertion^
Antenna Size: 0.76m and higher
Operating Temperature:
-40°C to +60°C

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GILAT SATELLITE NETWORKS