SKYEDGE II-C CAPRICORN PRO

Ultra-High-Performance
Rack-Mounted Satellite Router

ENABLING ULTRA-HIGH-SPEED SERVICES

SkyEdge II-c Capricorn Pro is a rack-mounted, ultra-high-performance VSAT designed to enable corporate services, 3G/LTE cellular backhauling and mobility services. For mobility, Capricorn Pro delivers acceleration and packet-per-second performances that support hundreds of users per VSAT. For 3G and LTE cellular backhauling, Capricorn Pro 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 Pro supports both TDMA and SCPC transmission.

COMPLETE FEATURE SET

The reversible, telco-grade Capricorn Pro can be front-mounted or back-mounted as needed, enabling installers to select the best mounting option based on field conditions and easy access for communications and power lines.

Capricorn Pro is a full-featured IP router that includes all the features of Capricorn-4, such as 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 Pro 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 Pro 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 BACKHAULING AND MOBILITY

Based on the latest generation, multi-core ARM technology, Capricorn Pro 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, mobility services**
- **Telco-grade, reversible rack-mounted VSAT**
- **Integrated, managed 4-port GbE LAN switch**
- **Built-in 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

Capricorn Pro VSATs are 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 Pro's advanced adaptive transmission technologies maximize performance and improve service availability. Capricorn Pro 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-S2 Adaptive Coding and Modulation (ACM)
Carrier Rate:
1.5Msps-67Msps (235Mbps)
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 (TDMA)

Access Scheme:
MF-TDMA, Adaptive Inbound
Inbound Rates:
Symbol rate - 128Ksps-6Msps
Modulation:
BPSK, QPSK, 8PSK, 16QAM
Coding: TPC
FEC: 1/3, 2/5, 1/2, 2/3, 3/4, 4/5, 6/7

RETURN CHANNEL (SCPC)

Standard:
DVB-S2 Adaptive Coding and Modulation (ACM)
Carrier Rate: 1.5Msps - 40Msps
Modulation:
QPSK, 8PSK, 16APSK
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

MODEM INTERFACES

RF Input / Output:
- Two female F connectors, 75 Ω
- RF in frequency - 950-2300MHz
- RF out frequency - 950-2300MHz
- DISEqC

Data Interfaces:
- 4 x Ethernet 10/100/1000BaseT RJ-45, 802.1q VLAN
- 1 x RS232 Interface, RJ-45
- 1 x RS485 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

ENVIRONMENTAL AND MECHANICAL

Rack Mount: 1 rack unit
Operating Voltage:
- 100V-240V AC Auto Range
- -48V DC

Operating Temperature:
0°C to +50°C
Certifications: CE, FCC, EMC
Dimensions:
441.50 x 242 x 44.4mm (WxDxH)
Weight: 3.5kg

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

^ Requires selection of appropriate IDU part number

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GILAT SATELLITE NETWORKS