



# SKYEDGE II-C CAPRICORN OUTDOOR

All-Weather VSAT Solution



## ALL-OUTDOOR VSAT

SkyEdge II-c Capricorn Outdoor is a VSAT satellite communications solution designed for all-weather communications in harsh environments. Its winning combination of an ultra-high-performance VSAT and rugged construction make SkyEdge II-c Capricorn Outdoor the perfect VSAT for the collection and transmission of critical data at remote, unattended outdoor locations. Whether monitoring remote pipeline sections or smart grids, providing video surveillance of facilities, providing backhaul to cellular towers or other uses where information is required for proactive maintenance or security, SkyEdge II-c Capricorn Outdoor is the optimal choice.

## WHEN FAILURE IS NOT AN OPTION

Capricorn Outdoor is built to function under the most severe weather conditions. All connectors are hermetically sealed to protect the electronics from water, sand and humidity. By using high-grade industrial components, Capricorn Outdoor provides reliable operation in the most extreme conditions.

## ENABLING HIGH-SPEED BROADBAND SERVICES

Capricorn Outdoor is part of SkyEdge II-c Capricorn's family of ultra-high-performance VSATs, designed to deliver high-throughput communications for corporate sites, 2G/3G/LTE cellular towers, POPs and mobility platforms. For 3G and LTE cellular backhauling, Capricorn includes Gilat's patent-pending cellular data acceleration software that enables full LTE speeds on cellular handheld devices. To support these very high return speeds, Capricorn supports both TDMA and SCPC transmission.

Based on SkyEdge II-c Capricorn VSAT technology, Capricorn Outdoor integrates Gilat's considerable product experience with TCP and HTTP acceleration, QoS, high inbound bitrates, improved access schemes and modulations.

## BENEFITS

- An all-weather satellite modem/router, operational under a wide range of external conditions
- High reliability with industrial-grade components
- Internal thermostatically controlled heater for cold temperatures
- Increased lightning protection
- Weatherproof external connections
- Up to 200Mbps service for 2G/3G/LTE cellular backhauling
- Built-in acceleration for 3G and LTE cellular data services
- On-demand inbound switchover between TDMA and high-speed SCPC carrier



## COMPLETE FEATURE SET

Capricorn Outdoor includes a full-featured IP router, advanced application-based QoS, VLANs, and next-generation IPv6 networking. To ensure fast Internet and a high-quality user experience, Capricorn Outdoor contains a full set of protocol optimization and application acceleration features, including TCP and HTTP protocol acceleration, compression and embedded web caching technologies. Capricorn Outdoor 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 Outdoor enables high-speed services up to 200Mbps. This, combined with the built-in acceleration technologies, is ideal for enterprise applications such as Cellular Backhaul, Mobility services, ISP PoP Locations, Oil & Gas, Video Contribution and Corporate Networking, which demand substantial bandwidth as well as large amounts of packets-per-second.

## 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	RETURN CHANNEL (SCPC)	ENHANCED FEATURES	ENVIRONMENTAL AND MECHANICAL
<p><b>Standard:</b> DVB-S2 Adaptive Coding and Modulation (ACM)</p> <p><b>Carrier Rate:</b> 1.5Msps-67Msps (235Mbps)</p> <p><b>Modulation:</b> QPSK, 8PSK, 16APSK, 32APSK</p> <p><b>Coding:</b> LDPC, BCH</p> <p><b>FEC:</b> 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10</p>	<p><b>Standard:</b> DVB-S2 Adaptive Coding and Modulation (ACM)</p> <p><b>Carrier Rate:</b> 1.5Msps - 40Msps</p> <p><b>Modulation:</b> QPSK, 8PSK, 16APSK</p> <p><b>Coding:</b> LDPC, BCH</p> <p><b>FEC:</b> 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10</p> <p><b>MODEM INTERFACES</b></p> <p><b>RF Input / Output:</b></p> <ul style="list-style-type: none"> <li>- Two female F connectors, 75 Ω</li> <li>- RF in frequency - 950-2300MHz</li> <li>- RF out frequency-950-2300MHz</li> <li>- DISEqC</li> </ul> <p><b>Data Interfaces:</b> 4 x Ethernet 10/100/1000BaseT RJ-45, 802.1q VLAN</p> <p><b>Management Interface:</b></p> <ul style="list-style-type: none"> <li>- Web-based local management</li> <li>- Full FCAPS management</li> <li>- Remote software upgrades over the air</li> <li>- SNMP</li> </ul>	<p><b>IP Features:</b> IPv4/IPv6, TCP, UDP, ICMP, DHCP, NAT/PAT, DNS Caching, cRTP, IGMPv2, SIP, DiffServ, VLANs, RIPv2, Static Routes</p> <p><b>QoS:</b> Per VSAT and per Managed Group, CIR, MIR, CBR, DiffServ and priority-based queuing, application-based priority</p> <p><b>Security:</b></p> <ul style="list-style-type: none"> <li>- AES-256 bit link encryption</li> <li>- IPSEC Client</li> <li>- ACL Firewall</li> <li>- X.509 Terminal Authentication</li> </ul> <p><b>Application Acceleration and Protocol Optimization</b></p> <ul style="list-style-type: none"> <li>- TCP acceleration</li> <li>- HTTP web pre-fetch acceleration and compression</li> <li>- GTP cellular data acceleration</li> </ul>	<p><b>Operating Input Voltage:</b> DC: 48V</p> <p><b>Operating Temperature:</b> -40°C to +60°C</p> <p><b>Humidity:</b> Up to 100%</p> <p><b>Dimensions:</b> 200 x 122 x 400mm (WxDxH)</p> <p><b>Weight:</b> 6.3 Kg</p> <p><b>Certifications:</b> CE, FCC, EMC</p> <p><b>TX/RX (ODU)</b></p> <p><b>Frequency Bands:</b> C, Ku, Ka</p> <p><b>Transmit Power:</b> Via IDU 24V or 48V DC insertion<sup>^</sup></p> <p><b>Antenna Size:</b> 0.76m and higher</p>
<p><b>RETURN CHANNEL</b></p> <p><b>Access Scheme:</b> MF-TDMA, Adaptive Inbound</p> <p><b>Inbound Rates:</b> Symbol rate - 128Ksps-6Msps</p> <p><b>Modulation:</b> BPSK, QPSK, 8PSK, 16QAM</p> <p><b>Coding:</b> TPC</p> <p><b>FEC:</b> 1/3, 2/5, 1/2, 2/3, 3/4, 4/5, 6/7</p>			

<sup>^</sup> Requires selection of appropriate IDU part number