MARINERAY 80P

SATCOM Ku-Band
Maritime Terminal

STAYING CONNECTED WHILE AT SEA

In today's connected world, access to communication is expected regardless of location, including offshore. Mariners require a cost effective maritime communications solution for Internet broadband service, to enable common tasks such as checking email, making phone calls or accessing weather updates.

MARINERAY 80P TERMINAL

Gilat's innovative MarineRay 80P terminal is the perfect all-in-one terminal for the small yacht passenger vessel and the fishing maritime segments.

Weighing only 42 Kg, MarineRay 80P is ideal to serve vessels that require a small, lightweight, well integrated and cost effective terminal. Designed for simplicity, the terminal features easy installation with minimal cables used for power, Ethernet and compass, as needed.

Automatic satellite search and skew control with any azimuth and accurate signal acquisition, topped with a 3-axis control and stabilizer, further make MarineRay 80P the ideal satellite communication terminal while at sea.

MARINERAY INCLUDES FASTEST SATELLITE MODEM/ROUTER

At the heart of MarineRay 80P is Gilat's renowned SkyEdge II-c Capricorn VSAT, designed for satellite communications on-the-move.

Capricorn is field tested supporting the most stringent aviation and maritime applications. Capricorn provides mobility benefits such as: beam switching, fast acquisition, map display as well as support of an unlimited amount of beams, satellites and terminals.

Capricorn is an ultra-high performance modem/router, with built-in TCP and HTTP acceleration technologies, meeting the growing need for fast data connectivity. The full-featured satellite IP router has advanced application based QoS, supporting high quality VoIP, video and an enhanced web browsing for maximum user experience.

The terminal is managed via Gilat's unified and centralized management system, TotalNMS, enabling flexible service plans and over-the-air software upgrades.

BENEFITS

- **All-In-One integrated maritime terminal**

  - **All components are inside the radome, thus minimizing RF cable losses and simplifying installation**

  - **3-Axis control and stabilizer**

  - **Automatic satellite acquisition**

- **High performance satellite modem/router**

  - **High speed Internet, E-mail, VoIP, Video**

  - **Built-in web acceleration and QoS**

- **Full suite of the SkyEdge II-c mobility features**

- **Full Ku-band support**

TECHNICAL SPECIFICATIONS

MECHANICAL

Dish Diameter: 80cm (31.5")
Terminal Weight:
55Kg (121 Lbs) (including modem, ACU, LNB and 6W BUC)
Radome Size:
97cm X 102cm D X H
Reflector material:
Aluminum

ANTENNA STABILIZATION

Operating Platform:
4-Axis (Yaw, Level, Cross, Polarization)
Azimuth Angle: 360º continuous
Elevation: -5º - 110º
Polarization: 0º - 270º
Skew Angle Control: Automatic
Ship Motion Support:
Roll: ±30º
Pitch: ±30º
Pointing Accuracy:
0.2º (RMS)
Tracking Speed: > 40º/sec.
Protocol: OpenAmip with ABS
Tracking Mode: auto tracking (elevation and azimuth have closed loop automatic tracking function)

OPERATING SPECIFICATIONS

Frequency:
TX: 13.75 ~ 14.5GHz
RX: 10.70 ~ 12.75GHz
Antenna Gain:
TX: 39.3 dBi @ 14.25GHz
RX: 38.1 dBi @ 12.5 GHz
Antenna G/T:
16.8 dB/K @ 45º Elevation angle, 12.5GHz, Clear Sky
Radome loss insertion:
<0.5dB
Cross-pol isolation:
>30dB
Polarity: Linear
Polarized Feed: Cross-Pol
LNB: Universal LNB, PLL
BUC: 6W Standard

TERMINAL INTERFACES

Input Power:
24V DC, 150W typical
LAN:
RJ-45

RECEIVE FORWARD CHANNEL

Standard:
DVB-S2/DVB-S2X 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

TRANSMIT RETURN CHANNEL (TDMA)

Access Scheme:
MF-TDMA, Adaptive Channels
Symbol Rate: 128Ksps-6Msps
Modulation:
BPSK, QPSK, 8PSK, 16QAM
Coding: TPC or LDPC
FEC:
TPC, 1/3, 2/5, 1/2, 2/3, 3/4, 4/5, 6/7
Modulation:
QPSK, 8PSK, 16APSK
Coding: LDPC, BCH
FEC:
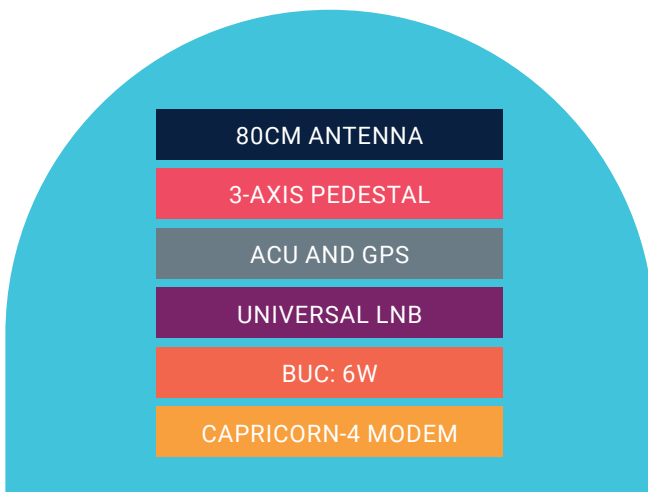1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

NETWORKING FEATURES

IP:
IPv4/IPv6, TCP, UDP, ICMP, DHCP, NAT/PAT, DNS Caching, cRTP, IGMPv2, SIP, DiffServ, VLANs, RIPv2/v3, 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, ACL Firewall, X.509 Terminal Authentication
Acceleration:
TCP, HTTP web pre-fetch & compression, GTP cellular data acceleration

ENVIRONMENTAL

Temperature: -20ºC to 60ºC
Humidity: 5% Up to 95%

MARINERAY 80P ALL-IN-ONE KU-BAND TERMINAL

80CM ANTENNA
3-AXIS PEDESTAL
ACU AND GPS
UNIVERSAL LNB
BUC: 6W
CAPRICORN-4 MODEM

All the terminal's components are contained within the radome

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GILAT SATELLITE NETWORKS