

Technical Notification

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SAILOR 900 VSAT – SkyEdge II Access Modem setup.

Subject:

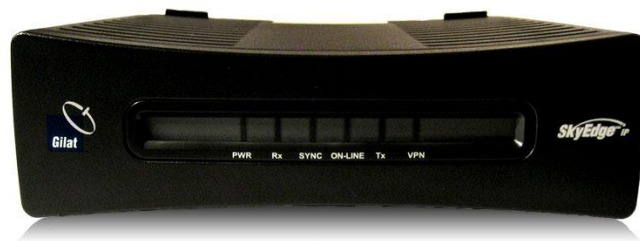
This technical note describes the installation and configuration of the SkyEdge II Access Modem from the company Gilat.

Priority:

- **LOW:** For information purposes only – no direct action needed!

Identification:

The SkyEdge II Access Modem is only supported from SAILOR 900 VSAT SW version 1.31 or better.



Action:

Configuration of the SkyEdge II Access Modem:

1. Connect a PC with an Ethernet cable to LAN port 1 of the modem.
2. Set the PC to static IP address: 192.168.1.2
3. Start an Internet browser (e.g. Internet Explorer, Firefox, Google Chrome or other) and go to [URL://192.168.1.1](http://192.168.1.1) in order to get access to the webserver of the modem.
4. Login with: Username: **inst** and Password: **\$Sat2598\$**

5. Go to the **Installer** menu, see below:

The screenshot shows the SkyManage web interface. The top navigation bar includes 'Status', 'Tools', and 'Installer' (highlighted with a red circle). The left sidebar has 'Setup' (highlighted with a yellow box) and sub-items: 'Setup from file', 'Antenna', 'CW', and 'Commands'. The main content area is titled 'Main' and contains a 'Submit' button. Below this is the 'General' configuration section with the following fields:

VSAT ID *	1524
Management PID *	515
Software Group Address *	520
Parameters Group Addr (Workgroup) *	257
Inbound ID *	65
Outbound ID *	1
RF Downlink Frequency *	12705300 KHz
Modulation Type	DVB-S2
Symbol Rate *	5000000 sps
Note	

Below the General section is the 'Boot-Time Options' section:

Software Download Timeout	30 sec
Software Download	Enable
Console Port	Enable

At the bottom is the 'SkyManage Web Site' section:

Web IP Address *	192.168.1.1
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■ RF Downlink frequency

In the section **General** the RF Downlink frequency is shown. Write it down as it is going to be used for the selection of LNB LO. (**RF Downlink Frequency** = 12705300 KHz in above example).

Go further down on the page to find the **BUC** and **LNB LO** frequencies. See below:

The screenshot shows the 'BUC and LNB' configuration section with the following fields:

LNB L.O	Custom
LNB Custom L.O	11250000 KHz
BUC L.O	12.80 GHz (Ext. Ku)
BUC 10MHz Reference Signal	ON

■ LNB LO

Depending on the RF Downlink frequency select an appropriate LNB LO of 9.75, 10.25, 10.75 or 11.25 GHz which will result in an L-band frequency between 950 and 1650 MHz which is the operating frequency band of the SkyEdge II Access modem.

In the above example: **LNB Custom L.O** = 11250000
(Because $12705300 - 11250000 = 1455.300$ MHz, this falls within the operating frequency band of the SkyEdge II Access modem).

■ BUC LO

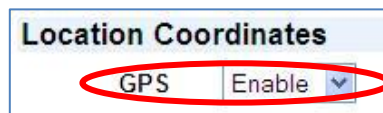
Select the BUC to be 12.8 GHz as this is the BUC LO of the SAILOR 900 VSAT. Remember to inform this to the hub operator when doing line-up and commissioning.

■ BUC 10MHz Reference Signal

The **BUC 10MHz Reference Signal** must be configured to ON, otherwise the SAILOR 900 VSAT will never allow TX.

■ Location Coordinates

Scroll further down to enable GPS for the **Location Coordinates**. See below:



This will enable the serial protocol of the modem so it can communicate with the ACU.

Go to the top of the page and press the **Submit** button and **OK** to save the new settings.

The SkyEdge II Access modem is now configured to be used with the SAILOR 900 VSAT.

Configuration of the SAILOR 900 VSAT:

Connect the PC to the service port of the ACU (LAN 3), set the PC to static IP address: 192.168.0.2 and enter the webserver of SAILOR 900 VSAT at [URL://192.168.0.1](http://192.168.0.1)

■ Modem Profile

Go to **SETTINGS → Satellite profiles → VSAT modem profiles**, add a new entry and enter the information (see below):

- | | |
|--|---|
| ■ Profile name | <i>Name of own choice</i> (e.g. SkyEdge II) |
| ■ VSAT modem menu) | <i>Gilat SkyEdge II</i> (choose from dropdown menu) |
| ■ Baud rate | <i>9600 baud</i> (choose from dropdown menu) |
| ■ 10 MHz reference dropdown menu) | <i>External – VMU Tx</i> (choose from dropdown menu) |

Continued....

The screenshot shows the Thrane & Thrane web interface. On the left is a sidebar menu with items: DASHBOARD, SETTINGS, Satellite profiles, VSAT modem profiles, Blocking zones, Network, E-mail setup, Reports, Dual antenna, SERVICE, ADMINISTRATION, HELPDESK, and SITE MAP. The 'Satellite profiles' menu item is highlighted. The main content area is titled 'ADD VSAT MODEM PROFILE'. It contains the following fields: 'Profile name' with the value 'SkyEdge II', 'VSAT modem' with a dropdown menu showing 'Gilat SkyEdge II', 'This profile is used on' with the value '0 satellite profiles', 'Baud rate' with a dropdown menu showing '9600 baud', and '10 MHz reference' with the value 'External - VMU Tx'. At the bottom of the form are 'Apply' and 'Cancel' buttons. Several fields and the 'Apply' button are circled in red in the original image.

Press **Apply**.

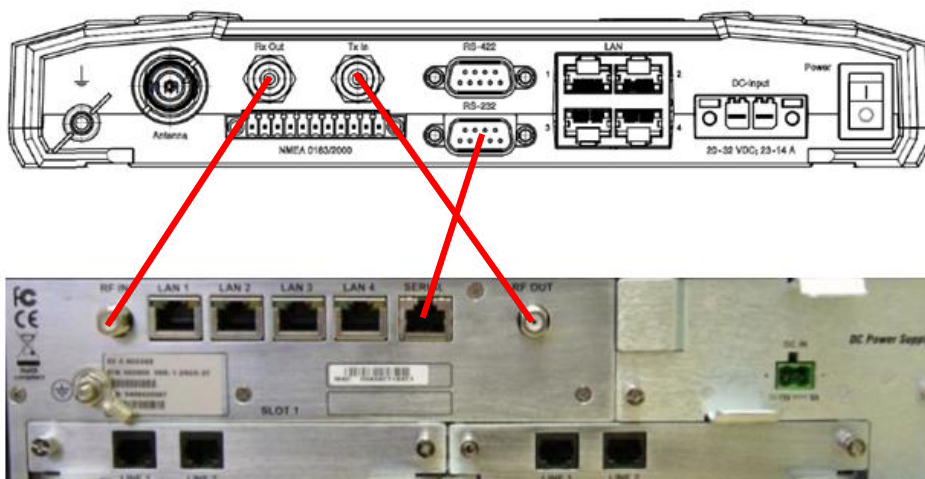
■ Satellite Profile

Go to **SETTINGS** → **Satellite profiles**, add a new entry and select the **Modem Profile** made in the previous section. Enter the satellite settings received from your service provider (see below e.g.).

- **Satellite profile name** *Name of own choice* (e.g. SkyEdge II VSAT Service)
- **VSAT modem profile** *SkyEdge II* (choose from dropdown menu)
- **Satellite position** *28.5 E°* (enter value)
- **Polarisation skew** *0°* (typically 0°) (enter value)
- **Maximum inclination** *0°* (typically 0°, but older satellites may require wider searching area) (enter value)
- **RX Polarisation** *Horizontal* (select)
- **TX Polarisation** *X-pol* (select)
- **LNB LO frequency** *11.250000 GHz* (enter value)
- **Tracking type** *Narrow band* (choose from dropdown menu)
- **Tracking RX frequency** *VSAT modem* (select)

Press **Apply**.

Cable connection between ACU and Modem:



- Connect the Modem **SERIAL** port to the ACU **RS-232** port (LAN → RS-232 cable).
- Connect Modem **RF IN** to ACU **Rx Out** (75 Ω RF cable w/F-connectors)
- Connect Modem **RF OUT** to ACU **Tx IN** (75 Ω RF cable w/F-connectors)

Activate the **Satellite Profile**.

Wait until the Modem gets RX Lock and check the **VSAT MODEM Signal level** in the webserver of SAILOR 900 VSAT, (see below):

Thrane & Thrane				
SIGNAL: <div></div>				
DASHBOARD	SAILOR 900 VSAT			
SETTINGS	System status	Tracking	ACU part name	TT-7016A
SERVICE	GPS position	55°48' N, 12°31' E	ADU part name	TT-7009A
ADMINISTRATION	Vessel heading	0°	ACU serial number	HM-ACU10-001
HELPDESK	Satellite profile	SkyEdge II VSAT Service	ADU serial number	ADU-100-5
SITE MAP	Satellite position	28.5°E	Engineering version	1.30 build 683
	RX polarisation	Horizontal	POINTING	
	TX polarisation	X-pol	Azimuth relative	161.3°
	RX RF frequency	12.705300 GHz	Elevation relative	25.2°
	LNb LO frequency	11.250000 GHz	Polarisation skew	-8.7°
	TX RF frequency	14.000000 GHz		
	BUC LO frequency	12.800000 GHz		
	Tracking RF frequency	12.705300 GHz		
	VSAT MODEM			
	Model	Gilat SkyEdge II		
	Signal level	13 dB		
	RX IF frequency	1455.300000 MHz		
	TX IF frequency	1200.000000 MHz		

The Modem and VSAT system is now ready for line-up and commissioning.

This concludes the procedure.

Kind regards,

Thrane & Thrane
Customer Service