RedPort

Setup and Use of RedPort Optimizer Voice with Inmarsat IsatHub (iSavi)

Information and easy-to-follow instructions on how to set up your Optimizer Voice and iSavi IsatHub terminal to connect to the Internet, send and receive SMS and phone calls, and enable VoIP service for affordable voice calling all over the world.

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Optimizer Voice for iSavi: Airtime Control and VoIP at Your Fingertips

Out of the box, the iSavi allows you basic control over data usage by configuring firewall rules (up to 10) and by setting caps on data consumption. It doesn't allow you to configure what programs or software can have access to the Internet, and doesn't compress anything. You are likely to exceed your desired limit without accomplishing all you require. This wide-open "pipe" to the Internet can cause large airtime bills.

Optimizer Voice allows you precise control over who can access your iSavi satellite Internet connection, as well as how they can use that connection. This gives you great flexibility to control your satellite airtime, and helps prevent unwanted airtime bills. Optimizer Voice helps prevent bill shock in the following ways:

- 1. Its built in firewall blocks all internet activity except XGate and RedPort Email, XGate Phone, and XWeb browsing
- 2. Email with XGate is compressed up to 95% of its original size, meaning lower data usage and faster data transfer.
- 3. Web browsing with XWeb compression web-browsing is compressed by a factor of 3 to 5, allowing for faster data transfer and lower data usage.
- 4. It turns your iSavi into a multi-user unit. Up to four users can be sending/receiving phone calls and/or text messages at the same time when using RedPort VoIP service.
- 5. With its RedPort VoIP Service (optional), Optimizer Voice allows you to make voice calls for considerably less than traditional iSavi phone rates. These VoIP calls consume approximately 15 minutes of talk time for each Mb of data. (Compare this with service like Skype which only offer about 1 minute of talk time per MB of data).
- 6. You can also make simple analog voice calls with traditional satellite airtime by using the VoIP-to-circuit-switch capabilities of the Optimizer Voice.
- 7. Its built-in Captive Portal (optional) allows you to restrict web activity. You can generate PIN-codes that can be given away or sold to control web access.

Setup Requirements

The following hardware and software is required:

- Inmarsat iSavi satellite terminal
- RedPort Optimizer Voice
- Optimizer Voice WiFi Bridge plugged into the USB port of the Optimizer Voice (this may have already been done by your dealer).
- IsatHub Control App for your iOS or Android device
- XGate Phone App for your iOS or Android device (Required to use RedPort VoIP service. Without the XGate phone app, you can only connect to the iSavi for standard Inmarsat voice calling).
- XGate and XWeb apps (optional)

For iSavi operational information please refer to the iSavi User Guide.

NOTE: The Optimizer Voice ships pre-configured for use with XGate and RedPort Email service and XWeb Web Browsing service. These services are not included with your Optimizer Voice and must be purchased separately. Contact your satellite service provider for details.

Configure the Optimizer Voice to Pair with the iSavi

Using your PC, Mac, iOS, or Anroid device, connect to the WiFi hotspot created by the Optimizer Voice:

- On a Windows PC, go to: Windows Start > Control Panel > Network Connections
- On a Mac, go to: Apple > System Preferences > Network
- On an iOS device, go to: Settings > Settings > Wi-Fi
- On an Android device, go to: Settings > Connections > Wi-Fi

The Network Name will look something like: 'wxa-153-xxxx' where 'xxxx' may represent the last four digits of the Optimizer Voice Mac address. Select this wireless network.

Open any web browser and enter this URL: http://192.168.10.1

Login with: Username: superadmin Password: webxaccess

Scroll down to the iSatHub WiFi Extender Setup section

Select <Connect> button

You should be taken to the Wireless Overview tab.

Generic MAC80211 802.11bgn (radio0 Channel: 11 (2.462 GHz) | Bitrate: 144.4 Mbit/s SID: wXa-153-2171 | Mode: Master 65% BSSID: 00:08:52:76:21:73 | Encryption: Nom

Generic MAC80211 802.11bgn (radio1 Channel: 6 (2.437 GHz) | Bitrate: 11 Mbit/s SID: ISavi-0006599 | Mode: Client 64% BSSID: AC:CFI:23:2F:BC:70 | Encryption: WPA

Select <Scan>

	Optimizer wXa-153 v1.60b5 Load: 1.02 1.04 1.05 Changes: 0							
	Home Services Status System Network Statistics Logout							
('	Weicome							
e	Crew Internet Services - DISABLED							
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S	Email Access							
	WB http://192.168.055/webmail POP - 192.166.055/110							
	SMTP - 192.168.0.55:25 with no connection or authentication security							
	Email Management							
	Create and manage crew email accounts							
	Retrieve, delete, or drop large emails (BigMail) quarantined on the server							
	Perform common email tasks							
	System Status							
	System status overview							
	Realtime bandwidth usage over satellite link							
	Historic bandwidth usage over satellite link System Message Log							
Fi	un system message kog							
	Local WiFi Setup							
	SSID and Security Wifi Setup							
	iSatHub WiFi Extender Setun							
	Select ISatHub WiFi network to connect to.							
	Cisable Firewall							
	should be used with caution and only when connected to land based WiFi.							
	System							
_	U Router Password							
	Keboot Kouter							
	🙆 Disable 🔏 Edit 🗶 Remove							
	🔍 Scan 🎦 Add							
NONE)	👹 Disable 🔣 Edit 🗶 Remove							

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Once the scan has completed, locate the iSavi Wireless Network and select < Join Network>

Interfaces Wifi DHCP and DNS Hostnames Static Routes Firewall Diagnostics	
Join Network: Wireless Scan	
iSavi-0006599 <u>67%</u> Channel: 6 Mode: Mater BSSID: AC:CF:23:2F:BC:70 Encryption: WPA2 - PSK	

Enter the password to access the iSavi (the default password appears on the iSavi unit). Select <Submit>.

eplace wireless configuration	Image: An additional network will be created if you leave this unchecked.
/PA passphrase	Specify the secret encryption key here.
ame of the new network	wwan The allowed characters are: A-Z, a-Z, 0-9 and _
reate / Assign firewall-zone	 cap: cap: lan: lan: ppp: ppp: wan: wan: wifi: (empty) unspecified -or- create:
	Choose the firewall zone you want to assign to this interface. Select unspecified to remove the interface from the associated zone or fill out the create field to define a new zone and attach the

Notice the signal strength is 0% as you are not yet connected to the iSavi network. Select <Save & Apply>

Device Configuration	
General Setup Advanced Settings	
Status	4ode: Client SSID: iSavi-0006599 ISSID: AC:CF:23:2F:BC:70 Encryption: - Channel: 6 (2.437 GHz) Tx-Power: 0 dBm ignal: 0 dBm Noise: 0 dBm itrate: 0.0 Mbit/s Country: 00
Wireless network is enabled	Oisable
Channel	6 (2.437 GHz)
Transmit Power	20 dBm (100 mW)

.....

NOTE: If the signal status remains 0% or is blinking from 0% to 100% this typically means that the WPA Passphrase was entered incorrectly. Return to the Join Network Settings page and enter the correct password and <Submit>.

Once you've successfully connected to the iSavi, you'll see that the signal strength now registers greater than 0%.

e Device Configuration section covers phys fined wireless networks (if the radio hardw onfiguration.	cal settings of the radio hardware such as channel, transmit power or antenna selection which are shared among all are is multi-SSID capable). Per network settings like encryption or operation mode are grouped in the <i>Interface</i>
Device Configuration	
General Setup Advanced Settings	
Status	Mode: Client SSID: iSavi-0006599 SSID: AC:CF:23:2F:BC:70 Encryption: WPA2 PSK (NONE) Channel: 6 (2.437 GHz) Tx-Power: 20 dBm Signal: -61 dBm Noise: 0 dBm Bitrate: 1.0 Mbit/s Country: 00
Wireless network is enabled	Oisable
Channel	6 (2.437 CHz)
Transmit Power	20 dBm (100 mW) -

Now that the Optimizer Voice and the iSavi are paired, you are protected against runaway airtime. In this state, you will use:

- IsatHub Control App to establish your data connection.
- XGate Satellite Email App or RedPort Email for sending/receiving email.
- XGate XWeb or RedPort Web Compression for web browsing.
- XGate Phone App for voice calls and SMS messaging.

NOTE: The Optimizer Voice ships pre-configured for use with XGate and RedPort Email service and XWeb Web Browsing service. These services are not included with the Optimizer and must be purchased separately. Contact your satellite service provider for details.

IMPORTANT - for iSavi units running firmware version 1.0.2 or earlier For Voice Users: Changing the Voice Protocol on iSavi (Not applicable if you are only going to use data over iSavi)

After you've successfully paired your RedPort Optimizer Voice and iSavi, you need to modify the voice codec in the iSavi in order to make voice calls over the RedPort Optimizer Voice.

- 1. Open up a web-browser on your smartphone, tablet, or computer and enter in this in the URL bar: <u>http://192.168.1.35</u>
- Login to the unit: Username: admin Password: 1234
- 3. Go to click on the Telephony tab > SIP Settings > Sip Server
- 4. Select the **g711u** codec

How to Start a Data Connection

No Service ᅙ	4:33 PM	M 🛛 🕈 🕈 72% 🗖	No Service ᅙ	4:33 PM	🕇 🖇 72% 💶)	No Service ᅙ	4:33 PM	1 🕴 72% 💶	No Service ᅙ	4:34 PM	И → 🕴 72% 💶)•
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Conne	ection	Devices	o ^o Conne	ection	Devices	o ^C Conne	ection	Devices	Conne	ection	Devices

A data connection is required for email and web browsing and RedPort VoIP Service.

Using your smartphone or tablet Settings, connect to the Optimizer Voice wireless network 'wxa-153-xxxx'.

Open the IsatHub Control App on your smartphone or tablet.

At first launch you must enter a username and password. The default credentials are:

username = admin password = 1234

Select <Connect to network> and wait for display of IsatHub: connected

Select <Connect data> and wait for display of Data On.

How to Stop a Data Connection

Open the IsatHub Control App on your smartphone or tablet.

Select <Disconnect data> and wait for display of Data Off.

No Service ♀ Help	4:34 PM IsatHub	✓ \$ 72% ■ Settings	No Service 중 Help	4:33 PM IsatHub	
000	Data On		000	Data Off	
	0 мв Used this ses	sion			
	Disconner	ot data		Connec	t data
	IsatHub: cor Signal 62db 98% Battery	inected		IsatHub: cor Signal 51db 98% Battery	nnected
(()	Wi-Fi: conne wXa-153-217	cted to 71		Wi-Fi: conne wXa-153-21	cted to 71
o ^O Conne	ection	Devices	o ^o Conne	ection	Devices

How to Send/Receive Email

A data connection is required for a successful email session.

Using your smartphone or tablet Settings, connect to the Optimizer Voice wireless network 'wxa-153-xxxx'.

Using the IsatHub Control App, start a data session (see How to Start a Data Session above)

Open the XGate App and send/receive email.

Close the data session when complete (see How to Stop a Data Session above)

Remember, email can be created and read offline. It is only necessary to initiate a Data Session when you are ready to connect to the mail server over your satellite link.

(Note: there is a 100kb billing increment for the iSavi – you may find it economical to leave your data connection open if you will use it again in short notice).

How to Web Browse

A data connection is required for a successful web browsing session.

Using your smartphone or tablet Settings, connect to the Optimizer Voice wireless network 'wxa-153-xxxx'.

Using the IsatHub Control App, start a data session (see How to Start a Data Session above)

Open the XGate App and select <Web> to start a web browsing session.

Close the data session when complete (see How to Stop a Data Session above)

How to Send/Receive SMS Messages

Using your smartphone or tablet Settings, connect to the Optimizer Voice wireless network 'wxa-153-xxxx'.

Using the IsatHub Control App, confirm that you are connected to the IsatHub:

Select <Connect to network> and wait for display of IsatHub: connected

No Service ᅙ	4:33 PM	1 ∦ 72% 💶 ≀	No Service ᅙ	4:33 PM	┩ 券 72% 💶 ি
Help	IsatHub	Settings	Help	IsatHub	Settings
000	Data: not co i	nnected	000	Data Off	
98% Battery	IsatHub not connected t Signal	o network 47dB network		Connec	ot data
	Pointing	assist		IsatHub: co Signal 51 dib 98% Battery	nnected
((·	Wi-Fi: conne wXa-153-217	cted to 71	(Wi-Fi: conne wXa-153-21	ected to 71
		Devices	o ^C Conne	ection	Devices
No SIP account or	onfigured				

Open the XGate Phone App. Select <Chat> to send an SMS message or to view the SMS message received.

Note: Only one SMS message can be sent at a time. Standard SMS message rates apply. (For multi-users see Multi-User Voice and SMS with RedPort VoIP service below)

How to Make/Receive Voice Calls

Using your smartphone or tablet Settings, connect to the Optimizer Voice wireless network 'wxa-153-xxxx'.

Using the IsatHub Control App, confirm that you are connected to the IsatHub Network:



Select <Connect to network> and wait for display of IsatHub: connected

Open the XGate Phone App to make and receive calls. Note: standard voice calling rates apply.

Optimizer Voice Extension Setup

Incoming calls will ring on those extensions with Ring enabled in the Optimizer Voice user interface on the Services > VOIP PBX > Extensions screen:

ł	lome	Se	vices Status S	System Network	Statistics	Logout					
	Crew I	nterne	t Access Web Cor	npression and Filtering	RedPort Em	ail SMS	GPS Tracking	WiFi Extender	GPS/NMEA Repeater	VOIP PBX	PPP
	Extens	sions	CDR Logs V	obal Activation Sail	lor FBB						_
L.											
15	ten	sion	b								
	SIP	Exter	isions								
	Ring	SMS	Extension	Password	Caller ID			Description			
			Value larger than 200	SIP extension password	Free text		You may enter a d	description here for y	our reference		
			201	1234	201	Captain line				💌 Delete	
			202	1234	202	Crew line 1				💌 Delete	
			203	1234	203	Crew line 2				🗙 Delete	
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l											
									🙆 Reset 🕝	Save 🔲 Save é	Apply

To enable Ring or SMS on an extension simply check the box for the service you want enabled.

When Ring is checked, the smartphone configured with the corresponding Extension will Ring with every incoming call.

When SMS is checked, that smartphone will receive every incoming SMS message.

Multi-User Voice and SMS with Optional RedPort VoIP Service

Why use the RedPort VoIP service?

Out of the box, the iSavi allows one phone call or one SMS message at a time. Phone calls via the smartphone app are standard circuit switch (PSTN) calls, not VoIP, therefore standard satellite airtime rates apply.

With the RedPort VoIP service you can make inexpensive outbound VoIP calls at a significant price reduction over standard satellite airtime fees. You have the choice of enabling a standard US land-based phone number so that land-based callers can call you quickly and easily.

Up to four people can be on calls or sending SMS messages at the same time. 15 minutes of talk time = about 1 Mbyte of data per channel (SIP extension).

Call payment methods include:

- Prepaid pincodes to help you stay on budget and/or support revenue generation. Pincodes can be given away or sold to crew/guests.
- Postpaid lines are billed monthly for actual usage.
- No charge for calls and text among local SIP extensions when on the Optimizer Voice WiFi network.

How to Enable the RedPort VoIP Service

Contact your satellite service provider to purchase the RedPort VoIP service.

When the service is activated you will be given a "Key". This key is a long alpha-numeric string that must be entered into the Optimizer Voice user interface.

Login to the Optimizer Voice user interface and select Services > VOIP PBX > Vobal Activation.

Home Se	vices	Status	System	Network	k St	tatistics	L	ogout					
Crew Interne	t Access	Web	Compression	and Filte	ring	RedPort	: Email	SMS	GPS Tracking	WiFi Extender	GPS/NMEA Repeater	VOIP PBX	PPP
Extensions	CDR	Logs	Vobal Acti	vation	Sailo	r FBB	_	_					_
Vobal Dec	oder												
Activation	Key						E	Enter H	(EY here, e)	cactly as giver recommended	i to you. Copy/Pas I.	te	
						C	A valid ontact yo	d activation our provid	on key must be er ler for a key.	netered to use this s	ervice. Additional charges	will apply. Pleas	e
L													
											🔘 Reset 🥥	Save 🛄 Save	& Apply

Enter the Key and select <Save & Apply>

Но	me Se	rvices	Status	System	Network	Statistics	Log	gout					
Cr	ew Interne	et Access	Web	Compression	n and Filte	ring RedPo	ort Email	SMS	GPS Tracking	WiFi Extender	GPS/NMEA Repeater	VOIP PBX	PPP
Ex	tensions	CDR	Logs	Vobal Act	ivation	Sailor FBB	_	_				_	_
Vo	oal Dec	oder											
-	Activation Key U2FsdGVkX1+L18299hisG1zQyxWkpT/lCT2eBo2uPS6VVRcgsUHL12SoSNJK9IKBmL6h OOPCazUi 7Fdlj9DDZw==												
							A valid contact you	activati ur provi	on key must be en der for a key.	etered to use this	service. Additional charges	will apply. Plea	ise
							🔕 Deactiv	vate					
	JID						21339						
	DID						18325484	1349					
											🔞 Reset 🧯	Save 🗈 Sav	e & Apply

With RedPort VoIP service activated, the new RedPort VoIP telephone number is displayed.

Once enabled, configure the SIP extensions for Ring and/or SMS by selecting the checkbox next to the SIP extension.

Select the payment method of each SIP extension (prepaid or postpaid). By default, Line 1 is always Postpaid.

On this same page, you can also:

- change the SIP extension password
- change the outgoing CallerID display
- enter a description for your reference

Hor	ne	Ser	vices	Status	System	Network	Statistics	Logout						
Cre	w In	terne	t Access	Web	Compression	and Filter	ing RedPort Em	ail SMS (GPS Tracking	WiFi Extender	GPS/NMEA Repeater	VOIP PBX	PPP	
Ext	ens	ions	CDR	Logs	Vobal Activ	vation S	ailor FBB							
Ext	Extensions													
A	Analog RJ-11 Telephone													
P	Payment Mode						postpaid			•				
S	SIP Extensions													
R	ing	SMS	Paym Meth	ent od	Extensi Value larger th	on nan 200 SI	Password P extension password	Caller ID Free text	You n	Desc nay enter a descript	ription Ion here for your reference			
	-	☑	postpaid	•	201	12	34	201	Captain line			💌 D	elete	
	-		prepaid	•	202	12	34	John	John's smart	phone		💌 D	elete	
	✓	☑	prepaid	•	203	12	34	Mary	Mary's smart	tphone		💌 D	elete	
		☑	postpaid	•	204	12	34	Bill	Bill's smartp	hone		💌 D	elete	
Ľ	Ad	d												
L														
											🔕 Reset 🧧	Save 🖸 Sav	ve & Apply	

In the example above, when an incoming call arrives, only the phones of the Captain, John, and Mary will ring. Incoming SMS messages will appear on the phones of the Captain, Mary, and Bill.

When the configuration of the SIP extensions is complete, select <Save & Apply>

Captive Portal Setup and Use

With the Captive Portal enabled, you can generate PIN-codes that can be given away or sold to control web access. This allows controlled access to the Internet by requiring users to enter pincodes before being granted permission to browse the web. In addition, the speed of access can be restricted and/or the duration or timing of the session. User sessions are logged in Call Data Records (CDR) for tracking the amount of time on the service and the amount of data transferred.