Thuraya Telecommunications Company

# ThurayaIP

# Frequently Asked Questions

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**Service Provider Information**



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## 1. Service

### 1.1 What is ThurayaIP service?

Reliable, affordable, portable, broadband data solution via Thuraya satellite using an A5 size compact, light weight terminal, especially useful for people who require reliable Internet access in areas with inadequate terrestrial infrastructure. The service is available across Thuraya's vast coverage area.

The service is based on Internet Protocol (IP) and offers broadband data solution on Shared Mode or Dedicated Mode.

### 1.2 Where is the service available?

Thuraya footprint covers more than 2/3$^{rd}$ of the globe and includes countries in Europe, North and Central Africa, large parts of Southern Africa, the Middle East, Central and South Asia, Asia Pacific and Australia.

### 1.3 What are the types of services available on ThurayaIP?

Two types of broadband data services are available, StandardIP and StreamingIP

StandardIP: Also called BackgroundIP or VBR (Variable Bit Rate), this service offers up to 444 Kbps data connectivity on shared mode or best effort basis.

StreamingIP: Also called CBR (Constant Bit Rate), this service offers dedicated data connectivity ranging from 16 Kbps to 384 Kbps.


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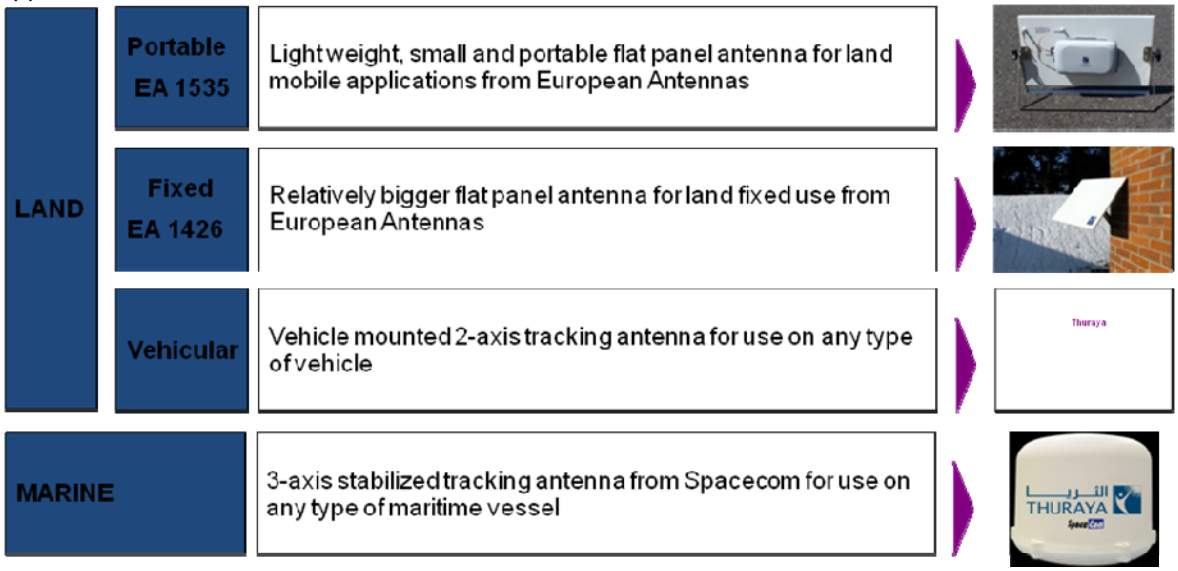
### 1.4 What types of external antennas are available?

Multiple types of external antennas are available to achieve the maximum throughput on ThurayaIP. These antennas cater to the needs of various market segments for land, vehicular, and maritime applications.




### 1.5 Are we required to use an external antenna with ThurayaIP unit?

ThurayaIP can be used with and without an external antenna. It has an inbuilt antenna which can be used for StandardIP connectivity of upto 444 Kbps on the downlink. The internal antenna can also be used for StreamingIP uplink connectivity of upto 256 Kbps. The details of the bandwidth available and the antenna used are as follows:

| ThurayaIP Data Capabilities | | Transmit | Receive |
|---|---|---|---|
| StandardIP | Without External Antenna | Upto 202 Kbps | Upto 444 Kbps |
| | With External Antenna | Upto 404 Kbps | Upto 444 Kbps |
| StreamingIP | Without External Antenna | 16, 32, 64, 128, 256 Kbps | 16, 32, 64, 128, 256 Kbps |
| | With External Antenna | 16, 32, 64, 128, 256, 384 Kbps | 16, 32, 64, 128, 256, 384 Kbps |

### 1.6 Is it mandatory to use external antenna to get the highest bandwidth?

Yes, to get the maximum bandwidth (uplink/downlink) as detailed in the table above, the external antenna has to be used.

### 1.7 What is the cable antenna needed? And what is its maximum length?

The antenna comes with a cable, connectors and the mounting kits, if required. The length of the cable varies with the type of the antenna used. eg for EA 1426 the length of the standard cable is 10 Mts whereas for EA 1535 it is less than 1 feet because the antenna is mounted on to the ThurayaIP terminal..

### 1.8 What are the key end-user activities that ThurayaIP supports?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Broadband internet access

Email, web mail, web browsing

Virtual Private Network (VPN)

File transfer (FTP)

Video conferencing

Video streaming

Intranet, E-commerce

### 1.9 What kind of hardware do I need to access the service?

ThurayaIP satellite IP Modem (Portable, Light weight, plug and play device)

ThurayaIP SIM Card

Connect the terminal to a notebook or a desktop PC via an Ethernet connection, USB Connection or WLAN and you are online.

### 1.10 How is the service available to subscribers?

The service is available to subscribers through ThurayaIP Service Providers assigned by Thuraya.

### 1.11 Who are the target subscribers?

Oil and Gas, Defence, Government, Media, NGOs, SMEs, individuals who need reliable broadband Internet access using portable devices.

### 1.12 What is the Quality of Service?

ThurayaIP offers two types of QoS:

**StandardIP:** This service offers shared channel resources among several users. This means that in any spot beam, the number of users logged on and are actively using the service will be sharing the available channels. The throughput shall vary depending upon the amount of data transmitted and received by various users sharing the channel, hence called VBR (Variable Bit Rate).

ThurayaIP provides an Internet connection using packet technology; Thuraya GPRS Gateway is then connected to the World Wide Web Network where Thuraya has no control over QoS.

Thuraya cannot guarantee certain throughput, but we keep monitoring the network to make sure that the best possible service throughput is achieved.

**StreamingIP:** This service offers dedicated throughput on a channel for a user. Within StreamingIP, different types of QoS are available ranging from a 16 Kbps to 384 Kbps for uplink as well as downlink. In this mode if a subscriber opts for 384 Kbps uplink and 64 Kbps downlink, and the network is available, the 384 Kbps uplink bandwidth and 64 Kbps downlink bandwidth is dedicated for this subscriber only. The throughput is Constant during the session, hence called CBR (Constant Bit Rate).

### 1.13 What are the uplink and downlink bandwidth options available on StreamingIP?

StreamingIP offers numerous uplink / downlink bandwidth options. It offers unmatched flexibility of variable uplink and downlink streaming bandwidth to suit any type of dedicated bandwidth requirement.

Example: For a media customer who wants to cover any event live, the best possible uplink bandwidth is 384 Kbps, however, on the downlink he does not require a huge bandwidth and hence might settle for 64 Kbps or 128 Kbps. This results in huge cost saving for the customer.



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Following is the uplink / downlink bandwidth matrix. The customer can choose any combination from the below matrix.

| Uplink / Downlink Bandwidth (Kbps) | 16 | 32 | 64 | 128 | 256 | 384 |
|---|---|---|---|---|---|---|
| 16 | 16 /16 | 32 /16 | 64 /16 | 128 /16 | 256 /16 | 384 /16 |
| 32 | 16 /32 | 32 /32 | 64 /32 | 128 /32 | 256 /32 | 384 /32 |
| 64 | 16 /64 | 32 /64 | 64 /64 | 128 /64 | 256 /64 | 384 /64 |
| 128 | 16 /128 | 32 /128 | 64 /128 | 128 /128 | 256 /128 | 384 /128 |
| 256 | 16 /256 | 32 /256 | 64 /256 | 128 /256 | 256 /256 | 384 /256 |
| 384 | 16 /384 | 32 /384 | 64 /384 | 128 /384 | 256 /384 | 384 /384 |

## 2. Terminal

### 2.1 Where are the terminals made?

Manufactured by Hughes Network Systems, Inc., USA

### 2.2 What are features of the terminal? (See Technical Specifications)

ThurayaIP is a feature packed Satellite IP Modem, absolutely portable, robust; truly plug and play with unmatched flexibility in operations.

### 2.3 What does ThurayaIP Package contain

ThurayaIP package includes…

ThurayaIP satellite IP modem

AC Mains power adapter and cable

Universal Power Adapter

Rechargeable lithium ion battery

Ethernet cable

USB Cable

User Manual

CD Containing USB Driver

### 2.4 Do I have to install any software on my PC before connecting ThurayaIP?

ThurayaIP is a true plug and play device. The browser on your PC should support Java. *(Java plug-in required on PC for terminal control www.java.com)*

### 2.5 What are the supported Operating Systems

Windows: NT 4.0, 98 second ed., 2000, ME, XP and Vista.

Macintosh OS 10.1 or later


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Linux Redhat 9

**2.6 List the supported browsers**

Microsoft Internet Explorer 6.0 or later for Windows, Microsoft Internet Explorer 5.0 or later for MAC Netscape Communicator 7 or later, Macintosh Safari 1.2 or later, Mozilla Firefox 2.0 or later.

**2.7 What are the basic steps to run ThurayaIP?**

Insert SIM, Power Up, and Obtain GPS fix

Connect using Ethernet / USB or WLAN, Point to satellite, You are ready to move into StandardIP Normal Operational Mode to perform activities such as browsing.

**2.8 What should I do to obtain GPS fix?**

Please refer to User Manual

Place ThurayaIP outside on a flat surface with a clear view of the sky.

Power up ThurayaIP by pressing the Power button.

ThurayaIP is now attempting to locate itself using GPS. This may take up to five minutes.

For optimum GPS signal reception, make sure ThurayaIP is positioned in a roughly horizontal placement. Since GPS receivers must "see" a large part of the sky without obstructions from buildings, mountains or trees, it may be necessary to take your ThurayaIP out to a clear space to obtain a new GPS location. It may be possible to obtain a new GPS location in a less favorable circumstance, but the time to completion may be longer.

The most recent GPS location is stored in ThurayaIP even when powered down.

Upon power up, if this stored GPS location is available the display indicates "Using Stored Location." Even so, ThurayaIP will attempt to update this GPS location since the Thuraya system will only allow access if your GPS location is not too old.

If ThurayaIP is able to update the GPS location, the status changes from "Stored" to "Valid." GPS location is shown as "Invalid" only under special circumstances when the stored information has been erased. In any case, you may wish to attempt network access to see if service will be granted.

(If the problem still persists kindly send the GPS coordinates, error codes, if any, and other details to customer.care@thuraya.com)

**2.9 GPS Fix taking a long time. What shall I do?**

Power cycle the terminal and retry under clear sky with no obstructions.

**2.10 How do I connect my PC / Notebook with ThurayaIP terminal?**

ThurayaIP terminal comes with the Ethernet Cable and USB Cable. You can connect your PC / Notebook with ThurayaIP terminal by using Ethernet Cable or USB Cable or WLAN.

**2.11 Location of the terminal?**


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Careful orientation of the terminal towards the satellite is required for establishing connection. More precise the alignment, faster is the data transmission. MMI Pointing details in User Manual.

### 2.12 What is wMMI and iMMI?

wMMI (Web Man Machine Interface) is the web based interface which a user can use to configure, set up and use the ThurayaIP terminal.

iMMI (Integrated Man Machine Interface) is the interface (LCD and few buttons) which is available on the ThurayaIP terminal which a user can use to configure, set up and use the ThurayaIP terminal.

### 2.13 What is Antenna Pointing Mode?

In the Pointing Mode information regarding pointing of the terminal to the satellite can be viewed on the MMI and the terminal can be adjusted accordingly to get the best signal strength.

You have to Exit Pointing Mode either through the MMI or by pressing the ***Exit Pointing Button*** on the terminal to enter the StandardIP Mode.

### 2.14 How can I enter Antenna pointing mode?

*If Pointing is Enabled*, Power off and on again. *If Pointing is Disabled*, enable it and then Power Off/On.

On the wMMI, Go to Settings<Advanced Settings<select Enabled for Pointing. Save. Power Off/On.

### 2.15 I am not able to view the Pointing Screen as shown in the User Manual after Power off/on?

Pointing may be Disabled (default setting). Enable it as above to see the Pointing Screen.

### 2.16 Do I have to go to the pointing screen each time I power up, even though I am using it in the same location?

No, Pointing is disabled in the default configuration. If it was enabled, you can disable it by going to the advanced settings page.

### 2.17 Can I change the SIM card with terminal powered on?

The terminal must be turned off before replacing SIM.

### 2.18 Where is the SIM card placed?

The SIM card is placed in a small compartment adjacent to the battery.

### 2.19 How can I remove the battery and the SIM card?

Turn off the terminal. To remove the battery, unscrew the battery compartment cover, remove the battery connector by pressing and pulling it. Pull out the battery from the compartment.

After you remove the battery, the SIM card can be removed by slightly pushing it into the compartment. The SIM card holder is push in / push out type.

### 2.20 How can I access the web-based user interface (wMMI)?

Open any of the installed browsers. Enter http://192.168.128.100 in the URL field.

### 2.21 Can I access the user interface (wMMI) with proxy enabled?


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Yes, if the terminal local IP address used to access the wMMI is configured in the Proxy settings page under exceptions. In order to access the wMMI from the browser, ensure that proxy settings in your browser are disabled. You may need to enable this setting on return to other Internet connections.

**2.22 How to disable the proxy?**

As per settings of your Internet Browser. Check User Manual

You must verify that the proxy server settings in your browser are disabled.

For Microsoft Internet Explorer, select Tools / Internet Options / Connections / LAN Settings and uncheck the box labeled 'Use a proxy server for your LAN'.

For Netscape or Firefox, go to Advanced Preferences and select 'Direct connection to the Internet'. For Safari, select System Preferences / Network / Built-in Ethernet / Proxies and uncheck the box labeled 'Web Proxy (HTTP).'

When complete please close your browser.

You may need to enable this setting on return to other Internet connections.

**2.23 What is the duration the battery will last when the terminal is continuously in use?**

1 hour when continuously transmitting at maximum speed.
2.5 hours continuous reception at the highest speed.

**2.24 What is the stand-by time for the battery?**

36 hours

**2.25 Are accessories like DC chargers, SIM card holders, carry case, battery, external antenna, solar chargers, available?**

Accessories like travel charger and battery for ThurayaIP are available with Thuraya.

**2.26 Does ThurayaIP operate indoors? What kind of antenna is needed?**

ThurayaIP may be used indoors with an external antenna. Flat Panel External Antennas from European Antenna Ltd. can be used with ThurayaIP terminal.

**2.27 Can ThurayaIP be used in maritime areas?**

ThurayaIP can also be used in maritime areas with compatible maritime antennas from Spacecom.

**2.28 Can ThurayaIP SIMs be used in other Thuraya terminals/products?**

Yes. ThurayaDSL SIM Cards can be used in ThurayaIP terminal but the speed available shall be limited to a maximum shared bandwidth of 144 Kbps.

**2.29 Can any other SIM cards be used in ThurayaIP?**

Yes, you can use ThurayaDSL SIM Card in ThurayaIP but the bandwidth available shall be limited to 144 Kbps only. You might have to update your SIM profile through our Customer Care to enable this.

**2.30 Can ThurayaIP SIMs be used in other similar products?**

Yes, in ThurayaDSL. But the speed would be limited to 144 Kbps only.

**2.31 How many concurrent users can it support using a switch or wireless?**

ThurayaIP terminal has the capability to support multiple concurrent users and each user having multiple sessions. The maximum recommended number of terminals is 12 concurrent users.


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**2.32 Can I use it when it is raining without antenna?**

The terminal conforms to IP55 ingress protection standards and hence can resist water spray for some time. But keeping the terminal under the rain is not advisable.

**2.33 Can I send files from a ThurayaIP to a ThurayaIP? Do I need a static IP address for that?**

Yes, you can send files from one ThurayaIP to another ThurayaIP. Static IP address is not required for this.

**2.34 What are the ports available on the unit?**

ThurayaIP terminal has one USB port, one RJ45 port and one WLAN connectivity option. For details please refer to the specifications sheet below.

**2.35 Can I use voice on ThurayaIP?**

ThurayaIP does not support Circuit Switched Voice. However, since it is a pure IP terminal, any VOIP application can be used on this to support voice.

**2.36 Do I need a firewall on my computer or does it contain itself a firewall?**

You shall have to use your own firewalls.

**2.37 Can I block users from accessing some websites and stop the pop-ups from the unit?**

No it cannot be done from the unit, but can be done using the firewalls on the local network.

**2.38 If I have 10 simultaneous users, do they share equally the bandwidth available?**

No, the bandwidth available to each user shall depend on the application used by the user and the amount of data exchanged by that user. Higher the amount of data being pushed/pulled, higher the bandwidth available for that user.

**2.39 What is the standard encryption available? Can I add other types of encryption?**

You can use any standard data encryption on ThurayaIP. All the major ones have been tested and proven on ThurayaIP

**2.40 Can I use ThurayaIP with any of the OS?**

Yes, please refer to the specifications sheet for more details.

**2.41 What do I need to setup a VPN access on one unit?**

You require a VPN client on your PC/laptop and a corresponding VPN server in your HQ to setup the VPN connection.

**2.42 If the terminal is disconnected and I am downloading a file, will it resume the download from the point it stopped?**

In general no, but it is subject to the application you have used to download the file.

**2.43 Can I use simultaneously streaming and standard IP?**

No, you cannot. You shall be able to use one at a time.

**2.44 Can I setup user profiles on ThurayaIP? If yes, can I give access to streaming to some of the users and normal browsing to others?**


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Yes, there are 4 default user profiles: Standard, 128kb/s streaming, 256kb/s streaming and 384kb/s streaming. Each could be configured by the user for StreamingIP or StandardIP service.

### 2.45 Can I use ThurayaIP with any of the videoconferencing equipments?

Yes, ThurayaIP can be used with various videoconferencing units like Scotty, Polycom, Tandberg, etc.

### 2.46 Does a user have to setup the unit when moving from one location to another or one country to another?

Yes, new GPS fix has to be acquired.

### 2.47 Can I use Fax over ThurayaIP?

ThurayaIP is a pure IP terminal. You can use any fax over IP software to send fax over ThurayaIP.

### 2.48 Does the bandwidth received changes when the connection rates drops from 80% to 70% for instance?

Yes. The bandwidth/throughput that you get on ThurayaIP is heavily dependent on the correct pointing. If the signal strength drops, the bandwidth available shall also drop.

### 2.49 When I use the terminal in a maritime environment, do I need a special setup?

Yes, when using the terminal in a maritime environment you have to use a Spacecom stabilized maritime antenna.

### 2.50 Is the stabilized antenna mandatory in an oil offshore platform?

If it is a floating oil platform, then the stabilized antenna is preferred. However, if it is a fixed oil platform, then the flat panel external antenna can suffice.

### 2.51 Can I use the unit with other applications apart from Quicklink?

ThurayaIP has been tested with multiple streaming media applications, the most important one being Quicklink.

### 2.52 Do I need to acquire the application directly from Quicklink?

The service provider can procure the Quicklink solution, comprising of the client side encoders and server side decoders directly from Quicklink.

### 2.53 Can I use ThurayaIP when there is a sandstorm? Or shall I add an antenna to increase its performance?

Yes, you should be able to use ThurayaIP during a sand storm as well.

### 2.54 Can I use ThurayaIP indoor?

Yes, using the following options:

Placing ThurayaIP outside and using the computer/laptop on WLAN

Placing ThurayaIP outside and extending the connectivity from ThurayaIP to the laptop on a LAN cable of upto 100meters.

Placing ThurayaIP external antenna outside and connect to the ThurayaIP indoor with a long antenna cable available with EA 1426 antenna version.


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### 2.55 Will my unit be upgraded automatically if there is a new version?

No, you shall have to download the new version from ThurayaIP website and then upgrade the firmware on your terminal as per the procedure described in the user manual.

### 2.56 Do I have to add specific applications to improve the performance of my ThurayaIP?

The performance of any IP link (especially the ones over satellite) can be improved using a special Performance Enhancement Proxy software/hardware. It is advisable to use the TCP window resizing software patch for Windows operating system; this can be provided by Thuraya Customer Care or downloaded from our web site.

### 2.57 Are the users notified in case there is a network outage?

Yes, Thuraya Customer Care sends the notifications for planned as well as unplanned outages to the Service Providers who then notify the customers.

### 2.58 Can I remotely control my ThurayaIP or use command applications?

You can remotely control your ThurayaIP by accessing the computer controller attached to ThurayaIP.

### 2.59 Is the unit compatible with both Mac and PC?

Yes, ThurayaIP is compatible with both Mac as well as PC.

## 3. Sales and Customer Support

### 3.1 How can we order the terminals?

As normal procedure

### 3.2 What will be the delivery scheme of the terminals?

Check with your Country Manager

### 3.3 What are the arrangements for ThurayaIP Customer service, after sales support, Technical Support?

Service providers are trained to provide required support. Service provider Help Desk and Customer Service Centre are also available for support to Service providers and subscribers.

## 4. Postpaid Service

### 4.1 What kinds of Postpaid Plans are available?

ThurayaIP Postpaid Service offers the following plans

Basic

Extra

Unlimited

Stream

### 4.2 What kinds of Prepaid Plans are available?

Only one prepaid airtime plan is available, ie Prepaid Unlimited.

### 4.3 How will we be able to distinguish the different monthly plans; are there 5 different Post paid Sims?


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Only one SIM Card for all ThurayaIP Postpaid package plans. Service Provider can activate as per subscriber requirements as Basic, Extra, Unlimited or Stream.

**4.4 What are the charges the subscriber has to pay on subscription?**

No Activation fee for any Post paid plans.

Monthly Fee prorated depending on date of activation (Free MBs will be prorated)

Monthly Fee for the next month

(For details contact you're Country Manager)

**4.5 If the subscriber is not fully using the MBs included in the package will there be a roll-over of MB's?**

No, there will be no roll-over of unused MBs, included in the package.

**4.6 Can subscribers shift between Postpaid Plans?**

Automatic shifting between Postpaid plans is not possible. Service Provider will be able to move subscribers from one plan to another as per the usual procedure in voice service by deactivating the subscriber from the current plan and reactivating him in another plan. If the subscriber is shifting from low usage plan to high usage plan, it is free. However, if the subscriber is moving from a high usage plan to a low usage plan then the charges apply, (For details contact your Country Manager).

**4.7 Can a SIM be suspended and reconnected? What are the applicable charges?**

Suspension/Reconnection can occur at any time based on subscriber request to service provider.

Customer is charged the normal monthly fee of the respective plan that he is subscribed to during suspension period.

**4.8 What is the process for Deactivation of SIM cards?**

The Service Provider, as per the usual procedure, can deactivate subscribers after paying all dues.

**4.9 What is the process for setting Credit Control Limit for a postpaid subscriber?**

The credit limit functionality for ThurayaIP Postpaid Service is provided based on SP request through Thuraya Helpdesk. The service works as follows:

Credit Limit, based on customer usage pattern, is fixed by the Service Provider.

Usage level of the customer, which accumulates daily until end of a calendar month, is regularly checked. When usage reaches a specified level of the Limit (e.g 80% or 100%), then action(s) defined by the SP will be taken.

e.g. sending report via email to SP for 80 % and suspension of contract for 100 %.

If usage has reached one of the specified levels (eg 80%) and the SP does not want the customer to be included in the further level (eg 100%), the SP can increase the Credit Limit or disable the functionality. However necessary actions should be taken by the SP to return to previous setup each month or as needed.

Usage level will be reset to 0 at the start of every month. If a customer account has been barred or suspended due to exceeding the Credit Limit, the service provider should reactivate the account each month as the detection is reset.

Note:

Credit Checks run every rate cycle in billing system. Accordingly credit limit may be reached or exceeded by customer during time between two consequences rate cycle. Credit control



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process might be affected due to any technical problems that delays rating process of subscriber's calls. Thuraya is not liable in such cases.

**4.10 What type of service comes as a default with ThurayaIP postpaid package?**

For all postpaid and prepaid plans, StandardIP comes as a default. However, the SP can enable or disable StreamingIP on any SIM Card from the provisioning system.

For postpaid plans except "Stream", the usage charges for StreamingIP are invoiced over and above the monthly plan charges.

Similarly for the "Stream" package, the charges for StandardIP are invoiced over and above the Stream package plan charges.

## 5. Prepaid Service

**5.1 What are the Prepaid Plans available?**

Only one Prepaid Plan, Unlimited, is available.

**5.2 What services come as default with Prepaid Plan?**

Only StandardIP is available on prepaid Unlimited plan.

**5.3 Do we have to make the first call to activate the prepaid Unlimited SIM card, (like any other Thuraya SIM card).**

Yes

**5.4 Is this first call starting the validity of the first unlimited voucher?**

Yes

**5.5 Can I make multiple refills and extend validity for longer periods?**

Yes, each refill adds SIM validity extension as above from expiry date of previous refill. Maximum SIM validity at any point of time is capped at 12 months regardless of the number of refills made.

**5.6 How can Prepaid Unlimited SIM validity be extended?**

Refill with Special ThurayaIP Unlimited PINs extends Unlimited SIM validity for 1 month from validity expiry date. Other refill cards cannot be used. Customers may refill before SIM validity expires.

If the account has sufficient credit for renewal ($12000) on the last active date, then the account will be renewed automatically without going to Inactive status.

If the account does not have sufficient credit for renewal ($12000) on the last active date, then the account will go to Inactive status. Once the account refilled, it will be changed back to Active status within one hour time and validity will be one month from the renewal date.

**5.7 Will the SIM be cancelled if validity is not extended?**

Subscribers who do not extend validity will be in Grace Period for 6 months from SIM expiry date. During the grace period, the ThurayaIP terminal is barred from accessing the service except to make a refill, using Refill APN. Once the refill is made the subscriber can use the service normally with an extension from the date of refill.

If no refill is made within 6 months of SIM expiry date, the SIM is cancelled.


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### 5.8 When will the grace period start (after not using the card for a certain period)

Grace Period starts After SIM Expiry Date

### 5.9 When does the service provider get airtime share?

Service provider gets his agreed airtime share of realized usage charges on monthly basis.

### 5.10 For prepaid subscribers, will it be possible for the SP to check about a subscriber's usage or credit position?

Yes.

### 5.11 When account credit reaches 0, will I get disconnected in the middle of your browsing or will the system wait until you close your session?

When there is no credit available for deduction, session is disrupted within 15 minutes, after which no data transfer is allowed using the "ThurayaIP".

The subscriber needs to change the APN to "refill" and restart the terminal to check balance or refill.

After refill, pending amount, if any, will be deducted before allowing use of "StandardIP" APN and reconnection of service. (The account can use "StandardIP" APN only when the available credit is > 0).

### 5.12 Service was disconnected soon after I started to use my ThurayaIP prepaid account. Why?

ThurayaIP prepaid subscribers may experience a momentary interruption of service upon their first use of ThurayaIP service. The interruption will occur approximately 15 minutes after the session initiation. Subscribers will be able to reconnect to the service normally thereafter.

### 5.13 Will I be charged separately for StandardIP and StreamingIP usage?

Both StandardIP and StreamingIP services can be made available to any subscriber. However the charging depends upon the plan the customer is subscribed to. Eg If a customer has subscribed to ThurayaIP Basic Plan, the customer is entitled to get $ 550 of StandardIP usage. The customer can use StreamingIP service as well. But the charges for StreamingIP shall be extra, over and above the bundle charges of $ 550.

## 6. General

### 6.1 How is charging done for StandardIP?

For StandardIP charging is based on usage. Usage includes browsing and the minor usage that occurs while remaining connected to the Internet. Charging is based on volume of data transferred and not based on time. Effectively if a ThurayaIP terminal connects in the morning till the evening, there would hardly be any charges (except the charges for minor usage that occur while remaining connected)

### 6.2 How is charging done for StreamingIP?

For StreamingIP charging is based on time. If the subscriber remains connected for 7 minutes, the charges will be for 7 minutes only. The charging is independent of the amount of data transferred.

### 6.3 What is ThurayaIP billing increment?


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ThurayaIP Data Block (Billing Increment) for StandardIP is 100 Kilobytes, for both postpaid and prepaid services.

For StreamingIP, the billing increment is 30 seconds.

### 6.4 How can the subscriber monitor usage?

The built in Usage Monitor (Statistics) on the wMMI gives an "indication" of how much usage has taken place.

The usage/charges can also be found out from web based services site http://services.thuraya.com

### 6.5 How can the subscriber get his password for Web based Billing Inquiry service - http://services.thuraya.com?

Postpaid Subscribers: Obtained from service provider through BSCS. To change contact service provider

Prepaid Subscribers: Last 4 digits on the SIM serial number is the default password. Password can be reset by Service Provider / Helpdesk / Customer service through PCAS.

### 6.6 What is the process for SIM Replacement?

Customers can replace their SIMs through the service provider at a charge of 50 USD per SIM.

### 6.7 Can a VPN run over ThurayaIP?

Yes. All the major VPN clients have been tested successfully.

### 6.8 What is the latency on ThurayaIP?

The answer to this question is not definitive. Thuraya does not have any control on the end to end network. The one in our hand is the satellite propagation delay (270ms for one direction). But for an end-to-end latency, we need to consider the service that is requested. For example, if one uses ThurayaIP to access a loaded website, the latency here differs from a normal website. On an average the end to end latency is approximately 700 msec (round trip).

### 6.9 Is it possible to connect one ThurayaIP to another ThurayaIP?

Yes.

### 6.10 Can we telnet a ThurayaIP terminal?

Telnet to the ThurayaIP terminal is not possible. However telnet to the computer connected to the ThurayaIP is possible to control ThurayaIP via VNC as an example.

### 6.11 Can we do the Over the Air (OTA) upgrade of ThurayaIP terminal?

No. ThurayaIP terminal can be upgraded only by manually running the necessary ThurayaIP upgrader file on the PC connected to the ThurayaIP terminal. The upgrader file can be downloaded from Thuraya website.

## 7. Public Static IP Address

### 7.1 How can a subscriber obtain Public Static IP address?

A public Static IP address will be assigned to an MSISDN upon subscriber request through the Service Provider.


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### Postpaid subscribers

Service provider can allocate the Public Static IP address in the provisioning process using the subscriber administration module.

Subscriber is charged 40 USD/IP/Month in advance – not refundable.

### Prepaid subscribers

Public Static IP address is provided to ThurayaIP prepaid subscribers based on request, at 500 USD/IP for one year. This fee is charged in advance and not refundable. Prepaid subscribers need to renew IP address subscription on yearly basis.

Service provider fill the Public Static IP request form and submits by fax/email to Thuraya Customer Care.

Customer care informs the service provider of the assigned public static IP address in 3-4 days.

**7.2 What is the process for a ThurayaIP prepaid subscriber to obtain Public Static IP address?**

The typical process would be

Use the account at least once

Credit 500 USD in the account and request for the Static IP

500 USD is debited and public static IP is provisioned for the account.

**7.3 How can the Prepaid Unlimited subscriber obtain Public Static IP address?**

Same as above. The 12000 USD Credit is for the 30 days of unlimited ThurayaIP access from the day of first use. An extra 500 USD must be credited to the account by refilling, prior to requesting Public Static IP address.

**7.4 Does the subscriber have to do anything to activate the Public Static IP?**

The assignment of the static IP is done from the network. Once the subscriber has been informed of the assigned Public Static IP address, the subscriber should manually configure the allocated address in the settings page of the wMMI. The changes will be reflected upon restart

**7.5 How will the IP addressing be invoiced?**

As normal service.

You can find it as a service in the monthly report and in the Invoice.

**7.6 How can the Public Static IP address be deactivated?**

Public Static IP address can be deactivated based on subscriber request through service provider.

**7.7 Why does a subscriber need a Public Static IP address?**

Public Static IP's addresses are useful to access the terminal from the internet - run services provided by the Customer e.g. Web Services, FTP services, video streaming, etc

Another use might be where a user is trying to connect through a secure link to a company's system where he is required to provide his Public IP.

## 8. VPN

**8.1 A subscriber is having 5 remote construction sites & two offices in the capitals of two countries. He wants to interconnect all his remote sites with his city offices by using ThurayaIP with VPN technology. Can he do this?**


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Customers can establish VPN sessions with their corporate headquarters using standard VPN clients. Microsoft VPN client is supported by the network. Other standard clients are also supported. PP2P and L2TP protocols have been tested successfully.

**8.2 Do I need to have a Public Static IP Address to establish VPN connection?**

No, however for security reasons it is preferred.

**8.3 Does Thuraya provide the VPN Client?**

No



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## 9. ThurayaIP Technical Specifications

Back

| ThurayaIP Technical Specifications | |
|---|---|
| **Physical Characteristics** | |
| Weight | 1.3 Kg terminal and battery |
| Size | 158mm x 225mm x 50mm (A5 size) |
| **IP Data Services** | |
| Background class of service | Up to 444 Kbps over a shared channel |
| Streaming IP | Without External Antenna: 16, 32, 64, 128, 256 Kbps<br>With External Antenna: 16, 32, 64, 128, 256, 384 Kbps |
| **Tolerances** | |
| Operating temperature | Running from External Supply: -25 °C to +55 °C<br>Running from Battery: 0 °C to +50 °C |
| Storage temperature | Including Battery: -20 °C to +60 °C<br>Excluding Battery: -40 °C to +80 °C |
| Operating humidity | 95% RH at 40 °C |
| Mechanical vibration | 200-2000 Hz, 0.3 $m^2/s^3$ |
| Unpacked Drop | 0.5 m on Concrete Surface |
| Water and dust proofing | IP-55 standard |
| **Power** | |
| External Power | Mains power supply adapter, 100-240 V AC at 50 -60 Hz |
| Input Voltage | 12 volt DC |
| **Battery** | |
| Battery Life | Up to 36 hours standby time<br>1 hour of continuous transmission at the highest rate |
| Battery Type | Lithium-Ion |
| Battery Charge temperature | 0 °C to +40 °C |
| **Interfaces** | |
| Connectors | Ethernet (RJ-45), USB |
| User Interface | Web based graphical user interface accessible via standard web browser. |
| External antenna connector | GPS, Active & passive antenna |
| WLAN connectivity | IEEE 802.11b standard with:<br>WEP encryption<br>SSID Broadcasting control<br>MAC address filtering<br>DHCP |
| **Compatible Operating Systems** | |
| Windows | 98SE, ME, NT 4.0, 2000, XP, Vista |
| Macintosh | OS 10.1 or later |
| Linux | Redhat 9 |
| **Compatible Internet Browsers** | |
| Microsoft Internet Explorer | 6.0 or later for Windows<br>5.0 or later for Mac |
| Netscape Communicator | 7.0 or later |
| Mozilla FireFox | 2.0 or later |



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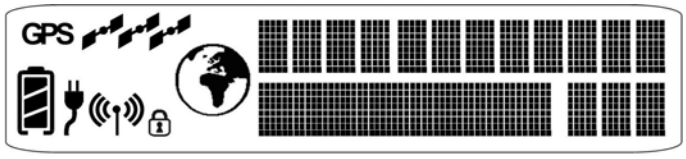
| | |
|---|---|
| Safari | 1.2 on Mac |
| Applications | |
| VOIP | Skype, MSN, Yahoo, AOL, Asterisk |
| Video and Other applications | Streambox, Quicklink |
| VPN systems | Cisco-VPN client V1 or V2.6.3 |
| | Nortel-Contivity VPN Client V04_15.06 |
| | Netscreen-Remote Client 8.1 |
| | Checkpoint-V4.1 |
| | Sonic Wall<br>IP Encryptor Omnisec 421 for Mobile IP VPN |
| Governmental Security Solutions (Encryption) | Omnisec IP-based VPN Solution based on well proven Omnicrypt System Architecture for Remote Site IP VPN and Secure Videoconferencing |
| | Omnisec Secure Collaboration Solution for Secure Collaboration |

## 10. Buttons and Display on the terminal




| Button | Action | Result |
|---|---|---|
| Power button | Short press | Backlight on, cancel any menu operation, return to status menu |
| | Long Press | Turn on or off |
| | Extra Long press | Hardware enforced power down |
| Connect button | Short press | Toggle audio pointing state (sound on/off) |
| | Long press | ❖ Toggle connection state (connect/disconnect)<br>❖ Exit pointing mode |
| Menu button | Short press | Scroll to next menu item |
| | Long press | Start GPS receiver |
| Modify button | Short press | Scroll to next option of displayed menu item when in menu |
| | Long press | Toggle WiFi on/off (when not in menu display) |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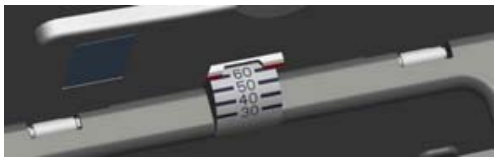
## 1.1.1

### 10.1 iMMI Menu and Display Summary

The upper level of the LCD displays status messages and menu items. Status messages are summarized in the table below.

| Display | Description |
|---|---|
| Powering Off | Displayed while DSL+ is powering down |
| Fault {code} | A hardware fault exists, preventing operation(see troubleshooting section for code explanations) |
| Too Hot | A temporary thermal shutdown is about to occur |
| Battery Hot | A temporary thermal shutdown is about to occur due to battery heating |
| No SIM | No SIM is detected in ThurayaIP |
| Locked | A security code is needed (entered via wMMII) |
| PIN | A SIM pin code is needed (entered via wMMI) |
| Pointing | In pointing mode |
| GPS old | GPS is older than the stored SI time period allows |
| Disconnected | PDP connection is disconnected, preventing traffic transfer |
| Tx{rate}/Rx{rate} | Transmit and Receive active rates in bits per second |
| Standard | Best efforts quality of service in both directions |

### 10.2 ThurayaIP Antenna Protractor




When you are positioning the antenna during the Antenna Pointing process, the protractor provides the current angle of the antenna so that you can adjust it to the Antenna Angle specified on the pointing screen.

### 10.3 Compass

Reference the compass during the Antenna Pointing process to get the correct Compass Direction needed for the antenna. The illustration shows an example of a South-West orientation.

The compass can be affected when close to magnetic fields or metallic objects.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