

VSAT services from Blue Sky Satellite Communications (Kenya and Southern Africa)

Blue Sky Satellite Communication are based in Johannesburg, South Africa, and have been involved in providing satellite services in Africa for the past 8 years.

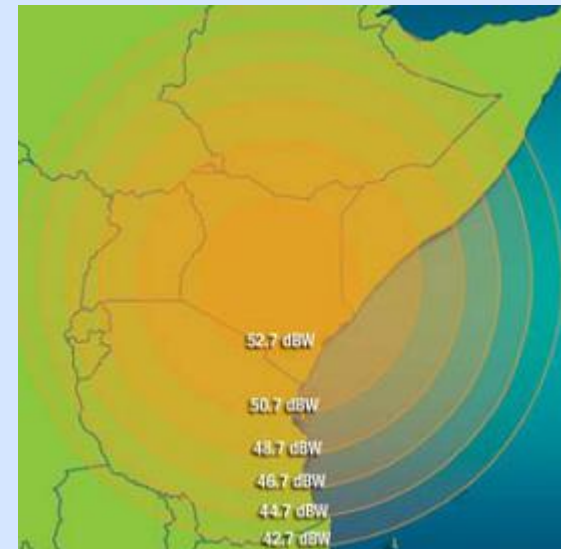
Fixed VSAT dish: Broadband internet connection

The capacity you need and the monthly charges will depend on your application. The least expensive will be a VSAT for a single PC user. The most expensive will be a VSAT used to provide internet trunking connection for a medium sized town ISP with hundreds of PCs, VoIP phones and base cell phone site included.

For home use, small business and internet cafe operations **iDirect** technology is offered in the Kenya area, plus **ViaSat LinkStar** throughout southern Africa. Tell Blue Sky where you are and how many PCs you want to connect and how many VoIP phones, and seek their advice as to the appropriate bit rates and sharing ratios to use.

In the coverage maps to the right iDirect service is offered in a high power and high sensitivity Ku band spot beam pointed at Kenya from the Intelsat 802 satellite at 33 deg east longitude. The downlink frequency into the indoor iDirect receiver is 1129.6 MHz.

The middle coverage map shows the coverage of the whole of southern Africa using the Eutelsat W3A Africa beam. The service comes from the **Eutelsat Skylogic (Viasat Linkstar)** VSAT hub is located in the European beam where it is connected to the world internet terrestrial trunk system. The beam is cross strapped on the satellite so that two transponders are in use - one each way. Downlink frequency to Africa is 1120.75 MHz (into the LinkStar box)



Large business, town ISP or large corporate

For large business or ISP operations **dedicated** satellite capacity is appropriate and the technology offered for this is DVB outlink and SCPC type modem for your return link. If the DVB capacity is dedicated to you [prices for the satellite capacity are much higher but the service is such that any congestion will be under your own control. Point to point linking is also possible and for this larger dishes are preferred at both ends, such as 2.4m diameter.

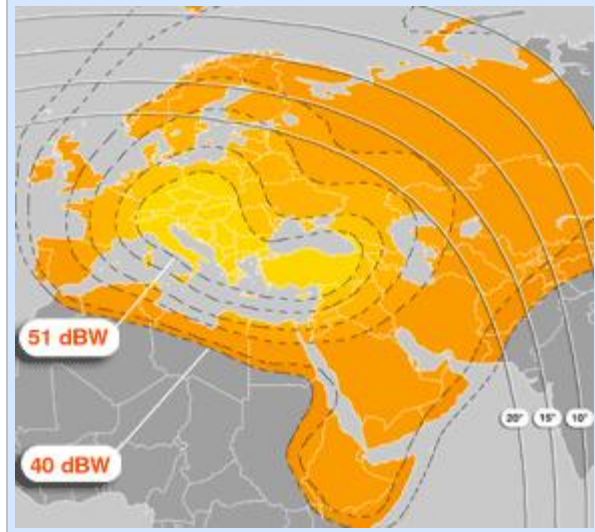
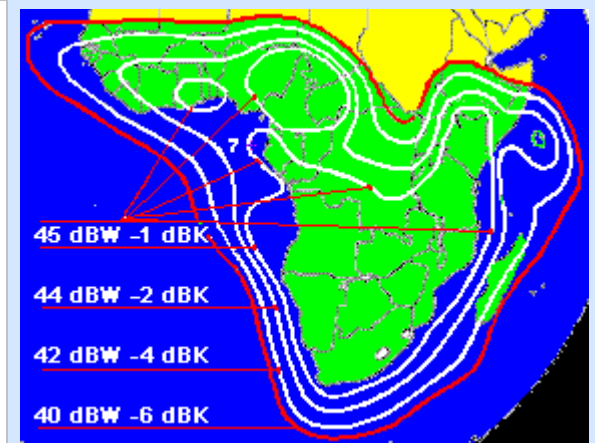
Portable and satellite phones / laptop sized satellite internet terminals.

More portable solutions are offered by the Thuraya, Inmarsat and Iridium satellite networks. These include Hughes, SO-2520, SO-2510, Iridium 9505A and Nera Worldphone. Laptop sized internet terminals include Explorer 500 BGAN, REGIONAL BGAN, HNS 9201 BGAN and Worldpro 1000 BGAN.

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I have written this page at the request of Blue Sky Satellite Communications. It is simply for your information and is not a paid-for advertisement.

Here are some pictures below of their VSAT installations in Africa



C-band circular polarization VSAT dish



C-band circular polarization feed assembly

Note the square tube behind the feed horn. This square tube is the **polarizer** and has two rows of pins inside. It may be attached at two alternative 90 deg positions (for left hand LHCP or right hand RHCP circular reception) to the OMT junction which is in the centre of the picture.

The receive LNB, at the bottom, is joined to the OMT via a transmit reject filter. The C band transmit BUC is on the lower left. Note that the entire feed assembly does not need to be adjusted in rotation. Its function as either a RHCP or LHCP receive depends on the way you bolt the polarizer to the OMT. If you get no receive signal try undoing the 8 bolts and trying it the other way.



Patriot Ku band dish



Channel master Ku band VSAT dish

Patriot Ku band dish and Channel Master dish. Note the high elevation angle of the Patriot antenna. The offset configuration means then when the beam is pointed almost straight up that the surface is still tilted to avoid water accumulating during rainfall. The strong rim prevents bending with temperature variations or with the weight and distortion is avoided. This means an accurate surface shape and excellent beam gain and performance.

	Satellite	L-band IF carrier frequency	VSAT technology
Here are some technical details about Blue Sky Satellite Communications services showing the satellites, carrier frequencies and the VSAT technologies used.	Intelsat IS-802 Intelsat IS-10-02 Intelsat IS-903 Eutelsat W3A	1129.6 MHz 1264.34 MHz 1263 MHz 1220.75 MHz	iDirect Ku-Band iDirect C-Band Skystar C-Band Linkstar Ku-Band
Blue Sky are a Virtual Network Operator (VNO) with direct control of their iDirect VSAT hubs on IS-802 and IS-10-02	Eutelsat AB3	1423.25 MHz	Linkstar C-Band