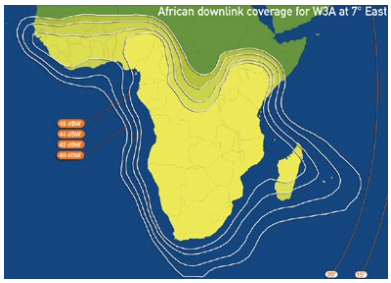
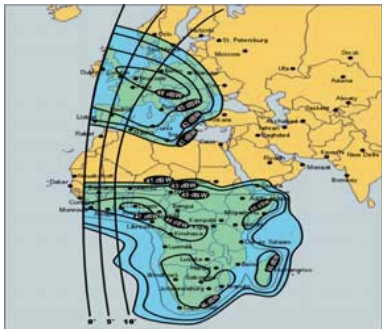
SatIP4

Low Cost C / Ku Band IP VSAT Solutions

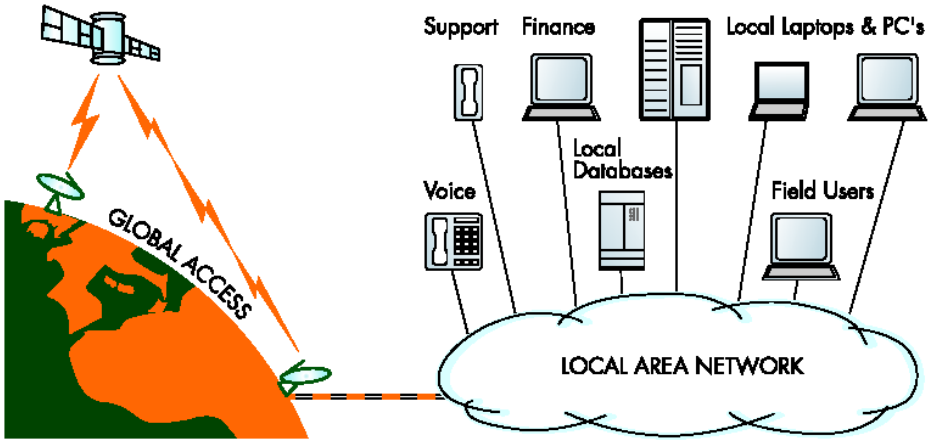
- High Bandwidth Internet Connectivity Solution
- No Phone Lines required, No Dial-Up, "Always On"
- Ideal for Broadband rather than Mission Critical Applications





SATIP4 KU Footprints
W3A (yellow), IS10 (blue)

VSAT technology represents a cost effective solution for users seeking an independent communications network connecting to the global Internet. VSAT networks offer value-added satellite-based services capable of supporting not only access to the Internet, data, LAN, voice/fax communications, but also providing powerful, dependable private network communications solutions.



SATIP4 CBand Footprint
IS904

The AfriConnect SatIP4 service operates at either C-Band or Ku-band to minimise costs whilst offering choice and provides downlink speed options from the Internet of 512kbps – 2mbps with uncapped usage (subject to acceptable use policy) and return links from 32kbps up 512kbps speed. The service can utilise low cost dedicated / shared bandwidth links.

SatIP4 is ideal for small office applications of 5 to 50 PCs, dependent on the level of simultaneous Internet usage by each workstation. All PCs on the network should have anti-virus software installed to prevent problems.

Terminal Description

1.8m VSAT Terminal
Outdoor Dish & RF

The AfriConnect SatIP4 service also uses industry-leading technologies including unique capabilities that optimize Internet IP application performance through efficient bandwidth usage, greater flexibility, and enhanced reliability and an excellent user experience.

The standard SatIP4 system is supplied with a Low Noise Block Down Converter (LNB), and with either a 2W integrated Block Up Converter (on KU Band) or 5W Block Up Converter (on C band) to receive and transmit data to the satellite respectively, with a 1.2m or 1.8mdish. This enables basic service provision with a return bandwidth from the site to the Internet of over 512kbps throughput.

For higher availability applications, or higher throughputs a 2.4m antenna would be required.

Low Cost C and Ku-Band IP VSAT Solutions

NETWORK

Architecture:	Deterministic TDMA Network Architecture(D-TDMA) Two-Way, star topology
Protocols Supported:	TCP/IP
Frequency Bands:	Ku-Band, C-Band
IP Protocols:	TCP, UDP, IGMP, ICMP, IP
Addressing:	Private and public

Benefits of SatIP

- TDMA outbound and inbound carriers
- Built-in simple router for bandwidth protection
- TCP acceleration in both directions
- QoS/prioritisation

TERMINAL

Outdoor Unit

Antenna Sizes Ku-Band: 960cm, 1.2 m & 1.8m
Antenna Sizes C-Band: 1.8 m & 2.4m
Outside Operating Temperature: -40° to +55°C
Humidity: Up to 100%
Transmitter: 2W Ku-band, 5W C-band

Indoor-Unit

RF Input/Output: Two F connectors, 75ohm female
Data Interface: 10/100 BaseT Ethernet (RJ45)
Size: 330mm x 203mm x 88mm (1U)
Weight: 1.8 kg
Operating Temperature: 0° to +40°C
Relative Humidity: 10 to 90%

COVERAGE

- W3A/IS10 for sub-Saharan Africa using Ku-Band
- IS904 for sub-Saharan Africa C-band
- PAS1R for North Africa/Europe Ku-Band
- W6 and SeSAT2 spot for Middle East and Afghanistan Ku-Band.

Interconnection to Internet and VoIP Switch

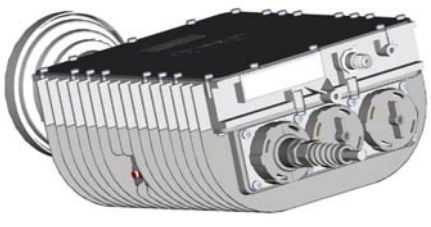
The network is designed to operate via the Internet backbone. The network can support VoIP if sufficient uplink bandwidth is available; a VoIP connection to the public phone network can be offered and legal to use in country.

Project Support

- AfriConnect will manage the whole project to ensure that installation is timely and an Ethernet interface to any existing networks is operational.
- Customers will be responsible for obtaining their own VSAT licenses in some countries. AfriConnect can also provide initial assistance and examples of how to apply, and what has been successful for other users.

Maintenance Options

- AfriConnect's SatWise product can also be used to provide a "network in a box" solution with many added security and management features.
- It is strongly recommended that a suitable UPS be provided for each SatIP unit if no generator supplied/UPS is available at each office.
- Support would normally be provided via email or over a phone line, including remote access to the client network over the new satellite link. This support will be proactive in ensuring that the system is working and that all traffic is getting through in timely fashion.



Integrated KU band LNB/BUC and VSAT Modem

Example 1.8m C-band Antenna