



## Dial up Internet services

Dial-up Internet access allows access to the Internet via a conventional telephone line and a modem. It is of use to those who travel and require an easily available cost-effective service for the transmission of light data. Once the Internet is engaged, the phone line is no longer available to make or receive calls.

## Cable Internet Services

Some cable television companies provide an Internet service, which uses their cables to deliver a fast, continuous connection. Connection speeds range from 500 Kbps to more than 1 Mbps.

## ISDN services

The ISDN digital access service is delivered via existing telephone lines and offers the possibility of initializing end to end digital connection.

## ADSL services

The ADSL service uses a conventional telephone line and a modem and works by splitting the phone line into two separate channels: one for data (e.g. Internet access) and the other for voice (phone calls), thus allowing simultaneous Internet and phone use. ADSL offers Remote LAN access internet access services which are available in Kenya in the following bandwidth ranges. Note: two values are offered for each configuration - the first figure gives the upload speed and the second figure gives the maximum download speed.

- 32/128 Kbps
- 64/256 Kbps
- 128/1MB
- 512/2MB

## Wireless technology

The two most common types of wireless phone technology currently in use in Kenya are: **GSM** (Global System for Mobile Communication) and **CDMA** (Code Division Multiple Access). For purposes of comparison, consumers should know that about seventy three per cent of the global mobile market uses GSM technology, while about fourteen per cent uses CDMA

## GSM technology

GSM is a 2nd Generation wireless telecommunications standard for mobile cellular services. First deployed in Europe, it is based on TDMA (Time Division Multiple Access) technology.

## CDMA technology

CDMA digital wireless technology employs a special coding scheme (whereby each transmitter is assigned a specific code), which allows multiple users to share common access to the network.

## Third Generation (3G) technology

Third Generation (3G) technology is the newest and most innovative form of communications technology available today. Third Generation (3G) mobile phones and networks offer high data transfer rates, wide bandwidth and increased capacity, all of which are required to support the new range of mobile phone digital services.

## Wireless Internet services

There are a number of wireless Internet services, such as;

**iBurst** - a mobile broadband wireless access system, which offers high performance, high speed, secure, mobile wireless access for business, home and office applications. iBurst offers the following benefits:



- Up to 1 Mbps data connectivity.
- Wide area wireless access, which means that larger cell sizes can be accommodated.
- Continuous connectivity.
- The service is fully compatible with existing laptops, PDAs and desktop computers: therefore upgrades and/or new devices are not required.
- the iBurst service is more secure than existing wireless delivery modes.

## Worldwide inter-operability for Microwave Access

### WiMAX

Worldwide inter-operability for Microwave Access (WiMAX) is a 3rd Generation protocol for wireless communications that makes more efficient use of bandwidth and better avoidance of interference.

## Wireless Fidelity (Wi-Fi)

Wireless Fidelity (Wi-Fi) is a wireless data network, which allows Wi-Fi enabled devices (such as PCs or mobile phones) to connect to the Internet - at such time as they are in the vicinity of the wireless data network.

## General Packet Radio Service GPRS

General Packet Radio Service (GPRS) is a packet-based wireless communication service, which provides continuous Internet connection for mobile phone users. GPRS allows 2G (2nd Generation) mobile phones to connect to the Internet for such purposes as the collection of emails or for the access of WAP pages.

## High-Speed Downlink Packet Access (HSDPA)

HSDPA is a new mobile telephone data transmission protocol, which is technically know as 3.5G. Essentially, it offers download speeds on a mobile phone, which are equivalent to those offered on an ADSL (Asymmetric Digital Subscriber Line), thus removing any limitations deriving from a slow connection.

## Enhanced Data-rates for GSM Evolution EDGE

Enhanced Data-rates for GSM Evolution (EDGE) refers to a faster version of the standard GSM wireless service, which is based on GSM standards while using TDMA technology.

## VSAT services

The services that can be made available through VSAT (Very Small Aperture Terminal) include:

- Electronic mail.
- WAN/LAN networking.
- Broadband Internet/Intranet access.
- Automatic teller machine interconnection.
- Electronic point of sale terminal interconnection.
- Credit card verification.
- Multimedia service delivery.
- Distance learning and training.

## Internet terms

**Bandwidth:** In the context of computer science, bandwidth can be used to refer to a measure of the information-carrying capacity (rate/speed) of a communication line. **Broadband:** This is a term used to depict a data rate greater than the ISDN basic rate. It is the generic term for high-speed digital Internet connections, such as wire line, DSL or cable modems and wireless 3G technologies. Broadband service is 'always on' so you do not have to dial-up for a connection.

**Download:** (or data downloaded) is any data retrieved from another computer on a network, for example, text, pictures or sound. **Upload:** is the sending of any data (text, pictures, sound files or software programmes) via a telecommunication network to another computer. **MB** or Megabyte (MB): is the term used to describe a measure of data. One MB is equal to 1,048,576 bytes, or roughly one million bytes. **Modem:** a MODulator - DEModulator is the device used to connect a computer to a telephone line.