

In the digital products field, Toshiba has enhanced the digital AV applications fields and will continue to produce distinctive products backed up by technology. We have provided the first HD DVD player in the world, a high-definition LCD-TV supporting digital high vision broadcasts, an AV notebook PC equipped with full high-definition LCD, a mobile phone with enhanced music player function and so on.

### The H1000 Series Digital High-Definition LCD-TV Equipped with HDD



42H1000 digital high-definition LCD-TV

Toshiba has developed the H1000 series, a digital high-definition LCD-TV equipped with a built-in 160 Gbyte hard disk drive (HDD) and a digital new brain “the meta brain-pro”. The H1000 series has 3 models (42V/37V/32V).

The H1000 series is equipped with the following convenient functions in addition to the normal record and playback functions:

- A function that ensures you won't miss that vital scene when someone drops in suddenly
- A function that allows you to check news anytime at the push of a button
- A function for easy timer setting for drama recording

In addition, since the TV is equipped with two digital terrestrial tuners, the user can watch one digital terrestrial broadcast program while recording another. And the user can watch two programs simultaneously with the double windows.

Furthermore, since “the meta brain-pro™” adopts 14 bit precision processing for picture processing functions such as “histogram dynamic gamma” and “color image control-pro”, the TV suppresses loss of picture elements or the occurrence of noise and brings a quality of picture as close as possible to the delicate feel of analog.

### HD-XA1 HD DVD Player



HD-XA1 HD DVD player

Toshiba has launched the world's first(\*) HD (High-Definition) DVD-video player, the HD-XA1 that can play high-resolution images and high-quality sound recorded on HD DVD-ROM, which incorporates interactive functions.

In the CE Show held in Las Vegas in January 2006, the functions newly incorporated in the HD-XA1 such as graphical menus and sub-video reproduction, as well as high resolution and high-quality sound, were demonstrated and gained great public favor.

The iHD engine, the heart of the interactive functionality of the HD-XA1, opens up the possibility of a new path for video content.

The HD-XA1 can also play DVD video and CD audio in addition to HD DVD video.

(\*) As of March 2006

## Perpendicular Magnetic Recording System HDD

Toshiba has become the first company<sup>(1)</sup> in the data storage industry to develop and commercialize two perpendicular magnetic recording (PMR) system



MK4007GAL 40 Gbyte (left) and MK8007GAH 80 Gbyte (right) 1.8-inch HDDs

HDDs: the MK4007GAL HDD packs 40 Gbyte into a drive only 5 mm thick, while the MK8007GAH achieves a capacity of 80 Gbyte<sup>(2)</sup> – the largest capacity<sup>(1)</sup> yet achieved in the 1.8-inch form factor.

Using a perpendicular magnetic recording system, Toshiba has achieved the world's highest<sup>(3)</sup> areal recording density of 206 Mbit/mm<sup>2</sup> (133 Gbit/in<sup>2</sup>). The storage capacity has been improved by 33% in comparison with that of a conventional Toshiba HDD.

In addition, integrated design technology for the head and disk that can bring out the full performance of perpendicular recording has been developed by incorporating a newly developed head and disk for perpendicular magnetic recording, achieving a stable high-density recording system.

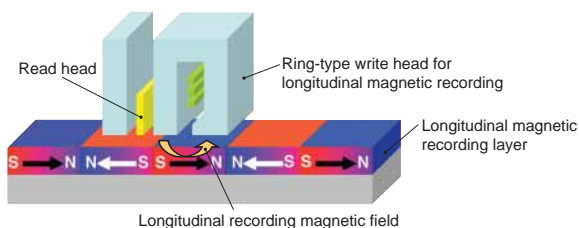
The perpendicular magnetic recording system refers to the data recording method by which recorded bits are aligned perpendicular to the disk plane and the recorded bits strengthen each other as nano-magnets. The system enables the recording density to be increased with good stability.

We plan to apply PMR technology in 0.85-inch HDDs in 2006, increasing capacity and supporting our effort to pioneer the market for ultra-small form factor drives.

(1) As of December 14, 2004

(2) 1 Gbyte = 1,000,000,000 bytes

(3) Among HDDs available commercially as of November 14, 2004



Structure of conventional longitudinal magnetic recording system

In a longitudinal magnetic recording system, signal magnets repulse and weaken each other.

### Comparison of HDD recording systems

## The World's First HD DVD-ROM Drive Commercialized for Notebook PC



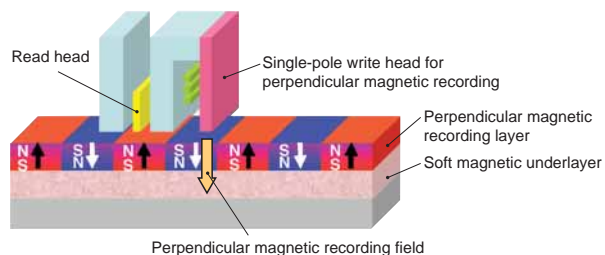
TS-L802A slim-type HD DVD-ROM drive

Toshiba has developed the world's first<sup>(\*)</sup> slim HD DVD drive for notebook PCs. The new drive, the TS-L802A, supports play back of HD DVD discs and can read and write both DVD and CD discs.

The physical structure of HD DVD discs is similar to the existing DVDs, consisting of a lamination of 0.6 mm thick clear resin layers. By maximizing this feature, the optics of HD DVD playback as well as CD/DVD read and write are integrated into a single objective lens. As a result, the drive's height has been successfully reduced to as thin as 12.7 mm.

We have achieved early commercialization by developing original LSIs, which process high-density HD DVD playback signals.

(\*) As of July 2006



Structure of perpendicular magnetic recording system

Perpendicular recordings reinforce magnetic coupling between neighboring bits, achieving stable higher recording density.

## Qosmio G20 New AV Notebook PC



Qosmio G20 new AV notebook PC

The Qosmio G20 is the flagship model in the AV notebook PC Qosmio series. In addition to the high quality picture enhancement technologies of the QosmioEngine, the color saturation of the 17-inch wide LCD (Liquid Crystal Display) has been improved approx. 60%, and TV and DVD images are displayed brightly and realistically.

Toshiba original software “Qosmio AV Center”, which is a newly developed synthetic AV management application, is structured based on the user interface of the RD series of HDD/DVD recorder and player. The setting operation for timed recording of TV programs and playback operation of recorded TV programs have been very much improved.

The Qosmio G20 features Intel® Centrino™ mobile technology, providing outstanding mobile performance and built-in wireless connectivity to improve productivity and enhance the entertainment experience. And the NVIDIA® GeForce™ Go 6200 enables high graphics performance. The Qosmio G20 offers Toshiba RAID (Redundant Array of Independent Disks). Qosmio's built-in RAID support provides increased storage space and failsafe redundancy to ensure maximum performance and data protection. Not only does this notebook deliver performance, it also offers industrial design. The glossy black premium interior, the illuminated feather touch AV buttons and the slot loading optical drive enhance the high-level audio device image.

*“Intel” is the registered trademark of Intel Corporation.*

*“Centrino” is the trademark of Intel Corporation.*

*“NVIDIA” is a registered trademark of NVIDIA Corporation.*

*“GeForce” is a trademark of NVIDIA Corporation.*

## Qosmio F20 New AV Notebook PC



Qosmio F20 new AV notebook PC

The Qosmio F20 is a 15.4-inch wide laptop, which was released in September 2005.

With Qosmio, features like TV function, QosmioEngine and an extreme diameter speaker with full bass sound are all built-in. Also this time a high brightness and 72% color saturation LCD has been added to provide a superb picture. In addition, the newly developed Toshiba original software “Qosmio AV Center” is preinstalled. This will dramatically improve the usability of AV functions with the same user interface design as that of the RD series of HDD/DVD recorder and player.

Furthermore, the user has a choice of either a black or white body color.



“Qosmio AV Center” Toshiba original AV software

## TECRA S3 Notebook PC



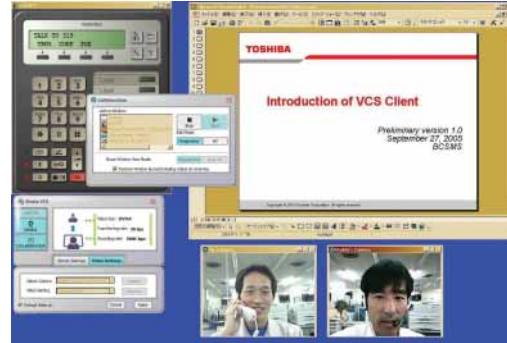
TECRA S3 notebook PC

In September 2005, Toshiba launched a new 15-inch notebook PC on the market, which is equipped with Toshiba's B2B product concept "EasyGuard".

EasyGuard is Toshiba's B2B (Business to Business) product concept, which provides the latest security features against physical shock ensuring data security. The TECRA S3 has shock protection bumpers and spill resistant covers over appropriate parts on the chassis to guard the PC and save data from physical damage. The TECRA S3 is also equipped with data security features such as fingerprint authentication and TPM (Trusted Platform Module) to protect saved data and content from cyber attack.

The TECRA S3 is Toshiba's B2B mainstream product, which provides high reliability for customers in an easy to use mobile computer package.

## Strata™ VCS Video Communication Solution



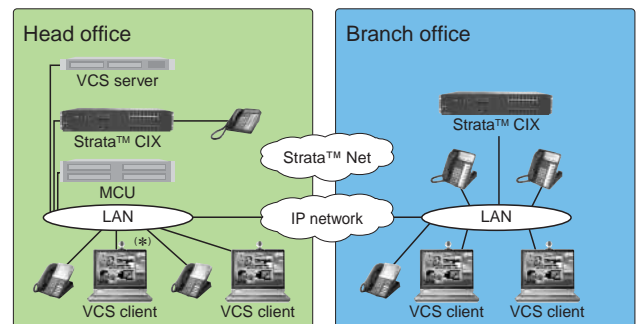
Screenshot of a Strata™ VCS client PC

Toshiba has developed Strata™ VCS (Video Communication Solution), which integrates video and data with voice communication in the rapidly emerging business network environment.

Strata™ VCS consists of Strata™ CIX (Toshiba's business communication system), the VCS server and the VCS client software and web camera installed on a PC at the office. A user simply dials a destination number from his/her phone for audiovisual communication with a remote third party while sitting at his/her own desk.

Strata™ VCS also has a remote collaboration feature as well, which enables users to send screen images from spreadsheet, presentation, word processing or other applications on their PCs to the PCs of remote third parties. The users can share and even edit the application data during the communication session.

Strata™ VCS offers good quality communication just as if the remote users were sitting next to each other and enhances business productivity to the ultimate level.



MCU: Multipoint Control Unit

(\*) The cameras in the photo are made by Logitech Inc.

Strata™ VCS system configuration

## W41T CDMA2000 1x/EV-DO Cellular Phone with a 0.85-Type 4 Gbyte HDD



W41T CDMA2000 1x/EV-DO cellular phone

Toshiba has developed the W41T CDMA2000 1x/EV-DO cellular phone with a 0.85-type 4 Gbyte HDD (Hard Disk Drive) for release on the Japanese market in February 2006. The W41T is the first Japanese phone with an HDD. It is a music-player-like cellular phone featuring HDD, electrostatic pad keys, and Bluetooth™.

About 2,000 stereo tracks<sup>(\*)</sup> can be stored on the internal HDD using “au Music Port”, which is the PC software for “LISMO”, a new service from “au”. The W41T supports USB (Universal Serial Bus) mass storage class, which makes it possible to transfer a variety of mass data from a PC to the HDD. The W41T features special structural properties and a unique data handling process for improvement in anti-shock and anti-shake: The HDD is wrapped in a protective gel material and each track is stored in an internal memory buffer before it is played. The W41T has electrostatic pad keys on the front of the cellular phone and can be operated with these keys to play music.

In addition, the W41T has a Bluetooth™ transceiver, and Toshiba has also developed an original Bluetooth™ profile that enables the user to listen to music on wireless pendant style earphones or speakers.

(\*) It is assumed that tracks are encoded with HE-AAC: 48 kbps, 4 min/stereo track, and 1.5 Mbyte/stereo track.

CDMA: Code Division Multiple Access  
LISMO: au LISTEN MOBILE SERVICE

“Bluetooth” is a trademark of Bluetooth SIG, Inc., USA.

## Vodafone 904T W-CDMA Cellular Phone



©ZENRIN DataCom  
©CYBIRD

Grip style

Vodafone 904T W-CDMA cellular phone

Toshiba has developed a new 3G (3rd Generation) model with dual mode (W-CDMA and GSM/GPRS) for Vodafone K.K., the Vodafone 904T, released in March 2006.

The Vodafone 904T is the flagship model in the spring 2006 lineup, which fully supports Vodafone K.K. 3G services. This model is the first Toshiba handset to offer IC card functionality, and it can be used for shopping as a cash or point card replacement.

The Vodafone 904T features a double rotating hinge structure with sub multi function keys, which enables the user to perform operations such as mail reading, Web browsing, navigation, voice/video calls in “grip style”.

In addition, the Vodafone 904T offers 7 digital comics (trial version) and 2 games (trial version) preinstalled for the user’s enjoyment, with other digital comics and games available via download.

Furthermore, the Vodafone 904T has a 3.2-mega-pixel camera, a 2.4-type (inch) QVGA (320×240) LCD (Liquid Crystal Display), a music player with sound effect functions, a miniSD memory card slot, stereo side speakers, Bluetooth™, IrDA, USB, and many other functions.

W-CDMA: Wideband Code Division Multiple Access  
GSM: Global System for Mobile communications  
GPRS: General Packet Radio Service  
IrDA: Infrared Data Association  
QVGA: Quarter Video Graphics Array

“Vodafone” is a trademark of Vodafone Group PLC.

miniSD Logo is a trademark.

## “neon” CDMA 1xEV-DO Cellular Phone



“neon” CDMA 1xEV-DO cellular phone

Toshiba has developed a new CDMA2000 1xEV-DO cellular phone, the “neon”, as the latest model in the au design project. Naoto Fukasawa, the leading product design creator, designed the phone. It has a simple and stylish form like two overlapping square boards.

The “neon” is equipped with a new LED (Light Emitting Diode) interface that has 257 red LEDs, which can display two lines of eight 16-segment characters on the flat body, which does not appear to be a display at all when not illuminated. It can therefore display various kinds of information, animations and messages. It is also possible to use it as a beautiful clock when it is set on the desktop holder, which is one of the attachments.

The “neon” can be used as a digital audio player, which has 48 kinds of sound settings using the combination of a sound equalizer and surround effects to enhance the listening experience. The phone also has an FM tuner and a large volume data folder of approx. 50 Mbyte, so it is possible to use it as an FM radio and record approx. 120 min of sound.

The phone is equipped with a communication function via IrDA, and it is possible to use it as a remote control for televisions etc. Large-sized flat keys are provided for greater visibility and comfort.

## Vodafone 803T (Japan)/Toshiba 803 (Europe) W-CDMA Cellular Phone and V604T PDC Cellular Phone

### Vodafone 803T (Japan)/Toshiba 803 (Europe) W-CDMA Cellular Phone

Toshiba has developed a new 3D W-CDMA cellular phone, the Vodafone 803T (Japan) and Toshiba 803 (Europe) which has a large-sized sub display and music player with control keys. This phone has music tools as standard equipment (stereo earphones with microphone and music controller, music transfer software, USB cable, and a miniSD memory card<sup>(\*)</sup>). The phone also has a 2.3-mega-pixel camera, a 2.2-type (inch) QVGA LCD, twin speakers, electronic dictionary (Japanese-Japanese, English-Japanese, and Japanese-English)<sup>(\*)</sup>, Bluetooth™, infrared communication and other functions.



Vodafone 803T(Japan)/Toshiba 803 (Europe) W-CDMA cellular phone

(\*) Only for the Japanese market.

### V604T PDC Cellular Phone

Toshiba has developed a new PDC cellular phone, the V604T, for Vodafone K.K. This model has many attractive audiovisual functions such as analog-TV and FM radio. The V604T features a movable rod antenna for TV and radio with improved maneuverability. Also, the V604T has two hinges placed in parallel, with which the terminal can be opened and closed 360-degrees. With this structure, the user can watch TV with the phone in compact style.

In addition, the V604T has a dedicated tuner for FM radio, and digital tuning for FM radio is also available. Built-in stereo speakers enable the user to listen to FM broadcasts and AAC (Advanced Audio Coding) music files with clear sound.



V604T PDC cellular phone

## WILLPOS™-Self SS-1000 Self-Checkout System

Toshiba TEC Corporation has developed a self-checkout system in which the procedure from scanning the product to packing and payment is done by the customer himself/herself. The specifications of this system resolve issues unique to the Japanese market and realize customer satisfaction for both POS (Point of Sales) system users and shops where it has been deployed.

The main features are as follows:

- Compact, space saving design half the size of an existing checkout lane
- A lineup of cashless types is available, and low cost is realized because it is possible to deploy a configuration of even 1 set at a minimum.
- The system is furnished with a "friendly" appearance, "easy to see" screen design and "thoughtful" operation system accommodating normal hand movements.
- Universal design is adopted and barrier free issues are considered.



WILLPOST™-Self SS-1000 self-checkout system

## CA4 Inkjet Printhead

Toshiba TEC Corporation has developed a new model of on-demand/piezo type inkjet printhead, CA4 in order to respond to the high productivity (high speed printing) and printing quality (tone quality) demanded of inkjet printheads for industrial printing.

Its interfaces including the outer shape, ink and electrical connections maintain compatibility with former models, and it is designed so that model changes by existing customers can be handled easily.

The main features are as follows:

- Various tone modes of 1 to 15 drops are realized.
- 1.3 times faster than the former product in the standard 7 drop mode
- Max. double speed is realized compared with the former model in 1 drop mode
- Inherits the high spotting accuracy and high reliability of former model



CA4 inkjet printhead