

In the digital products field, Toshiba has enhanced its role in the field of digital AV applications and will continue to produce innovative new products backed up by our advanced and environmentally-friendly technologies. We have produced a hard disk recorder with the world's first recordable HD DVD drive, a high-definition LCD-TV, 2.5-inch and 1.8-inch HDD products with the industry's highest areal density, the world's first AV notebook PC to support ISDB-T digital broadcasts and HD DVD, a mobile PDA phone which has high picture quality and greater PC compatibility, and so on.

RD-A1 Hard Disk Recorder with The World's First^(*) Recordable HD DVD Drive

The new RD-A1 can record and store up to 130 hours^{(*)2} of high-definition (HD) broadcasts on a high capacity 1Tbyte hard disk and record up to 230 minutes^{(*)2} of HD content on a 30 Gbyte dual-layer HD DVD-R disc.

In addition to HD DVD, the RD-A1 also supports playback from and recording to conventional DVD-RAM/-RW/-R discs, giving users complete access to content recorded and saved on standard DVD. It also offers simplified transfer of DVD disc content to higher capacity HD DVD discs. Ease of use is also enhanced by the ability to record two TV programs, one on digital HD and one on analog, to the hard disk, simultaneously. Another key feature among the many supported by the RD-A1 is support for 1080p output via HDMI, allowing viewing of "full HD" progressive scan video signals. Up-conversion of standard DVDs to 1080p resolution output also enhances the enjoyment of current DVD software and recorded programs.

Video and audio output is further enhanced by the design of the RD-A1's chassis, which isolates the player from vibration and optimizes the performance of its high-grade parts and components.

(*)1 As of June 2006, as a digital video recorder with HD DVD (as researched by Toshiba)

(*)2 Recording of digital terrestrial broadcasts at approx.17 Mbps in TS mode



RD-A1 hard disk recorder with HD DVD recording and playing drive



Screen showing program dubbing

The Z2000 Series Digital High-Definition LCD-TV



47Z2000 digital high-definition LCD-TV

Toshiba has developed the Z2000 series, a digital high-definition LCD-TV equipped with a new digital image processing system "New Meta-Brain-PRO™" and a full HD IPS (In-Plane-Switching) panel^(*) which are capable of receiving terrestrial, BS and 110 degrees CS broadcasting signals. The Z2000 series has 4 models (47V, 42V, 37V, 32V).

The "New Meta-Brain-PRO™" is an original high-definition image processing system developed by Toshiba having various image enhancement functions such as "Texture realizer" which reproduces the textural quality of objects, "Detail realizer" which expresses a variety of image content vividly, and it can deliver a real high-definition image.

In addition, the Z2000 series is full of home network functions such as DLNA (Digital Living Network Alliance), capability for high-definition recording and playback with an externally connected LAN HDD.

A "Minimal Design" which eliminates all superfluous decoration has been adopted for the exterior to enable the user to focus on the screen image.

(*) 32Z2000 is equipped with a wide viewing angle wide-XGA liquid crystal panel.



Microprocessor board for HD image processing system New Meta-Brain-PRO™

gigabeat™ V30T HDD Audio Player



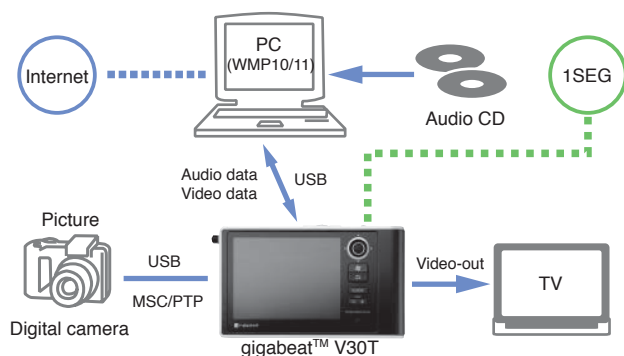
gigabeat™ V30T HDD audio player

Toshiba has launched the V30T, the first digital audio player of its kind in Japan^{(*)1}, which enables portable ISEG^{(*)2} broadcasting and recording.

The gigabeat™ V30T is equipped with a ISEG tuner and 3.5-inch QVGA LCD to create a quality ISEG broadcasting/video viewing experience^{(*)3}. Furthermore, the 30 Gbyte hard disk drive built into the device allows it to record up to 130 hours of ISEG broadcasting.

Of course, the device offers a lot more in addition to ISEG. The HDD is capable of storing up to 7500 audio songs^{(*)4}, as well as home video, music clips, and other video content totaling 127 hours^{(*)5}, giving the user a seamless choice of both audio and video entertainment.

As a final note, the battery is capable of up to 7 hours of ISEG broadcasting^{(*)6}, 25 hours of audio^{(*)7}, and 9 hours of video playback^{(*)8}.



MSC: Mass Storage Class PTP: Picture Transfer Protocol

Multiple accessibility of gigabeat™ V30T

- (*)1 as of November 1, 2006 (as researched by Toshiba)
- (*)2 ISEG is a digital terrestrial broadcasting service for cellular phones and moving vehicles, etc.
- (*)3 In some cases, users may experience poorer reception even in ISEG broadcasting areas due to the location (such as in subways and other underground locations).
- (*)4 WMA & MP3 formatted 128 kbps audio data with a play time of roughly 4 minutes.
- (*)5 Bit rate of 500 kbps

HD DVD Content Development/Debugging Environment

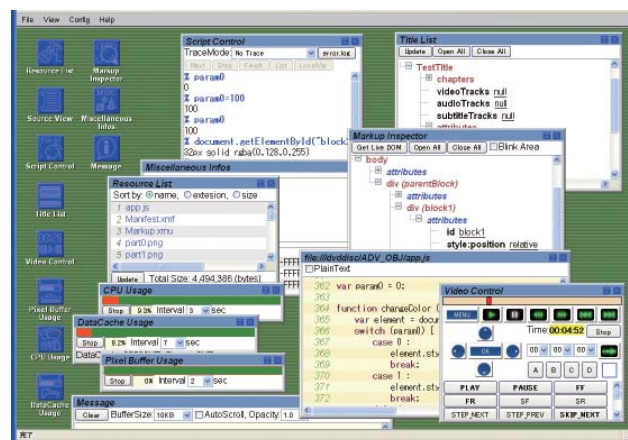
Toshiba has developed the world's first^{(*)1} debugging environment for commercial HD DVD content.

It is a web-based system which consists of HD DVD emulator software on an HD-XA1 HD DVD player as a server and a web browser on a PC as a client. They communicate with each other utilizing Ajax^{(*)2} technology. The user of this system can inspect and/or modify various kinds of information on HD DVD content and its behavior on the player such as its resource usage, ECMAScript code, tree structure of XML (eXtensible Markup Language), etc. via the browser on the fly while the content is being played.

Toshiba's deep understanding and rich experience in the field of HD DVD technology has made it possible to develop this system. This will allow authoring studios to accelerate their development of HD DVD content.

(*)1 As of November 2006 (as researched by Toshiba)

(*)2 Asynchronous JavaScript and XML



Screen shot of this system

- (*)6 Under the volume level set at the time of factory shipment, headphone output and brightness level set at 1
- (*)7 Under the volume level set at the time of factory shipment, headphone output, audio data of WMA 44.1 kHz and 128 kbps and backlight option turned off
- (*)8 Under the volume level set at the time of factory shipment, headphone output and brightness set at 1 and with 500 kbps WMV video data

WMP : Windows Media® Player

WMA : Windows Media® Audio

WMV : Windows Media® Video

MP3 : Moving Picture Experts Group 1 audio layer 3

"Windows Media" is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

200 Gbyte, 2.5-inch HDD Product with The World's Highest Areal Density and 100 Gbyte, 1.8-inch HDD Product with The Industry's Largest Capacity



MK2035GSS 200 Gbyte,
2.5-inch HDD

Toshiba has launched a new 2.5-inch hard disk drive (HDD) that uses perpendicular magnetic recording (PMR) technology to achieve the industry's largest^{(*)1} 200 Gbyte capacity with only two platters. The best of class HDD, MK2035GSS, features the highest areal density yet achieved^{(*)2} at 277.1 Mbit/mm² (178.8 Gbit/in²).

Shipment has also begun for a 1.8-inch drive that offers a storage capacity of 100 Gbytes, the largest^{(*)3} capacity yet achieved in this class of HDD. The drive, MK1011GAH, also employs PMR technology and an improved error correction code to secure the highest^{(*)4} areal density of any 1.8-inch HDD on the market, 240.8 Mbit/mm² (155.3 Gbit/in²).

Small form factor HDDs are now used in diverse applications, from mobile PCs to digital audio players. The market has a voracious appetite for larger data capacities, as more powerful networks and applications bring audio-visual capability to more mobile products, particularly AV notebook PCs. By applying PMR technology to small form factor HDDs, Toshiba brings much increased data capacity to the industry's mainstream drive, a move that will also sustain the industry trend toward thinner, lighter notebook PCs, particularly high-end notebook PCs offering high storage capacity.



MK1011GAH 100 Gbyte, 1.8-inch HDD

SD-L902A The World's First Slim HD DVD Write Drive



SD-L902A slim type HD DVD write drive

Toshiba has developed the world's first^(*) slim HD DVD writer for notebook PCs, the SD-L902A, which can read and write to HD DVD-R, standard DVD and CD discs.

The SD-L902A uses a high power blue-violet laser diode that can read and write to HD DVD-R (SL/DL) discs and that offers support for high-density HD DVD-ROM discs, including high definition movie and video images.

To achieve the drive height within 12.7 mm which is required for notebook PCs, we designed a special optical system and electrical circuit for SD-L902A.

SL/DL: Single layer/Dual layer

(*) As of October 2006 (as researched by Toshiba)

- (*)1 The industry's largest commercially available two-platter capacity, as of June 5, 2006 (as researched by Toshiba)
- (*)2 The world's highest commercially available areal density, as of June 5, 2006 (as researched by Toshiba)
- (*)3 The industry's largest commercially available capacity in a 1.8-inch hard disk drive, as of Dec. 5, 2006 (as researched by Toshiba)
- (*)4 The world's highest commercially available areal density in a 1.8-inch hard disk drive, as of Dec. 5, 2006 (as researched by Toshiba)

Hard disk capacity is calculated on the basis of 1 Mbyte = 1 million bytes, and 1 Gbyte = 1 billion bytes.

Qosmio™ G30 New AV Notebook PC



Qosmio™ G30 AV notebook PC

The Qosmio™ G30 is a flagship model AV notebook PC of the Qosmio™ series. And the Qosmio™ G30 is the world's first^(*) AV notebook PC which supports ISDB-T digital broadcasting and HD DVD.

Full HD 17-inch wide color LCD (1920×1200 pixel) is implemented and beautiful HD images in ultra-high-density such as ISDB-T digital broadcasting content and HD DVD movies with a great sense of depth are faithfully reproduced.

“Qosmio™ AV Center”, which is proprietary Toshiba software and developed synthetic AV management applications, have been upgraded. Using “Qosmio™ AV Center”, digital content such as ISDB-T broadcast content, DVD, HD DVD, CD, Home network movies, music and pictures can be controlled with easy and consistent operation. And moreover, the double recording function (recording two programs simultaneously), which is popular in “RD-Style” HDD/DVD recorders and players, is supported.

In order to provide high quality sound, both right and left speakers have 40 cc box and bass-reflex architecture. In addition, this notebook PC is the first in the world^(*) to include a 1 bit digital amplifier installed in a high class audio system. The sound system of the Qosmio™ G30 achieves 4W+4W, the highest output in this class despite power saving and compact design. And it is able to reproduce sound in the middle-high to bass sound range even more clearly than the previous model.

ISDB-T: Integrated Service Digital Broadcasting-Terrestrial

(*) As of May 2006 (as researched by Toshiba)

PORTÉGÉ™ R400



PORTÉGÉ™ R400

Toshiba released a new Tablet PC PORTÉGÉ™ R400 early this year. The PORTÉGÉ™ R400 is a thin & light flagship model utilizing Toshiba high density, miniaturization technology which gives space for more functionality, such as 3 PCI express mini card slots and 2 memory slots.

The PORTÉGÉ™ R400 has two new functions as follows:

- The PORTÉGÉ™ R400 is a notebook computer with the ability to automatically synchronize e-mail and calendar events even when the system is in standby mode. Notifications are displayed on the Toshiba Edge Display, located on the front edge of the PORTÉGÉ™ R400. To ensure the full benefit of the convertible tablet PC design, the Toshiba Edge Display is viewable in notebook or tablet mode and even when the unit is stored in a carrying case.
- The PORTÉGÉ™ R400 is a wirelessly dockable notebook computer utilizing ultra wide band (UWB) technology. This seamless approach eliminates the daily hassle of connecting and disconnecting peripherals and delivers the convenience and simplicity that mobile users demand.

Toshiba has employed a dramatic black and white color scheme for the PORTÉGÉ™ R400. This distinctive approach delivers a level of elegance and sophistication to satisfy the esthetic standards of successful mobile professionals.

TECRA™ A8



TECRA™ A8

Toshiba has designed the TECRA™ A8 with high quality and reliable mobile technologies to move you beyond the desktop, whether at school or at the office. Exclusive EasyGuard™ technologies such as HDD protection, shock absorbing design, and advanced encryption and security better protect critical components and data from everyday hazards for more reliable mobile computing.

Toshiba subjected the TECRA™ A8 to extreme quality testing during the design process to ensure superior quality in every aspect and component.

Toshiba with TÜV has run 70 cm drop tests, 100 cc spill proof tests, and highly accelerated life tests (HALT) to meet the high quality of the TECRA™ standard.

Additional quality components include display hinges designed to withstand years of usage, and a reinforced protective display cover for better system durability.

TÜV: Technischer Überwachungs Verein

Strata™ CIX40 IP Communication System

The Strata™ CIX40 is a telephony system for SOHO (Small Office Home Office) that can be connected as a satellite office of headquarters using IP (Internet Protocol) networking capabilities. The Strata™ CIX40 is a built-in scalability system with a modular design, which allows incremental updates as required by the customer. The base system comes with up to 3 exchange lines and 8 extensions. The maximum capacity is up to 40 ports by 6 lines, 16 extensions, 2 standard telephone ports, 8 channel IP interface, 4 serial interface and 4 voice mail ports with 40 hours of storage. The system can be configured and installed easily using a browser-based administration tool and plug-and-play design.

The Strata™ CIX40 supports IP and digital endpoints. Users have a choice of IPT (Internet Protocol Telephone), SoftIPT™, and third-party SIP telephones. Toshiba's IPT endpoints are the IPT2010-SDC, IPT2020-SD and IPT2008-SDL with 8-button large LCD and HTML support. The IPT1020-SDC has the unique feature of direct connection to a local central office, which is capable of making an emergency call to a direct central office line bypassing the Strata™ CIX system.



Toshiba Strata CIX40 - Small Business IP
2006 Product of the Year Award

December 2006

Recognized for Outstanding Innovation



Strata™ CIX40



IP business communication system

Strata™ CIX40 IP business communication system

W52T CDMA Cellular Phone Handling 1 SEG TV and Digital Radio Broadcasting



W52T cellular phone

Toshiba has developed the W52T CDMA (Code Division Multiple Access) cellular phone for the Japanese market, in response to 1 segment broadcasting (known as “1SEG” in Japan) and “Digital Radio”. 1SEG is a digital terrestrial broadcasting service for cellular phones and moving vehicles, etc, and it features clear moving pictures and interactive services. “Digital Radio” offers high quality sound comparable to that of CDs and an array of data broadcasting services including text and moving pictures.

The W52T model offers advanced picture quality since it is equipped with a 3-inch wide-VGA size high-precision liquid crystal display (LCD) in a sliding chassis. The W52T model also enables play and record of high-quality moving pictures in which the VGA-size pictures are processed at 30 frames per second since it is equipped with a 3 mega-pixel auto focus camera, 1 Gbyte large-capacity memory and new multimedia processing large-scale integrated circuit (LSI) developed by Toshiba. Furthermore, the W52T model is compatible for use in an electronic money system with the FeliCa function that uses contactless IC card technology.

These features make the W52T model a top-of-the-line multimedia cellular phone.

“FeliCa” is a registered trademark of Sony Corporation.

“FeliCa” is a technology for non-touching IC cards developed by Sony Corporation.

911T W-CDMA Cellular Phone



911T W-CDMA cellular phone

Toshiba has developed a new 3G (3rd Generation) model with digital TV for Softbank Mobile Co., the 911T, released in March 2007.

The 911T is the flagship model in the spring 2007 lineup, which supports most of the new Softbank Mobile Co. services. It supports 1SEG services, “Digital TV” for mobile phone, while it has a slider type design to realize thickness of only 17.9 mm.

The 911T has a 3-inch wide-VGA (480×800) LCD (Liquid Crystal Display) used for “Digital TV” display, PC web site viewer and Microsoft document viewer with high-resolution.

The 911T supports the high-speed data communication service called “3G High-speed” which conforms to HSDPA. The service allows stress free content download since a maximum 3.6 Mbps with best effort^(*) downlink high-speed internet communication is possible. Furthermore, it supports the standard Bluetooth audio profile, A2DP, and makes it possible to connect a commercially available Bluetooth headset.

The 911T has a 3.2-mega-pixel camera with auto-focus functionality that delivers large-screen and high-resolution images.

HSDPA: High Speed Downlink Packet Access

A2DP: Advanced Audio Distribution Profile

^(*) The speed may drop off or connection may fail due to network congestion or poor reception environment.

The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Toshiba is under license.

W47T CDMA2000 1xEV-DO Cellular Phone for the Japanese Market



CDMA cellular phone, au W47T for domestic use in Japan

The Japanese cellular phone service provider au introduced the CDMA2000 1xEV-DO Rev.A (Code Division Multiple Access 2000 1x Evolution Data Only Revision A) service in December 2006.

In response to this service, Toshiba released the W47T cellular phone for the Japanese market in the same month, which has gained a favorable reputation. The W47T is the world's first commercial cellular phone to take advantage of the 1xEV-DO Rev.A system.

With this system, the peak data rate on the forward link has been increased to 3.1 Mbps and that on the reverse link to 1.8 Mbps.

The system also allows control over users and applications with different levels of priority through the support of an optional quality of service (QoS) function. The improved data rate enables high-speed downloading of large-volume content and video call services. In particular, the W47T is the first au cellular phone model to support videophone services. The service specification is based upon standard specifications of 3GPP2 (3rd Generation Partnership Project 2) and the IETF (Internet Engineering Task Force), and it's possible to call cellular phones other than au that support the videophone service.

In addition, the W47T has a 3.2-mega-pixel main-camera, a VGA (Video Graphics Array) sub-camera which is mainly used by the videophone and many other functions. It is also the first au cellular phone by Toshiba to support FeliCa.

"FeliCa" is a registered trademark of Sony Corporation.

"FeliCa" is a technology for non-touching IC cards developed by Sony Corporation.

PORTÉGÉ G900 Windows Mobile PDA Phone



PORTÉGÉ G900

Toshiba has developed and commercialized the PORTÉGÉ G900, a smart handheld device.

The PORTÉGÉ G900 has Windows Mobile® 6 installed, and offers e-mail, Internet and multimedia, which have high affinity with a PC, and synchronization functionality with a PC. It also delivers high operability with a full keyboard, a touch panel input method and a large and high-resolution 3.0-type (inch) wide-VGA (800×480) LCD (Liquid Crystal Display). It also supports a finger print sensor not only for personal authentication but also for the cursor pointer on the screen.

It is also possible to lock and unlock a PC with the PORTÉGÉ G900, and remote control the PC from the PORTÉGÉ G900 or vice versa, via Bluetooth by installing the bundled application software on the PC.

The PORTÉGÉ G900 supports quad band (900/1800/1900 MHz GSM/GPRS/EDGE, 2100 MHz W-CDMA/HSDPA) as a mobile phone to realize worldwide use and high speed data communication. Furthermore, it has a 2.0-mega-pixel camera and supports miniSD memory cards, that all fits into a compact slider chassis.

GSM:	Global System for Mobile communications
GPRS:	General Packet Radio Service
EDGE:	Enhanced Data GSM Environment
W-CDMA:	Wideband Code Division Multiple Access
HSDPA:	High Speed Downlink Packet Access

"Windows Mobile" is a registered trademark of Microsoft Corporation in the United States and other countries.

The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Toshiba is under license.

Demonstration Experiment of EXPRESSPOS Payment System Using Electronic Tags and Electronic Money



EXPRESSPOS, the world's first payment system using electronic tags and electronic money

The EXPRESSPOS is an advanced POS terminal with the world's first (*) payment system using electronic tags and electronic money for the purpose of reducing both waiting times for customers and lost opportunities for shopkeepers of convenience stores. The system has been developed as a part of the demonstration experiment project for electronic tags by the Ministry of Economy, Trade and Industry.

The electronic payment for lunches and drinks is made instantly with the total amount indicated when they are placed on an accounting tray at the checkout counter thanks to electronic tags on the goods. So shopping can therefore be expedited extremely smoothly even during crowded lunchtimes. The result of the demonstration experiment showed it took only 14 seconds on average, about half of the time required for a conventional checkout payment.

In the future, electronic tags on goods will be fully utilized from the very point of distribution throughout the supply chain to fully exploit their merits and balance their cost.

(*) As of March 2006 (as researched by Toshiba)

e-STUDIO 2500c/3500c/3510c Color Multifunctional Peripherals



e-STUDIO 2500c/3500c/3510c, color multifunctional peripherals

Toshiba TEC Corporation has launched a series of high-end digital color multifunctional peripherals to cover high quality color documents and high productivity document handling.

The newly developed fine granular toner and image processing technology renders higher picture quality, and the newly developed technology of high-compression portable document format (PDF) function secures high-speed document handling capacity. In addition, the easy replaceable unit (ERU) concept was applied to the design of each unit to improve ease of maintenance, the total cost of ownership (TCO) concept was applied to elongate the serviceable life of consumable parts, and the most recent control technology has been developed to enhance security functions and usability of the machine.