Digital Products

In the digital products field, Toshiba will continue to produce new innovative products based on our advanced technologies with the aim of creating a more affluent society while offering new services and functions responding to diversifying user needs. Among our many achievements are the world's first digital high-definition LCD-TVs featuring the super-resolution reconstruction technique, and the world's first notebook PCs equipped with the SE1000 Quad Core HD Processor.

REGZA™ ZH7000 Series Digital High-Definition LCD TV

52ZH7000

REGZA ZH7000 digital high-definition LCD TV

Toshiba has commercialized the REGZA™ ZH7000 series of high-end LCD TV models (52V/46V/42V types) featuring a new image processor called metabrain™ premium and a double-frame-rate (120 Hz) 10-bit full HD panel (1 920 ×1 080 pixels).

The metabrain premium processor reproduces more detailed and vivid video images from images having less than a full HD pixel count by means of Resolution+™, the world's first(*) super-resolution reconstruction technique. The metabrain premium processor automatically adjusts the video controls according to the environment, such as a bright or dark room, and reproduces HD video with high density.

The main specifications are as follows:
- Recording and playback with an internally connected 2.5-inch 300 Gbyte HDD and an externally connected USB HDD are supported.
- Internet HD movies and TV services are supported.
- Home networking functions supported by the Digital Living Network Alliance (DLNA) with recording and playback capability using an externally connected LAN HDD are enriched.

(∗) Super-resolution reconstruction technique adopted in a consumer-model digital LCD TV, as of September 2008 (as researched by Toshiba)

LCD: Liquid crystal display
HD: High definition
HDD: Hard disk drive
USB: Universal serial bus
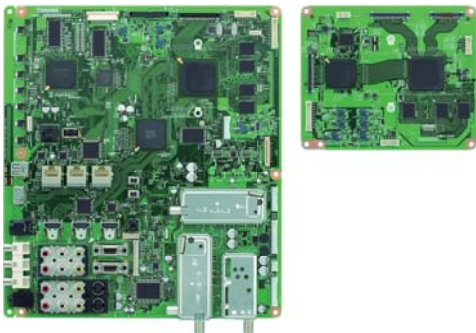
metabrain premium image processor

Resolution+™ Super-Resolution Technology

Super-resolution-processing LSI

With the rapid dissemination of large-screen full HD LCD TVs in recent years, demand has intensified for the upscaling of lower resolution images to full HD size by means of a super-resolution technology.

Toshiba has developed an original super-resolution algorithm in which upscaling is performed from a single image as well as a super-resolution-processing LSI in order to incorporate the algorithm into LCD TVs. The algorithm uses a process that predicts degradation of the original image when it is upscaled and optimally compensates for the degradation. This process produces a picture quality that is almost the same as a full HD image. Additionally, the super-resolution algorithm adds finer details, providing a high-quality image replete with spatial effect.

This super-resolution technology, called Resolution+, has been incorporated into Toshiba's large-screen LCD TVs in the U.S., Europe, Japan, and other parts of the world since 2008.

LSI: Large-scale integration

500 Gbyte 2.5-inch HDD and Industry's Largest Capacity 250 Gbyte 1.8-inch HDD

500 Gbyte 2.5-inch HDD

250 Gbyte 1.8-inch HDD

Toshiba has launched six new 2.5-inch HDD products. The top-line MK5055GSX achieves a capacity as high as 500 Gbytes by employing an improved read-write head and an enhanced magnetic layer to boost recording density. A newly developed advanced servo technique combined with a fine-tuned mechanical design minimizes noise emanating from the drives, making them very quiet during the seek operation. Moreover, the power consumption during data seek and read/write operations has been reduced by 0.5 W compared with our current top-of-the-line 400 Gbyte HDD. The new drives support an optional free-fall sensor function, which detects falling of the HDD and parks the head before impact.

Mass production of three advanced 1.8-inch HDDs has also started. Among these, the MK2529GSG offers a storage capacity of 250 Gbytes, the largest in the industry(*) for this form factor. The new drives incorporate a SATA interface and have a high rotational speed of 5 400 rpm, making them ideal for mobile PCs that require high-performance HDDs.

SATA: Serial Advanced Technology Attachment

(*) The industry's largest commercially available capacity in a 1.8-inch HDD, as of September 2008 (as researched by Toshiba)

VARDIA™ RD-X8 "High-Vision" Recorder

VARDIA RD-X8

Toshiba has commercialized the VARDIA RD-X8 "High-Vision" recorder, an HD model equipped with XDE™ high-resolution reproduction technology and an "HD Rec" function to record HD images to DVD-R/RW/ RAM.

XDE reproduces an HD image by optimally combining technology to correct outline information and technology to suppress noise, allowing both DVD software and HD broadcasts to be enjoyed.

In addition, the VARDIA RD-X8 is equipped with an HD encoder to convert HD broadcast images compressed using the MPEG-2 standard into those compressed by the more compact MPEG-4-AVC method. Thanks to the HD encoder and the "HD Rec" function, the VARDIA RD-X8 is capable of recording many hours of HD broadcasts to DVD-R/RW/RAM.

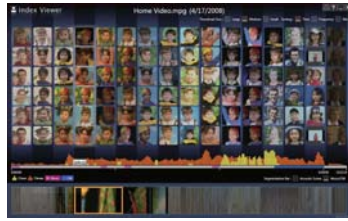MPEG-2: Moving Picture Coding Experts Group-phase 2
MPEG-4: Moving Picture Coding Experts Group-phase 4
AVC: Advanced Video Coding

New Qosmio™ G50 AV Notebook PC

Qosmio G50 AV notebook PC

Video indexing/face navigation

The Qosmio G50 is a flagship model of the Qosmio series of audiovisual (AV) notebook PCs. The Qosmio G50 is the world's first(*) notebook PC equipped with the Toshiba's SE1000 Quad Core HD Processor, a dedicated media processor.

The SE1000 Quad Core HD Processor has four salient features: "upconvert," "transcoding," "video indexing/ face navigation," and "gesture control." The upconvert function converts standard-definition (SD) video to sharper and clearer HD video using an upconversion algorithm developed by Toshiba. It also can convert a DVD movie to an HD-resolution image in real time. The transcoding function smoothly implements direct digital-to-digital conversion from one codec to another. Video indexing/face navigation recognizes and classifies the faces of actors appearing in the video contents, creates an automatic index grouping the facial images of each actor, and lists it on the screen. The user can then play back a specific video scene by clicking on the actor's facial image. Finally, the gesture control function allows music and video files to be controlled with simple hand gestures.

The Qosmio G50 has an 18.4-inch full HD LCD and can display HD video dot by dot. Using REGZA-LINK™ (HDMI-CEC), HD movies can be easily enjoyed on the large screen of a REGZA™ digital LCD TV. In order to provide high-quality sound, the Qosmio G50 is equipped with large-diameter harman/kardon™ stereo speakers and a subwoofer. It also has an integrated ISDB-T TV tuner (dual tuner) for Japan and a DVB-T TV/analog hybrid TV tuner for Europe, Australia, and Asia.

HDMI-CEC: High Definition Multimedia Interface-Consumer
　　　　　　Electronics Control
ISDB-T: Integrated Service Digital Broadcasting-Terrestrial
DVB-T: Digital Video Broadcasting-Terrestrial

Remote-free gesture control

(∗) As of July 2008 (as researched by Toshiba)

"harman/kardon" is a trademark of Harman International Industries, Incorporated.

TECRA™ A10/ M10

TECRA A10

TECRA M10

The TECRA A10 and M10 models, respectively equipped with 15.4-inch and 14.1-inch screens, are business notebook PCs that meet the requirements for business usage including high quality, durability, extendibility, and security with EasyGuard™ technologies. The design incorporates quality improvements identified prior to the design stage including strengthening of the system substrate rigidity. Moreover, excellent durability has been achieved by adopting functions to prevent crashing of the hard disk drive and protect important data.

The Toshiba PC Health Monitor, which is installed as a utility program, monitors the usage conditions of the PC system such as vibration detected by a three-dimensional (3D) accelerometer, power consumption, cooling system performance, etc., and informs the user of the state of the system via messages.

In addition, specifications aimed at enhancing the operating effectiveness of the user are incorporated including an eSATA port offering a high-speed transfer rate and wireless LAN conforming with the IEEE 802.11n draft 2.0 standard.

eSATA: External Serial Advanced Technology Attachment
IEEE: Institute of Electrical and Electronics Engineers, Inc.

PORTÉGÉ™ R600 Offering High Performance in the Mobile Environment

PORTÉGÉ R600

   Toshiba has developed the PORTÉGÉ R600 12-inch mobile notebook PC with the goal of achieving true mobility featuring three world firsts[*1]: thinnest profile, lightest weight, and longest battery life. This was attained by bringing together our technologies and know-how in notebook PC manufacturing cultivated over more than 23 years.

   This model also offers excellent environmental performance including power saving, resource conservation, and longer operating life, with the aim of achieving environmental harmony as a universal standard. The R600 series has been accorded elite EPEAT Gold™ status—the top ranking for a laptop in these respected environmental standards—and has also received TreeHugger's[*2] Best of Green award.

(*1) As of September 2008 (as researched by Toshiba)

(*2) TreeHugger is the leading media outlet dedicated to driving sustainability mainstream.

EPEAT: Electronic Product Environmental Assessment Tool

MAGNIA™ LiTE41S IA Server with Battery for Power Supply Backup

   Toshiba has developed the MAGNIA LiTE41S IA (Intel® Architecture) server, a small, one-way entry server incorporating a battery for power supply backup that protects the system from power supply failure and momentary voltage drops.

   The MAGNIA LiTE41S reduces the footprint by about 40% and power consumption by about 20 W compared with a server having an external uninterruptible power supply (UPS). It is equipped with a long-life Ni-MH battery that is eco-friendly (lead-free) and reduces the frequency of battery replacement.

   Furthermore, the MAGNIA LiTE41S incorporates a scheduling function to perform automatic start-up and automatic shutdown to reduce the system running costs by cutting down the power when it is not needed.

Ni-MH: Nickel-metal hydride
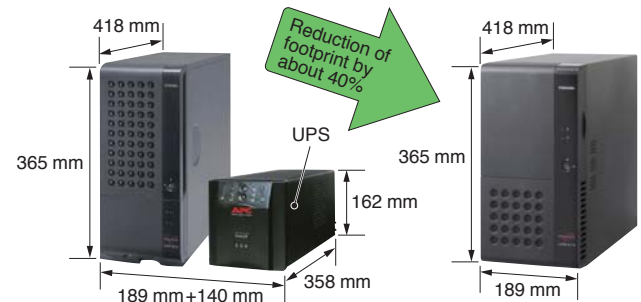
MAGNIA LiTE41S IA server with battery backup

"Intel" is the registered trademark of Intel Corporation.

T001 CDMA2000 1xEV-DO Cellular Phone

T001 cellular phone

Toshiba has developed the T001 model CDMA2000 1xEV-DO (Code Division Multiple Access 2000 1x Evolution Data Only) cellular phone and released it in February 2009. The T001 offers the "full change" function, permitting not only the appearance of the phone to be almost entirely changed but also the menu design, button operations, contents, etc. as well. This allows users to select their own preferences from among more than 1 500 combinations.

The T001 comes with a wide 3.1-inch visual VGA (480×800 pixels) organic EL display, enabling it to display ultrahigh-density image content. Furthermore, the "Mobile REGZA™ Engine" is installed, allowing users to enjoy beautiful images in which natural colors are vividly integrated with brilliance control by executing storage color correction according to the characteristics of the organic EL device.

The T001 is also equipped with a 5.15 mega-effective-pixel autofocus (AF) high-resolution camera with an optical image stabilizer. This camera's face detection AF function is the first to be installed in a Toshiba terminal.

Usability of the phone has been optimized by improving the processing performance of the software corresponding to the high-pixel-density display and camera. The T001 can also handle "Global Passport CDMA," making it possible to talk over the telephone to people in 26 countries of the world in the region.

VGA: Video Graphics Array
EL: Electroluminescence

W65T CDMA 2000 1xEV-DO Cellular Phone

Cellular phones continue to evolve in terms of multifunctionality and high performance. Recently, demand has been increasing for easy-to-use and higher quality cellular phones that can serve as a tool for enriching daily life, including the appreciation of images and music, enjoyment of sports, and so on. In response to these requirements, Toshiba has developed the W65T CDMA 2000 1xEV-DO cellular phone.

The main features of the W65T are as follows:
- A flat and refined design has been achieved by using touch sensors for the front panel keys.
- Easy scrolling and menu selection through the use of a new "speedy controller."
- Good visibility together with the low power consumption of an organic EL display by using the image quality correction technology of terrestrial digital broadcasting.
- Improved mobile communication performance by enhancing communication capacity with base stations using the "antenna diversity technology" employed in "voice-data communications."
- Support of high-bit-rate data transmission for the high-quality "EZ Chaku-uta Full Plus" music delivery service.
- Improved ease of use by enhancement of the Bluetooth® function and a gadget function adding favorite applications to the idle screen.

Speedy controller

Flat and refined design

Touch sensors

W65T CDMA 2000 1xEV-DO cellular phone

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

e-STUDIO 205L/255/305/355/455 Black-and-White Multifunctional Peripherals

Toshiba TEC Corporation has launched a series of black-and-white multifunctional peripherals (MFPs), the e-STUDIO 205L/255/305/355/455 models, featuring high image quality, high productivity, user-friendly operation, and environmental consciousness in a compact and lightweight body. The industry's smallest and lightest body with the largest inside volume has been achieved by reducing the number of parts by about 30%. Furthermore, a standby power consumption of 1 W, which represents a reduction of about 95% compared with conventional products, has been realized by employing a newly developed system-on-chip (SoC) device.

At the same time, the basic performance is enhanced in various ways: the image quality of black-and-white copies is improved by using a color scanner function, the high productivity of double-sided copying has been achieved by developing a special sheet reversal mechanism, and user-friendly operation is realized by employing an 8.5-inch color LCD monitor. In addition, these MFPs incorporate state-of-the-art control technology to ensure collaborative solutions for systems and applications, high security, and ease of administration such as department-level management.

e-STUDIO 455 black-and-white multifunctional peripheral

MA-2055/FS-2055 System Registers

FS-2055 system register

Toshiba TEC Corporation has developed the MA-2055/FS-2055 system registers featuring a wide display, a variety of functions, and various interfaces in response to users' needs.

The main features are as follows:
- A large 8.5-inch color WVGA (800 × 480 pixels) LCD offering a high level of visibility is installed on the compact cabinet as standard equipment.
- Various functions such as a twin thermal printer for the use of 58 mm-width receipts and journals, communication via LAN, and data storage using a universal serial bus (USB) memory support the management and analysis of sales data from multiple directions.
- Entry of data such as a store name is simply performed using the same character input method as for cellular phones.
- Options are available for the connection of cashless payment systems including electronic money and credit card terminals, as well as the connection of up to six scanning systems.

WVGA: Wide Video Graphics Array