

“True experience” - Toshiba’s IFA 2005 Highlights

Under the motto “True experience”, Toshiba used the IFA 2005 exhibition in Berlin, held from September 2-7, 2005, as an opportunity to showcase exciting new technologies. This year’s IFA Highlights included:

- ▶ SED (surface-conduction Electron-emitter Display) flat screen technology
- ▶ LED projector - weighing 565 grams, a first in projector technology
- ▶ Hi-Vision Network TV
- ▶ HD-DVD - the future of optical disks



Future technology on display: Toshiba’s Voice Recognition lets people interface with machines.

SED – a bright new technology for exceptional HD home entertainment

At this year’s IFA in Berlin, Toshiba announced a new flat screen technology called SED (Surface-conduction Electron-emitter Display). This new technology represents a significant increase in picture quality for flat screens while significantly reducing power consumption.

Like traditional cathode ray tube (CRT) TVs, SED technology, developed by Toshiba and Canon, is based on the targeted emission of electrons. When

electrons hit the screen, a phosphorous-based fluorescent layer in the glass surface lights up. Unlike CRT technology, SED uses one electron emitter per pixel and there is no need to

scatter electron rays. *SED TV, set for mass production in 2007, incorporates the new SED technology.* Therefore, it is now possible to produce bigger displays with SED technology.



As with CRTs, SED technology achieves response times of under a millisecond. SED TVs also have no need for a separate backlighting mechanism. Picture quality no longer depends on the viewing angle and lighting is spread evenly across the whole display. At the same time, the new SED technology produces a stunning 8600:1 contrast ratio for even crisper, clearer images.

LED featherweight – a first in projector technology

IFA 2005 saw Toshiba announce a featherweight projector that is based on LED (light-emitting diodes) technology. In place of a lamp, the new projector uses LED, requiring considerably less amounts of energy than conventional projector lamps.

Measuring just 136 x 39 x 100 mm, the LED projector sets a new record in the ultra-portable class. When the projector is switched off, the 250 gram battery recharges fully in just three hours, running for two hours off-line – enough for a full-length film or even a long presentation.

Unlike projector lamps, LED projectors don’t heat up after long hours of use; operating noise is therefore barely perceptible. With an extremely fast startup time of just two seconds and a rated service life of around 10,000 hours, LED projectors give off little heat, saving costs on replacement bulbs, fans, and energy.



Toshiba’s LED projector weighs just over 500 grams and runs on batteries for up to two hours. Available at the end of 2005.

LAN-compliant HDTV for home networks

Toshiba’s Hi-Vision Network TV combines high-quality, high definition television with the advantages of LAN and USB connectivity. Equipped with two 10/100 Mbit Ethernet ports, a USB port and an SD memory card slot, the flat screen TV set communicates with PCs, notebooks, and LAN hard drives in the home network, as well as with mobile devices via USB. Of course, it also provides internet access via TV, allowing users to read their e-mail or simply browse the web.

Connectivity opens the TV set up to a completely new range of applications such as recording television programmes in high definition quality onto LAN hard drives. Thanks to the fast LAN connection, HD signals are transmitted perfectly in the home network without any loss of quality.

The home networked LAN drives can become a High Definition HDD recorder, allowing you to record in HD format. At the same time, the networked TV offers access to images

and films that are stored on home networked PCs. Thanks to LAN connectivity, access is available to the home network and the Internet. One Ethernet port is used to connect to a LAN hard drive; the other can be combined with a network hub or switch, connecting up to seven additional LAN hard disc drives, a broadband router, PCs and notebooks. In the new digital home, the TV becomes the operation centre of the home network.



Hi-Vision Network TV combines high-quality, high-definition television with two 10/100-MBit Ethernet ports, one USB port and an SD Memory card slot.

High Definition DVD: A new standard on its way into your living room

The DVD Forum, a group of over 230 companies that develops and defines DVD formats, is working on developing the HD DVD standard. The standard provides the necessary storage space for HD content.

Put simply, high definition means greatly improved picture quality coupled with new standards for the transfer, provision and compression of high definition video content. HD DVD is a new technology that meets the requirements of the future home cinema and exceeds the storage volume of traditional DVDs almost twenty-fold. In the future, it will be possible to store up to 90 gigabytes of data on an HD DVD.



Toshiba's prototype HD DVD player will allow up to 90 GB of HD content.

The new technology is based on two basic principles. First, a blue-violet laser is used to scan more information than a traditional red laser in the same space. Second, up to three 15GB data layers can be incorporated into each disc. The combination of high data density and three data layers expands the storage capacity of a double-sided HD DVD to 90 gigabytes compared to the 4.7 gigabytes of a traditional DVD. Toshiba will also offer HD-DVD versions with 45, 30 and 15 GB.