



Digital Television

Delivering on the DTV Promise

In response to the proliferation of new digital television (DTV) products available at a range of price points, the Consumer Electronics Association (CEA) has introduced more detailed definitions for the DTV products now available to consumers. The new product definitions, with corresponding logos identifying each class of products, are designed to give retailers and consumers a clearly defined explanation of the various choices in the growing digital TV marketplace.

New Categories offers more Choice

A new digital TV product category called Enhanced Definition TV (EDTV) has been added between High Definition TV (HDTV) and Standard Definition TV (SDTV). EDTV products are digital TVs with higher display performance than SDTV. This new category offers consumers another range of options when purchasing DTV products.

Component Products Clearly Defined

The new definitions and logos also address the component nature of many manufacturers' television product lines. With new definitions and logos for "monitors" and "tuners," consumers and retailers will now be able to distinguish sets with integrated DTV tuners from monitors and tuners sold separately. Therefore, consumers can be sure that the EDTV or HDTV monitor they purchase can be combined with the appropriate tuner to receive digital broadcasts and display at Enhanced Definition (ED) or High Definition (HD) quality levels.

New Clarity for Retailers and Consumers

The definitions are expected to be incorporated into manufacturers' television marketing materials in the coming months. CEA's Video Division Board developed the definitions to more clearly define parameters for the varying levels of DTV products available and to make it easier for consumers to differentiate between the types of DTV products offered. The Board defined minimum attribute resolution requirements that, until now, had not existed for High Definition televisions and monitors. Specifically, HDTV displays must have active top-to-bottom scan lines of 720 progressive, 1080 interlaced, or higher. For the first time, consumers will be able to understand the different technical approaches taken by manufacturers to the display of widescreen high definition programming, particularly on 4:3 aspect ratio HDTV displays. (Manufacturers will disclose the number of active scan lines for a high definition image within a 16:9 aspect ratio "letter boxed" image area on an HDTV display).

The CEA Video Division Board also adopted two resolutions that provide clear guidelines to manufacturers and retailers for the advertising of DTV products to consumers. The first resolution will allow consumers to clearly differentiate between the new DTV sets and analog-only televisions. The resolution states that

analog-only televisions (televisions/monitors with a scanning frequency of 15.75 kHz) should not be marketed or designated to consumers as having any particular DTV capability or attributes.

In a second related resolution, the Board agreed that the new definitions for monitors and tuners should be used by all manufacturers and retailers to replace general, non-industry terminology like “DTV-ready” or “HDTV-ready.”

This new terminology will give consumers a ‘good-better- best’ choice when shopping for digital TV products. Manufacturers created this range of definitions so that consumers will be armed with the information they need to make informed buying decisions across varying budget levels.

CEA DTV Definitions



High-Definition Television (HDTV):

HDTV refers to a complete product/system with the following minimum performance attributes:

Receiver: Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Display Scanning Format: Has active vertical scanning lines of 720 progressive (720p), 1080 interlaced (1080i), or higher

Aspect Ratio: Capable of displaying a 16:9 image

Audio: Receives and reproduces, and/or outputs Dolby Digital audio

High-Definition Television (HDTV) Monitor:

HDTV Monitor refers to a monitor or display with the following minimum performance attributes:

Display Scanning Format: Has active vertical scanning lines of 720 progressive (720p), 1080 interlaced (1080i), or higher

Aspect Ratio: Capable of displaying a 16:9 image

In specifications found on product literature and in owner's manuals, manufacturers are required to disclose the number of vertical scanning lines in the 16:9 viewable area, which must be 540p, 810i or higher to meet the definition of HDTV.

High-Definition Television (HDTV) Tuner:

HDTV Tuner refers to a RF receiver with the following minimum performance attributes:

Receiver: Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Outputs: Outputs the ATSC Table 3 720p and 1080i/p formats in the form of HD with minimum active vertical scanning lines of 720p, 1080i, or higher. Additionally, it may output HD formats converted to other formats. The lower resolution ATSC Table 3 formats can be output at lower resolution levels. Alternatively, the output can be a digital bitstream with the full resolution of the broadcast signal.

Audio: Receives and reproduces, and/or outputs Dolby Digital audio



Enhanced Definition Television (EDTV):

EDTV refers to a complete product/system with the following minimum performance attributes:

Receiver: Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Display Scanning Format: Has active vertical scanning lines of 480 progressive (480p) or higher

Aspect Ratio: None Specified

Audio: Receives and reproduces, and/or outputs Dolby Digital audio

Enhanced Definition Television (EDTV) Monitor:

EDTV Monitor refers to a monitor or display with the following minimum performance attributes:

Display Scanning Format: Has active vertical scanning lines of 480 progressive (480p) or higher

Aspect Ratio: None specified

Enhanced Definition Television (EDTV) Tuner:

EDTV Tuner refers to a RF receiver with the following minimum performance attributes:

Receiver: Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Outputs: Outputs the ATSC Table 3 720p and 1080i/p and 480p formats with minimum active vertical scanning lines of 480p. Alternatively, the output can be a digital bitstream output capable of transporting 480p, except the ATSC Table 3 480i format can be output at 480i.

Audio: Receives and reproduces, and/or outputs Dolby Digital audio



Standard Definition Television (SDTV):

SDTV refers to a complete product/system with the following performance attributes:

Receiver: Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats, and produces a useable picture

Display Scanning Format: Has active vertical scanning lines less than that of EDTV

Aspect Ratio: None specified

Audio: Receives and reproduces usable audio

Standard Definition Television (SDTV) Tuner:

SDTV Tuner refers to a RF receiver with the following mini-mum performance attributes:

Receiver: Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Outputs: Outputs all ATSC table 3 formats in the form of NTSC output

Audio: Receives and reproduces, and/or outputs Dolby Digital audio