



Set-top Box Qualified Product List
List Posted on February 1, 2012

Below are currently qualified ENERGY STAR models available for sale in the U.S. and Canada.

Please note that cable, satellite, and telecom service providers may not carry all models of boxes.
 Please check with your specific service provider for assistance obtaining an ENERGY STAR qualified set-top box.

Company Name	Brand Name	Model Name	Model Number	Base Functionality	Additional Functionalities Present ¹	ENERGY STAR Qualified for Single-room Operation	ENERGY STAR Qualified for Multi-room Operation	Does Product Incorporate Auto-Power Down? (Y/N)	Does Product Incorporate Deep Sleep State? (Y/N)	Single-room Configuration Test Results				Multi-room Configuration Test Results ²				Date Qualified	Date Available on the Market	Available at Retail?
										Tested Power in On Mode (W)	Tested Power in Sleep Mode (W)	Tested Power in Deep Sleep State (W)	Total Energy Consumption (TEC) ³ (kWh/yr)	Tested Power in On Mode (W)	Tested Power in Sleep Mode (W)	Tested Power in Deep Sleep State (W)	Total Energy Consumption (TEC) ³ (kWh/yr)			
Apple Inc.	Apple	Apple TV	MC572	IP	Adv. Video Processing, HD, Home	Yes	No	Yes	No	2.114	0.1948		6.609				08/15/2011	09/01/2011	Yes	
Arris Group Inc	ARRIS	Media Player	MP2000NA	Thin-client/Remote	HD, Home Network Interface	Yes	No	No	No	9.12			53.9				9/26/2011	7/1/2011	No	
Cisco Systems	Cisco	Explorer 8742 HDC	Explorer 8742 HDC	Cable	Adv. Video Processing, CableCARD, DVR, DOCSIS, HD, Home Network Interface, Multi-room	Yes	Yes	No	No	23	18.3		183.00				06/03/2011	05/01/2011	No	
Cisco Systems	Cisco	Explorer 4742HDC	Explorer 4742HDC	Cable	Adv. Video Processing, CableCARD, DOCSIS, HD, Home Network Interface	Yes	No	No	No	17	13.9		137.74				06/07/2011	06/10/2011	No	
Cisco Systems	Cisco	ISB7500	ISB7500	IP	Advance Video Processing, High Definition, Home Network Interface, Digital Video Recorder (DVR)	Yes	No	No	No	18	14.6		145.00				08/26/2011	09/01/2011	No	
Cisco Systems	Cisco	ISB7050	ISB7050	IP	Advance Video Processing, High Definition, Home Network Interface, Digital Video Recorder (DVR)	Yes	No	No	No	18	14.6		145.00				08/26/2011	09/01/2011	No	
Cisco Systems	Cisco	ISB7000	ISB7000	IP	Advance Video Processing, High Definition, Home Network Interface	Yes	No	No	No	11.8	11.9		103.40				08/23/2011	09/01/2011	No	
Cisco Systems	Cisco	ISB7100	ISB7100	IP	Advance Video Processing, High Definition, Home Network Interface	Yes	No	No	No	11.8	11.9		103.40				08/23/2011	09/01/2011	No	
Cisco Systems	Cisco	ISB7005	ISB7005	IP	Advance Video Processing, High Definition, Home Network Interface	Yes	No	No	No	11.6	11.4		100.80				08/26/2011	09/01/2011	No	
Cisco Systems	Cisco	8642HD	8642HD	Cable	Adv. Video Processing, DVR, DOCSIS, HD, Multi-room, Multi-stream – Cable/Satellite	Yes	Yes	No	No	24.5	22.9		208.00				08/26/2011	09/01/2011	No	
Cisco Systems	Cisco	Explorer 4642HD	Explorer 4642HD	Cable	Advance Video Processing, DOCSIS, High Definition, Home Network Interface	Yes	No	No	No	14.9	11.7		119.00				08/23/2011	09/01/2011	No	
Cisco Systems	Cisco	DTA 170HD	DTA 170HD	Cable	HD	Yes	No	No	No	4.9	5.1		43.40				08/31/2011	09/01/2011	No	
Cisco Systems	Cisco	CIS430 p/n 4034511	CIS430 p/n 4034511	IP	Adv. Video Processing, DVR, HD, Home Network Interface	Yes	No	No	No	16.6	11.2		125.90				10/03/2011	03/01/2011	No	
Cisco Systems	Cisco	CIS430 p/n 4034511-5	CIS430 p/n 4034511-5	IP	Adv. Video Processing, DVR, HD, Home Network Interface	Yes	No	No	No	16.2	11.6		124.40				10/20/2011	03/01/2011	No	
Cisco Systems	Cisco	Explorer 8642 HDC	Explorer 8642 HDC	Cable	Adv. Video Processing, CableCARD, DVR, DOCSIS, HD, Multi-room, Multi-stream – Cable/Satellite	Yes	Yes	No	No	27.6	21.6		221.20				10/12/2011	06/01/2010	No	
Cisco Systems	Cisco	Explorer 4642HDC	Explorer 4642HDC	Cable	Adv. Video Processing, CableCARD, DOCSIS, HD, Home Network Interface	Yes	No	No	No	17.5	13.8		139.90				10/12/2011	06/01/2010	No	
Digital Multimedia Technology Co., Ltd.	HD-ADD	DMT-200HD	DMT-200HD	Cable DTA	HD	Yes	No	No	No	6.5	5.9		54.75				12/12/2011	09/30/2011	No	
DIRECTV	DIRECTV	HD Digital Satellite Receiver	H25-100	Satellite	Advanced Video Processing, HD, Multi-stream - Cable/Satellite, Home Network Interface	Yes	no	No	no	10.7	10.1		91.54				4/28/2011	5/1/2011	no	



Set-top Box Qualified Product List
List Posted on February 1, 2012

Below are currently qualified ENERGY STAR models available for sale in the U.S. and Canada.

Please note that cable, satellite, and telecom service providers may not carry all models of boxes.
 Please check with your specific service provider for assistance obtaining an ENERGY STAR qualified set-top box.

Company Name	Brand Name	Model Name	Model Number	Base Functionality	Additional Functionalities Present ¹	ENERGY STAR Qualified for Single-room Operation	ENERGY STAR Qualified for Multi-room Operation	Does Product Incorporate Auto-Power Down? (Y/N)	Does Product Incorporate Deep Sleep State? (Y/N)	Single-room Configuration Test Results				Multi-room Configuration Test Results ²				Date Qualified	Date Available on the Market	Available at Retail?
										Tested Power in On Mode (W)	Tested Power in Sleep Mode (W)	Tested Power in Deep Sleep State (W)	Total Energy Consumption (TEC) ³ (kWh/yr)	Tested Power in On Mode (W)	Tested Power in Sleep Mode (W)	Tested Power in Deep Sleep State (W)	Total Energy Consumption (TEC) ³ (kWh/yr)			
DIRECTV	DIRECTV	HD DVR	HR24-100	Satellite	Advanced Video Processing, HD, Multi-stream - Satellite, DVR, Multi-room	No	Yes	no	no					22.5	22.35		197.06	7/22/2011	5/1/2010	no
DIRECTV	DIRECTV	DIRECTV Receiver	L14-100	Satellite	N/A	Yes	no	no	no	6.84	5.52		55.1					8/19/2011	9/15/2011	no
DIRECTV	DIRECTV	DIRECTV Receiver	D12-100	Satellite	N/A	Yes	no	no	no	7.86	6.24		62.94					8/19/2011	8/15/2011	no
DIRECTV	DIRECTV	DIRECTV Satellite Receiver	H25-500	Satellite	Adv. Video Processing, HD, Home Network Interface	Yes	no	no	no	12.23	10.96		102.50					09/09/2011	2/1/2011	no
DIRECTV	DIRECTV	DIRECTV HD DVR	H24-500	Satellite	Adv. Video Processing, DVR, HD, Multi-room, Multi-stream Satellite	No	Yes	no	no					24.53	22.57		207.73	9/14/2011	2/15/2010	no
DIRECTV	DIRECTV	DirecTV SD Receiver	D12-700	Satellite	N/A	Yes	No	No	No	6.266	5.324		51.456					10/12/2011	5/1/2008	No
DIRECTV	DIRECTV	DirecTV HD STB Receiver	H24-200	Satellite	Adv. Video Processing, HD, Home Network Interface	Yes	No	No	No	13.99	11.31		113.05					10/12/2011	11/10/2011	No
DIRECTV	DIRECTV	DirecTV HD Satellite Receiver	H25-700	Satellite	Adv. Video Processing, HD, Home Network Interface	Yes	No	No	No	9.748	9.024		82.753					10/12/2011	10/25/2011	No
DIRECTV	DIRECTV	DirecTV HD DVR	HR24-200	Satellite	Adv. Video Processing, DVR, HD, Multi-room, Multi-stream – Satellite	No	Yes	No	No					20.03	21.03		194.71	10/14/2011	10/19/2011	No
Funai Corporation, Inc.	MAGNAVOX	NetBOX	TB600MG2 F/F7	IP	Adv. Video Processing, HD, Home Network Interface	Yes	No	Yes	Yes	5.64	0.681	0.68	31.3					6/8/2011	11/1/2011	Yes
Funai Corporation, Inc.	FUNAI	NetBOX	TB600FX2	IP	Adv. Video Processing, HD, Home Network Interface	Yes	No	Yes	Yes	5.64	0.681	0.68	31.3					6/28/2011	9/1/2011	Yes
Motorola (Mobility, General Instrument Corp)	Motorola	IPTV Set- Top Box	VIP1225	IP	Adv. Video Processing (MPEG4), HD, DVR, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	15.7	11.82		123.85					9/9/2011	12/1/2008	no
Motorola (Mobility, General Instrument Corp)	Motorola	IPTV Set- Top Box	VIP1232	IP	Adv. Video Processing (MPEG4), HD, DVR, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	16.21	12.58		128.78					9/9/2011	12/1/2010	no
Motorola Mobility, General Instrument Corporation	Motorola	IPTV	VIP1002	IP	Adv. Video Processing, HD, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	9.1	9.19		80.05					9/9/2011	12/1/2010	no
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set- Top Box	VIP2250	IP	Adv. Video Processing (MPEG4), HD, DVR, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	17.65	14.41		142.97					9/14/2011	9/1/2010	no
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set- Top Box	VIP2262	IP	Adv. Video Processing (MPEG4), HD, DVR, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	17.65	14.41		142.97					9/14/2011	9/1/2010	no
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set- Top Box	VIP2102	IP	Adv. Video Processing (MPEG4), HD, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	9.84	9.63		85.43					9/26/2011	3/1/2009	no
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set-Top Box	VIP1200	IP	Adv. Video Processing (MPEG4), HD, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	no	no	10.93	10.459		94.029					9/26/2011	3/1/2009	No
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set-Top Box	VIP2200	IP	Adv. Video Processing (MPEG4), HD, Home Network Interface, Multi-stream – IP	Yes	No	no	no	11.254	11.164		98.258					9/26/2011	9/1/2010	No



Set-top Box Qualified Product List
List Posted on February 1, 2012

Below are currently qualified ENERGY STAR models available for sale in the U.S. and Canada.

Please note that cable, satellite, and telecom service providers may not carry all models of boxes.
 Please check with your specific service provider for assistance obtaining an ENERGY STAR qualified set-top box.

Company Name	Brand Name	Model Name	Model Number	Base Functionality	Additional Functionalities Present ¹	ENERGY STAR Qualified for Single-room Operation	ENERGY STAR Qualified for Multi-room Operation	Does Product Incorporate Auto-Power Down? (Y/N)	Does Product Incorporate Deep Sleep State? (Y/N)	Single-room Configuration Test Results				Multi-room Configuration Test Results ²				Date Qualified	Date Available on the Market	Available at Retail?
										Tested Power in On Mode (W)	Tested Power in Sleep Mode (W)	Tested Power in Deep Sleep State (W)	Total Energy Consumption (TEC) ³ (kWh/yr)	Tested Power in On Mode (W)	Tested Power in Sleep Mode (W)	Tested Power in Deep Sleep State (W)	Total Energy Consumption (TEC) ³ (kWh/yr)			
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set-Top Box	VIP2202	IP	Adv. Video Processing (MPEG4), HD, Home Network Interface, Multi-stream – IP	Yes	No	no	no	11.254	11.164		98.258				9/26/2011	9/1/2010	No	
Motorola Mobility, General Instrument Corporation	Motorola	Cable Set-Top Box	DCX3510	Cable	Adv. Video Processing, CableCARD, DVR, DOCSIS, HD, Home Network Interface, Multi-stream – Cable, Multi-room	Yes	Yes	No	No	21.46	19.14		179.71				10/11/2011	8/2/2011	No	
Motorola Mobility, General Instrument Corporation	Motorola	Cable Set-Top Box	DCX700-M	Cable	Adv. Video Processing, CableCARD, HD, Home Network Interface, Multi-room	Yes	No	Yes	No	13.89	10.65		101.598				10/11/2011	6/1/2010	No	
Motorola Mobility, General Instrument Corporation	Motorola	Cable Set-Top Box	DCX3501	Cable	Adv. Video Processing, CableCARD, DVR, DOCSIS, HD, Home Network Interface, Multi-stream – Cable, Multi-room	Yes	No	Yes	No	24.9	17.07		169.64				10/11/2011	11/2/2010	No	
Motorola Mobility, General Instrument Corporation	Motorola	IPTV Set-Top Box	VIP2100	IP	Adv. Video Processing (MPEG4), HD, Home Network Interface, Multi-stream – IP, Multi-room	Yes	No	No	No	9.84	9.63		85.43				9/26/2011	9/26/2011	No	
Samsung Electronics Co Ltd	Samsung	SMT-H3362	SMT-H3362	Cable	Adv. Video Processing, CableCARD, DOCSIS, HD, Multi-room	Yes	Yes	Yes	No	14.62	14.53		127.51				6/1/2011	7/11/2011	No	
Samsung Electronics Co Ltd	SAMSUNG	SMT-C8340	SMT-C8340	Cable	Adv. Video Processing, CableCARD, DOCSIS, HD, Multi-room	Yes	Yes	Yes	No	26.6	25.58		228.75	26.86	25.96	231.86	6/27/2011	7/11/2011	No	
Samsung Electronics Co Ltd	DIRECTV	HR24NC-200	HR24NC-200	Satellite	Adv. Video Processing, DVR, DOCSIS, HD, Multi-room, Multi-stream – Cable/Satellite	Yes	Yes	No	No	22.84	21.41		195.33	23.29	21.29	196.79	8/30/2011	9/1/2011	No	
Sony Electronics Inc.	SONY	NETWORK MEDIA PLAYER	SMP-N200	IP	Adv. Video Processing, HD, Home Network Interface	Yes	No	Yes	No	8.01	5.88		57.9				8/11/2011	10/01/2011	Yes	
Sony Electronics Inc.	SONY	NETWORK	SMP-NX20	IP	Adv. Video Processing, HD, Home Network Interface	Yes	No	Yes	No	8.01	5.88		57.9				8/11/2011	10/01/2011	Yes	
Tatung Technology Inc.	TATUNG	STB-2540	STB-2540	IP	Adv. Video Processing, HD, Home Network Interface	Yes	No	No	No	10.5	10.01		91.80				09/07/2011	08/01/2011	No	

¹ Additional functionalities may be present in the model but not tested by ENERGY STAR.

² In homes that seek to view programming on multiple TVs, EPA wishes to encourage deployment of ENERGY STAR qualified

³ The estimate of total energy consumption over a year is calculated based on US average TV viewing patterns.

Set-top Box (STB) Qualified Product List Column Definitions

Brand Name & Model Name: Identifiers assigned to a product or family/series of products for sales and marketing purposes.

Model Number: Identifier assigned by the manufacturer to a unique product or a family/series of products.

Base Functionality (Product Type): The primary means of access to video content for a STB. All of the following base types may be configured as a simple STB that provides a single primary function, or as part of a complex STB that provides a primary function and one or more additional functionalities.

- a. *Cable* - receives television signals from a broadband, hybrid fiber/coaxial, or community cable distribution system with conditional access
- b. *Satellite* - receives television signals from satellites
- c. *Internet Protocol (IP)* - receives television/video signals encapsulated in Internet Protocol (IP) packets
- d. *Cable Digital Transport Adapter (DTA)* - a minimally-configured STB whose primary function is to receive television signals from a broadband, hybrid fiber/coaxial, or community cable distribution system
- e. *Terrestrial* - receives television signals over the air or via community cable distribution system without conditional access
- d. *Thin-client/Remote* - A STB that (1) is designed to interface between a Multi-room STB and a TV (or other output device), (2) has no ability to directly interface with a Service Provider, and (3) relies solely on a Multi-room STB for content

Additional Functionalities Present: Indicates that the product has one or more of the following functionalities in addition to the base functionality. Additional functionalities such as Multi-room may be present but not tested by ENERGY STAR. Columns G and H denote whether or not a model is tested and ENERGY STAR qualified for single-room and multi-room operation.

- a. *Adv. Video Processing* - capability to encode, decode, and/or transcode audio/video signals
- b. *CableCARD* - capability to decrypt premium audio/video content and services and provide other network control functions via a plug-in conditional access module.
- c. *Digital Video Recorder (DVR)* - capability to store video in a digital format to a rewritable disk drive or other non-volatile storage device integrated into the STB
- d. *DOCSIS®* - The capability to distribute data and audio/video content over cable television infrastructure.
- e. *High Definition (HD) Resolution* - capability to transmit or display video signals with resolution greater than or equal to 720p
- f. *Home Network Interface* - capability to interface with external devices over a high bandwidth network (e.g., WiFi, MoCA, HPNA)
- g. *Multi-room* - capability to provide independent audio/video content to multiple devices within a single family dwelling
- h. *Multi-stream* - capability to deliver two or more simultaneous audio/video streams to a consumer display, thin-client/remote STB, or recording device

- i. *Removable Media Player* - capability to decode digitalized audio/video signals on DVD or Blu-ray Disc optical media
- j. *Removable Media Player / Recorder* - capability to decode and record digitalized audio/video signals on DVD or Blu-ray Disc optical media

ENERGY STAR Qualified for Single-room Operation: This column indicates the product qualifies for ENERGY STAR when providing content to only one TV (or other output device).

ENERGY STAR Qualified for Multi-room Operation: STBs with multi-room capability may be installed to provide independent audio/video content to multiple devices within a single family home. This column indicates that the product qualifies for ENERGY STAR when providing content to more than one TV (or other output device).

Does Product Incorporate Deep Sleep State? (Y/N): This column indicates whether or not the product incorporates a state within Sleep mode characterized by reduced power consumption.

Does Product Incorporate Auto-Power Down? (Y/N): The column indicates whether or not the product has the capability to switch itself from On mode to Sleep mode after a predetermined period of time.

The following four columns are reported test values for the product in single-room configuration and multi-room configuration as applicable. A set-top box may be qualified for multi-room operation solely on the basis of tests performed in a single-room configuration (if the tested energy consumption is low enough, per Section 3.4.1.i of the ENERGY STAR Eligibility Criteria for Set-top Boxes). Multi-room test results will be omitted in such cases.

Tested Power in On Mode (W): Measured power according to the ENERGY STAR STB Test Method with the product activated and providing one or more primary functions such as delivery of live or recorded audio/video content.

Tested Power in Sleep Mode (W): Measured power according to the ENERGY STAR STB Test Method where the product is connected to the mains power source, is not providing a primary function, and offers one or more user oriented or protective functions such as internal sensors, clocks, and facilitation of remote control activation/deactivation.

Tested Power in Deep Sleep State (W): Measured power according to the ENERGY STAR STB Test Method with the product in Deep Sleep State.

Total Energy Consumption (TEC) (kWh/yr): Calculation of expected energy consumption for a typical user over a one year period; expressed in units of kWh/year. Actual annual energy consumption will vary depending on usage patterns.

Date Qualified: The date that an EPA-recognized Certification Body certified the product to the ENERGY STAR specification.

Date Available on the Market: The date that the product is available to consumers either through a service provider or for purchase at retail.

Available at Retail?: This column indicates with or not the product is available at retail (in-store or online). STBs are also provided to end users through service providers. A service provider is a business entity that provides audio/video content to subscribers with whom it has an ongoing contractual relationship. A service provide distributes ENERGY STAR qualified STBs to end users under a lease or rental agreement.

Key Efficiency Criteria

Qualified models meet all ENERGY STAR requirements as listed in the Version 3.0 ENERGY STAR Program Requirements for Set-top Boxes that are effective as of September 1, 2011.

Table 1: Base Functionality Annual Energy Allowance	
Base Functionality	Version 3.0 Energy Allowance (kWh/year)
Effective Dates	On and after 9/1/11
Cable	60
Satellite	70
Cable DTA	35
IP	50
Terrestrial	22
Thin-Client/Remote [9]	35

Table 2: Additional Functionality Annual Energy Allowance	
Additional Functionalities	Version 3.0 Energy Allowance (kWh/year)
Effective Dates	On and after 9/1/11
Additional Tuners/Multi-Stream – Cable/Satellite[2]	16
Additional Tuners/Multi-Stream – Terrestrial/IP[2]	8
Adv. Video Processing[4]	12
CableCARD[7]	15
Digital Video Recorder (DVR)	45
DOCSIS[8]	20
High Definition[1,5]	25
Home Network Interface [3]	10
Multi-Room[3,6]	40
Removable Media Player	8
Removable Media Player/Recorder	10

To calculate the ENERGY STAR allowance for a given device, take the sum of the base functionality allowance and all applicable additional functionalities allowances (if present). This sum is the calculated annual kWh limit, or TEC value. This sum equals the maximum amount of energy the box can use in a given year as calculated following the ENERGY STAR test procedure.

Annual Energy Allowance (kWh/year) = Base Functionality Allowance + Additional Functionalities Allowance

Notes:

- [1] The High Definition allowance is the only additional functionality allowance that may be applied to STBs with
- [2] Additional Tuners/Multi-Stream adder applies only once, regardless of the number of tuners/streams.
- [3] The Multi-Room allowance may not be combined with the Home Network Interface allowance on a single
- [4] The Adv. Video Processing adder only applies once per box and can not be applied multiple times.
- [5] Credit for High Definition applies to all STBs except those with Base Functionality of TERRESTRIAL.
- [6] The Multi-room adder applies only once, regardless of the number of rooms served by the device.
- [7] The cable card adder can be applied on a per cable card basis in Version 2.0, but only once per STB in
- [8] OEMs must test with DOCSIS enabled if DOCSIS is present. Service providers can test with it and take the
- [9] The Advanced Video Processing, Home Network Interface, High Definition, Removable Media Player, and