

AT&T is a signatory to the [Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Set-Top Boxes](#) (“VA”). As a signatory, AT&T committed to procure 90% of its new set-top boxes per the ENERGY STAR® Version 3.0 standard through 2016, a more stringent “Tier 2” standard since 2017, and an even tougher “Tier 3” standard beginning in 2020 ([2017 Annual Report](#)). We also agreed to provide Typical Energy Consumption (TEC) for set-top box models that are available to customers. The information for those devices is provided below. More information about AT&T’s sustainability program is available [here](#).

DIRECTV Set-Top Box Models, Functionality and Energy Consumption

Description	Model	Functionality	Energy Consumption			ENERGY STAR Version
			On (W)	Off (W)	TEC (kWh / yr)	
ENERGY STAR Version 3.0 STBs						
Thin Client	C31-700	APD, AVP, HD, HNI	5.9	4.5	43.2	3
Thin Client	C41-500	APD, AVP, HD, HNI	5.4	4.1	39	3
Non-DVR	D12-100		7.9	6.2	62.9	3
Non-DVR	D12-700		6.3	5.3	51.5	3
Non-DVR	H24-200	APD, AVP, HD, HNI	14	11.3	105.9	3
Non-DVR	H24-700	APD, AVP, HD, HNI	13.7	11.5	106.5	3
Non-DVR	H25-500	APD, AVP, HD, HNI	12.2	11	99.3	3
Non-DVR	H25-700	APD, AVP, HD, HNI	9.9	9.2	82.1	3
DVR	HR24-100	APD, AVP, DVR, HD, MR, MS-C/S	22.5	22.4	196.2	3
DVR	HR24-200	APD, AVP, DVR, HD, MR, MS-C/S	23	21	189.3	3
DVR	HR24-500	APD, AVP, DVR, HD, MR, MS-C/S	24.5	22.6	202.7	3
DVR	HR44-500	APD, AVP, DVR, HD, MR, MS-C/S	19.7	18.8	167	3

Description	Model	Functionality	Energy Consumption			ENERGY STAR Version
			On (W)	Off (W)	TEC (kWh / yr)	
ENERGY STAR Version 4.1 STBs						
Thin Client	C41-100	APD, AVP, HD, HNI	5.57	4.15	39.9	4.1
Thin Client	C41-500	APD, AVP, HD, HNI	5.6	4.04	39.38	4.1
Thin Client	C41-700	APD, AVP, HD, HNI	5.213	3.66	36.14	4.1
Thin Client	C41W-100	APD, AVP, HD, HNI, MIMO 5 GHz	7.2	5.57	53.0	4.1
Thin Client	C41W-500	APD, AVP, HD, HNI, MIMO 5 GHz	7.17	5.73	53.9	4.1
Thin Client	C51-100	APD, AVP, HD, HNI	6.38	3.72	39.22	4.1

Thin Client	C51-500	APD, AVP, HD, HNI	5.64	3.64	37.15	4.1
Thin Client	C51-700	APD, AVP, HD, HNI	6.08	4.22	41.89	4.1
Thin Client	C61-100	APD, AVP, HD, HNI	5.4	4.25	40.2	4.1
Thin Client	C61-500	APD, AVP, HD, HNI	5.43	4.22	40.1	4.1
Thin Client	C61-700	APD, AVP, HD, HNI	5.28	4.1	39.0	4.1
Thin Client	C61K-700	APD, Ultra HD, TC HEVP, HNI, MIMO 5 GHz	9.5	4.1	49.8	4.1
Non-DVR	H25-100	APD, AVP, HD, HNI	10.32	8.42	78.563	4.1
DVR	HR44-200	APD, AVP, DVR, HD, MR, MS-C/S	19.29	18.03	158.63	4.1
DVR	HR44-500	APD, AVP, DVR, HD, MR, MS-C/S	18.94	17.873	154.39	4.1
DVR	HR44-700	APD, AVP, DVR, HD, MR, MS-C/S	18.46	17.42	149.44	4.1
Non-DVR	H44-500	APD, HD, HNI, MS-C/S	10.37	9.37	84.7	4.1

Description	Model	Functionality	Energy Consumption			ENERGY STAR Version
			On (W)	Off (W)	TEC (kWh / yr)	
ENERGY STAR Version 5.1 STBs (all include HD and APD)						
Non-DVR	H44-100	HN1, MS-C/S	9.79	9.05	81.2	5.1
DVR	HR54-200	DVR, MR, MS-C/S	12.2	11.1	101.0	5.1
DVR	HR54-500	DVR, MR, MS-C/S	13.66	12.64	111.0	5.1
DVR	HR54-700	DVR, HNI, MR, MS-C/S	12.10	11.01	99.3	5.1
DVR	HS17-100	DVR, Ultra HD, HNI, MR, MS-C/S, MIMO 5 GHz, AP, Transcoding	20.2	18.92	170.0	5.1
DVR	HS17-500	DVR, Ultra HD, HNI, MR, MS-C/S, MIMO 5 GHz, AP, Transcoding	19.48	18.34	164.0	5.1

Description	Model	Functionality	Energy Consumption			ENERGY STAR Version
			On (W)	Off (W)	TEC (kWh / yr)	
Non ENERGY STAR certified STBs						
DVR	HR34-700	APD, AVP, DVR, HD, MR, MS-C/S	28.5	26.9	239.5	
Thin Client	C61-200	APD, AVP, HD, HNI	5.41	4.23	40.1	
Thin Client	C61W-400	APD, AVP, HD, HNI, MIMO 5 GHz	6.53	5.03	47.9	

Thin Client	C61W-700	APD, AVP, HD, HNI, MIMO 5 GHz	6.56	5.22	49.2
Thin Client	C71KW-400	Ultra HD, TC HEVP, HNI, MIMO 5 GHz	5.86	4.13	45.0

AT&T U-Verse Set-Top Box Models, Functionality & Energy Consumption

Description	Model	Functionality	Energy Consumption			ENERGY STAR Version
			On (W)	Off (W)	TEC (kWh / yr)	
DVR	VIP 2262	DVR, AVP, HD, HNI, MS-T/I, MR	12.06	10.33	104	
DVR	VIP 2250	DVR, AVP, HD, MS-T/I, MR	17.65	14.41	143	4.1
Non-DVR	VIP 2500	AVP, HD, HNI, MS-T/I	11.73	11.4	102	4.1
DVR	ISB 7500	DVR, AVP, HD, MS-T/I, MR	18	14.6	145	4.1
Non-DVR	ISB 7005	AVP, HD, HNI, MS-T/I	11.6	11.4	101	3
Non-DVR	ISB 7105	AVP, HD, HNI, MS-T/I	11.8	11.8	103	4.1
DVR	IPH 8005	DVR, AVP, HD, MS-T/I, MR	11.3	8.2	87.7	3
DVR	IPH 8010	DVR, AVP, HD, MS-T/I, MR	11	8	85.4	3

Set-Top Box Features, Descriptions and Allowances

Feature	Description
AP	Access Points provide IEEE 802.11 Wi-Fi connectivity to multiple clients
APD	Automatic power down (APD) monitors parameters correlated with user activity or viewing; if the parameters collectively indicate that no user activity or viewing is occurring, the APD feature enables the device to transition to a sleep mode or OFF mode
AVP	Advanced video processing (AVP) enables set-top box to encode, decode, and/or transcode audio/video signals
DVR	A digital video recorder (DVR) allows set-top boxes to store digital video files to a rewritable disk or other integrated storage device
HD	High definition (HD) makes set-top boxes capable of transmitting video signals with resolution greater than or equal to 720p
HNI	Home network interfaces (HNIs) allow set-top boxes to interface with external devices via a high-bandwidth local area network
MIMO 5 GHz	IEEE 802.11n/ac and related Multi-Input Multi-Output enabled Wi-Fi functionality that supports more than one spatial stream in both send and receive
MR	Multi-room (MR) functionality enables set-top boxes to provide independent audio/video content to multiple devices within a single household

MS	Multi-stream (MS) for cable and satellite (C/S) and for Telco/IP (T/I) is the capability to deliver multiple simultaneous audio/video streams to a single display, thin-client/remote set-top box, or recording device over coax or via satellite
TC HEVP	Thin client high efficiency video processing: Video decoding providing compression efficiency significantly higher than H.264/AVC, for example HEVC (H.265)
Transcoding	Additional capability to translate, transrate, transscale, transcrypt, or perform audio format conversions in real-time
Ultra HD	The capability to transmit video signals with a minimum output resolution of 3840×2160 pixels