

Satellite television refers to television delivered through the medium of communications satellites, instead of the conventional terrestrial television and cable television that is broadcasted with the aid of ground cables. In various countries around the globe, satellite television is increasingly taking over the previous terrestrial signals, providing the audiences with a broader variety of channels and services that include subscription-only services. Satellite television is extremely popular around the world and to receive it, you need to buy a receptor i.e., a dish and a digibox.

Similar to other communications transmitted through satellite, satellite television begins with a transmitting antenna that is located at an uplink facility. Uplink satellite dishes are usually very wide, resulting in more precise aiming and improved signal strength of the satellite. To enable the transmission of the uplinked signals within a defined range of frequency, the uplink dish is pointed toward a specific satellite, so that the transmission can be received by one of the transponders tuned to that frequency range on that satellite. Thereafter, the transponder retransmits the signals back at a dissimilar frequency band to Earth. This process is known as translation and is primarily used to avoid any kind of interference with the uplink signals, specifically in the C-band (4–8 GHz) or Ku-band (12–18 GHz) or in both of them. Downlink refers to the leg of the signal path from the satellite to the receiving station on Earth.

An archetypal satellite comprises upto 24 transponders for C-band and upto 32 transponders for Ku-band only satellite. In case of hybrid satellites, the number increases furthermore.

Satellite television is primarily of three main categories: reception direct by the viewer, reception by headends for distribution across terrestrial cable systems and reception by local television affiliates.

DBS (Direct Broadcast Satellite) falls under the first category, i.e. direct to the viewer reception.

- Direct Broadcast Satellite (DBS)

Also referred to as Direct-To-Home (DTH), direct broadcast satellite is comparatively a new discovery in the arena of satellite teleport services in the world. DBS has two connotations – firstly, the term can be used to refer to the communication satellites that deliver the DBS service. Or else, it can also be used to refer to the actual television service. DBS or DTH systems are popularly known as mini-dish systems that make use of the upper portion of the Ku band.

In some countries where Ku band transmissions are not allowed, few networks have made use of modified DBS systems that are capable of running on C-band. The DVB-S standard for transmission is used by the maximum number of DBS systems. The Pay-TV service is proprietary and usually comprises a Conditional Access Module and Smart Card.

This feature helps the providers of satellite teleport services to ensure that only authorized subscribers, who are paying to acquire access to the various television channels only have access to the broadcast. However, Pay-TV concept also allows the airing of all FTA (free-to-air) channels to all subscribers, even those who possess only the standard equipment i.e., the DBS receivers without the Conditional Access Modules that are available in the market.

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