



## **Indian Standard IS 18112:2022 - Digital Television Receiver for Satellite Broadcast Transmission - Specification**

**Digital Television (DTV) Receivers** are designed to receive signals transmitted via **satellite broadcast transmission**. They are capable of receiving satellite broadcast signals, specifically for the reception of **DVB-S2 (Digital Video Broadcasting - Satellite - Second Generation)** services. The receivers should support multiple services like **television, radio, and data services**.

**IS 18112:2022** ensures that digital television receivers for satellite broadcast transmission in India are capable of receiving high-quality digital signals, delivering consistent audio-visual experiences, and complying with industry standards for safety, performance, and interoperability. This standard plays a crucial role in fostering the adoption of high-quality satellite television in India, ensuring that consumers receive reliable and high-performance digital television services.

### **1. Technical Requirements:**

- **Signal Reception:** The receiver must be capable of receiving DVB-S2 compliant signals over satellite broadcast channels.
- **Modulation and Demodulation:** The standard defines the acceptable modulation schemes, such as QPSK (Quadrature Phase Shift Keying), for signal processing.
- **Error Handling:** The receiver must include provisions for error correction techniques to handle signal degradation due to noise or interference, ensuring high-quality video and audio output.

### **2. Performance Characteristics:**

- **Video and Audio Output:** The receiver must support standard video and audio formats for television viewing, including HD (High Definition) and SD (Standard Definition) resolution.
- **Resolution and Aspect Ratio:** It specifies the minimum resolution (e.g., 720p, 1080p) and aspect ratios (e.g., 16:9).
- **Interfacing:** It requires compatibility with standard video interfaces like HDMI (High Definition Multimedia Interface) for connection to external displays.
- **Audio Standards:** The receiver must support standard audio formats like MPEG and AC-3 for clear sound reproduction.

### **3. Functional Features:**

- **Receiver Control:** It includes provisions for on-screen display (OSD) for user interface, electronic program guide (EPG), and other user controls.
- **Connectivity:** Support for common connectivity options like USB, Ethernet, and Wi-Fi, which may be used for software updates or internet-based services.
- **Power Management:** The receiver must have efficient power consumption features and comply with energy efficiency standards.

### **4. Safety and EMC Compliance:**

- The receiver must meet electrical safety standards to prevent electrical hazards and comply with electromagnetic compatibility (EMC) regulations to minimize interference with other electronic devices.

5. **Quality Assurance:**

- The standard includes requirements for the quality of construction, durability, and long-term reliability of the digital TV receiver.
- It emphasizes performance testing to ensure that all parameters, such as signal quality, audio-visual output, and system stability, meet the specified standards.

6. **Environmental Requirements:**

- The standard specifies temperature, humidity, and other environmental parameters within which the receiver should function without degradation in performance.