



## Promwad Innovation Company

is an independent electronics design house and a professional developer of STB (set-top boxes).

Our customers receive not only design documentation and all intellectual property rights, but also a competitive product for rental and sale in the target markets.

Close partnership with leading STB chipset vendors provides us with access to cutting-edge technologies.

Our official partners:



## STB Development at Promwad Innovation Company

### ➔ Digital set-top boxes development: DVB-T, DVB-S/S2, DVB-C, IP + hybrid STB

- STB prototyping based on the developer's PCBs and development kits
- Circuit and PCB design and components cost minimization
- Embedded software (middleware) development
- Third-party STB software integration
- CAS/CAM conditioned access system support
- Industrial enclosure design and graphic user interface development
- Optimization in production process and production support
- Technical support throughout the product life cycle

### ➔ We implement STB functions

- SD/HD/FullHD video playback
- Video-on-demand (VoD)
- Electronic program guide (EPG)
- Internet telephony
- Multimedia playback from HDD and USB storage devices
- Support for an external WiFi module, a keyboard and a mouse (via USB)
- Data routing
- Viewing RuTube and YouTube
- Web-based interface
- Software development kit (SDK)
- User interface customization
- Software update over the network



ELECTRONIC  
PRODUCTS DESIGN

**Promwad engineers** create STBs from scratch or base them on ready-made platform solutions. Our services include all design stages, from concept development to mass production.

The result of our development belongs to the customer and is not circulated in other projects.

## Digital STB Development at Promwad. Our Projects

➔ **IPTV STB SML-282 Base** was developed by Promwad engineers under the order of SmartLabs, Ltd. It implements support for OTT services, the PVR media player and MPEG-2/4 for 3D/HD video.

Rostelekom, Russia's largest communications operator has selected this device for providing a single IPTV service throughout Russia.

➔ **DVB-T + IP/ DVB-C + IP: SD7167 Hybrid Design** for terrestrial and cable digital broadcasting in the MPEG-2/4 H.264 format (video HD/SD + IPTV). It is based on the new high-performance STi7167 processor. It features integrated peripherals that provide extensive functionality with a minimum number of additional elements, which leads to a reduction in the product's cost.

The software is Linux-based. The product also implements the capability to quickly change the STB user interface (using HTML and JavaScript as well as implementing own API).

➔ **IPTV STB based on the STi7105 chip** for receiving and decoding the IPTV stream, which is transmitted over the Ethernet network. Supported video: SD/HD. The STi7105 processor has provided rich functionality without increasing the cost of the device.

The SDK designed for HTML/Javascript and C++ helps extend the STB capabilities. The user interface is based on HTML5 web technologies, which simplifies the scalability of the system and provides wide customization options.

➔ **STB DVB-C** for cable digital broadcasting in the MPEG-2 (SD) format targets the low-end market. It implements smart card support for CAS integration.

This project involved the creation of STB hardware and software platforms as well as enclosure design development. The software was based on the OS21 real-time OS by STMicroelectronics. This helped achieve a very compact application, use low-cost flash memory and ensure the shortest response time.

➔ **IPTV STB with DVB-T/S/S2** for terrestrial and satellite broadcasting is based on the SMP8654 processor by SigmaDesigns. Supported video format: MPEG-2/4, HD/SD.

The device is fitted with two CI CAM slots, a smart card interface to decode closed channels, an HDMI connector and an optical SPDIF transmitter. Two USB and SATA interfaces are available for connecting external storage devices. The STB implements an Ethernet 10/100/1000 Mbit interface and an IEEE802.11b/g Wi-Fi interface to work with external networks.

The use of the latest specialized MPEG4 decoder by SigmaDesigns helped make 100-percent use of the processor capacity.

**Development center in Moscow, Russia:** 4th Lesnoy pereulok, 4  
Regus Business Center Capital Plaza  
Tel. +7 (495) 642 82 43 Email: info@promwad.ru

**Development center in Minsk, Belarus:** office 903, 22 Olshevskogo str.  
Tel. +375 (17) 312 12 46  
Email: info@promwad.com Website: www.promwad.com