

SMART LNB



The Smart LNB opens the door for broadcasters to operate their own ecosystem of linear television and connected TV services directly by satellite. The Smart LNB is a new generation electronic feed connected to a satellite antenna with an embedded transmitter to provide Connected TV and M2M services. Target services include: payment transactions, subscription-based and on-demand services, home automation, HbbTV, pay-per-view, social networking, live show participation, subscription management, and audience measurement. The Smart LNB provides a narrowband return link, optimized for short transmissions with low duty cycle. It is also capable of routing IP data contained in DVB-S2 multiplexes for applications such as multiscreen viewing of IP video channels. It enables a wide range of Connected TV and M2M applications, providing a transparent bi-directional IP link compatible with existing applications, and ready to support advanced services provided by the satellite bouquet operators.

The Smart LNB is an enabler for non-linear TV services: it allows a satellite bouquet operator to leverage the enormous efforts and developments done in the Web applications and services, which today are accessible only to terrestrial and OTT operators, and to build its own interactive services based on a fully satellite infrastructure, available everywhere, and at low cost.

For the first time in satellite services history, the Smart LNB provides a cost-effective solution for interactive broadcasting and M2M services, scalable to tens of millions users, with simple, consumer-grade equipment. This target is reached thanks to the use of cutting edge technologies, such as bandwidth efficient protocols and high throughput satellites.

The Smart LNB is suitable for mass market installation with a target cost of a few dozen euros. It can be coupled with an external LNB for multi-satellite installations. For

existing installations, the Smart LNB can reuse existing coaxial cabling. The Smart LNB can be connected to the home IP network as well as to legacy STB's or satellite-enabled TV's, via a small splitter. Future interactive STB's or home gateways will be able to directly connect to the Smart LNB and fully exploit its benefits.

The Smart LNB, while being a low cost device, integrates state-of-the-art technology. It achieves high spectral efficiency in the return link thanks to the use of an advanced spread spectrum protocol and HTS satellites in Ka-band. The Smart LNB will also be available in a C-band version.

The Smart LNB is a result of a long development effort led by Eutelsat, supported by ESA and EU Commission. It is based on widely adopted standards such as IP, DVB-S2, ETSI S-MIM. Leading research institutions were involved in the design: ESA and DLR. Eutelsat will take appropriate steps so as to ensure a wide adoption of this technology. First prototypes were developed by Temix, Calearo, and MBI, and are currently available for demos. First product series are being developed by Paradox Engineering and Ayecka Communication Systems, and will be available in H1-2014.

Smart LNB Services Include:

- **Payment Transactions:** subscription to new offers, channels, etc.
- **Subscription-based and On-demand Services:** Push video-on-demand, pay-per-view, etc.
- **Interactive TV:** HbbTV, voting, betting, etc.
- **Multiscreen Viewing:** distribution of IP video channels in the local network
- **Security:** DRM rights clearance, exchange of encryption keys
- **Social:** Such as Twitter and Facebook, related to a TV programme
- **Customer Intelligence:** terminal telemetry and troubleshooting, user behaviour, audience measurement
- **Home Automation:** management of home appliances, lighting, temperature, locks, etc.
- **Data Gathering:** sensor networks, SCADA, etc.

