

Inaris Service Manager

TARA Systems



August 2007

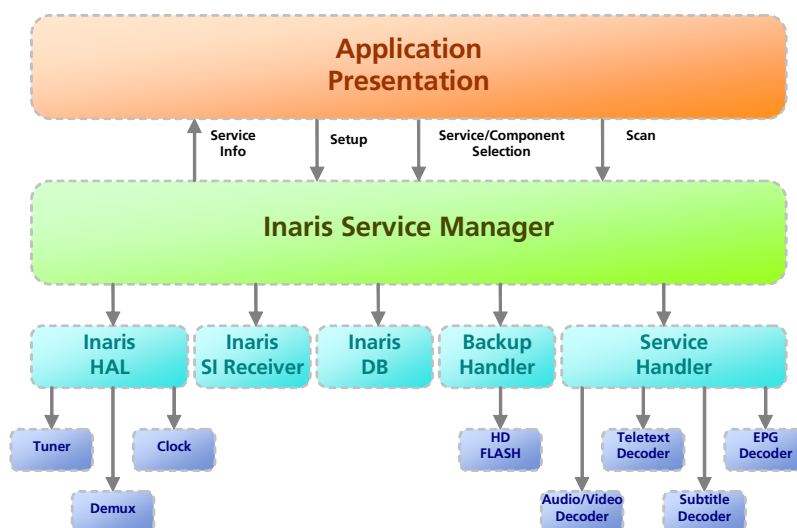
The Inaris Service Manager is the central component for DVB TV reception on embedded platforms. It manages scan, storage and selection of all available TV services, interacts with specific service components like EPG, Teletext or DVB Subtitling and can be flexibly extended according to the manufacturer's needs.

DVB TV reception is a very fundamental feature of TV sets, Set-Top Boxes and similar devices today, and because of the ongoing convergence of CE, PC, mobile and automotive world it is now also entering mobile devices and car entertainment systems. Nevertheless, the realization of DVB TV reception is not trivial, because various established and upcoming new specifications (e.g. Freeview, Entavio, Nordig) have to be understood and implemented. Moreover, because of its central role within the device, the DVB reception part interacts with many other software modules and e.g. hands over data to the EPG or Teletext decoder. Therefore, rather than implementing a patchwork of various DVB related modules, which is modified whenever required, a solid strategy and profound software structure is needed right from the beginning.

TARA Systems now offers its Inaris Service Manager and thereby provides a DVB reception solution to its customers, which is easy to integrate, but also very flexible to be adapted to customer-specific requirements. This development is based on TARA's existing modular components for EPG reception, data storage and management (Inaris DB), decoding of Teletext and DVB Subtitling, which are deployed in millions of CE devices, as well as on TARA's long-term experiences in the market. The Inaris Service Manager now combines and extends the existing software modules, thereby achieving the next step in TARA's strategy to establish a full DVB middleware stack.

In combination with its GUI development tool "Embedded Wizard" and its DiVi tools for customer-specific tests and verification of DVB receivers, TARA provides a complete tool chain that enables DVB TV reception in devices with minimum effort and maximum flexibility regarding further extensions. To guarantee an optimal usage of its components and tools, TARA Systems offers architectural workshops and consulting to its customers.

Currently, the Inaris Service Manager supports Single-tuner reception of Free-to-Air services via DVB-T, and is open for future extensions towards DVB-S/-C reception as well as third-party software for e.g. conditional access or MHEG-5 engines.



Inaris Service Manager - System Overview

„Excellence in Embedded CE Software“

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Technical Overview

The Service Manager uses the existing Inaris SI Receiver to extract all relevant DVB-SI/PSI data from received data streams. The service data is stored in the Inaris Database. All hardware and OS specific functions, like tuner control are handled via an Abstraction Layer (Inaris HAL) to guarantee a high portability of the Service Manager to different hardware platforms and operating systems.

The Service Manager handles all data available for DVB services. For playing a selected service and controlling Teletext and DVB Subtitling, specific service handlers can be registered with the Service Manager. With this clear software structure the Inaris Service Manager becomes a base component of an open DVB middleware architecture and helps to establish a solid and sustainable software design for a wide range of products.

Besides that, the Inaris Service Manager handles many of the 'bits and pieces' of DVB TV reception and hides the underlying complexity to facilitate the integration furthermore.

Service Scanning: The Inaris Service Manager enables scanning for DVB-T services using the assigned tuner. The found services are stored in the internal database (Inaris DB) and can be selected for viewing. Currently, Free-to-Air single tuner DVB-T is supported. DVB-S and DVB-C service scanning will be realized in the next step.

Service Lists: All services found during a service scan are stored in the all services list. In addition to this list user specific favourite lists are supported. Several operations can be applied on service lists, like moving, copying, deleting or editing. Additionally, groups of services can be defined and all operations can be applied on such service groups.

Service Selection: Within the list of all services or any favourite list a service can be

selected and started for playing. Different filters and sorting enable comfortable service navigation.

Service Component Selection: A DVB service consists of different components/streams, like audio/video, Teletext or DVB subtitling. The Service Manager automatically selects components based on setup parameters like default audio or subtitle language. The Service Manager provides all information about the available components and enables the selection of components, e.g. a specific language, from within the device application.

Service Monitoring: When playing a service all parameters are monitored by continuously extracting all relevant data from PAT/PMT/SDT tables. The registered service handlers are automatically informed about any changes of these parameters.

Setup Management: The Service Manager and the underlying Inaris Database enable comfortable storage and management of device settings and parameters, such as volume, user language and many more. Thereby, a unified data management infrastructure for all device related data is established. A back-up of the In-RAM database can be stored on persistent memory, e.g. hard-disk or flash.

Suited for a wide product range: Because of its platform independent implementation and its lean footprint, the Inaris Service Manager as well as the connected components for EPG, Teletext, DVB Subtitling, data storage and user interface are suited for a wide range of products, such as Set-Top Boxes, TV sets, mobile applications and car entertainment systems.

Contact & Information

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