SEAS

SEAS 9000
Modular IPTV / Streaming Solution

DESCRIPTION

SEAS9000 is a complete Streaming Solution offering an excellent TV experience for all types of marine vessels. The solution is modular, offering base features and a number of add-on functionalities, which makes projects more cost effecient.
The solution is easy to setup, configure and has very low maintenance.

Headend Streaming Unit

FEATURES

- Compact design

- Scalable IPTV Portal with start package for 1-25 televisions.

- Easy to customize with different receivers and output modules to choose from

- Multiscreen support for display on televisions as well as mobile devices

- TV/Radio channels can be streamed over Coax, IP and Wi-Fi networks

- Interactive features such as recording, pause, rewind options

- Video on demand (VOD), TV on demand (TVOD)

- Edit & broadcast messages, information and presentations over the network

- Intuitive interface for users and administrators

- Robust design to provide for reliable operation in marine conditions

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MODULAR IS EFFECTIVE

The headend unit has 12 module slots that can be equipped with any combination of available receivers and output modules, depending on application and requirement. A customized solution is often more cost effecient especially for smaller projects.
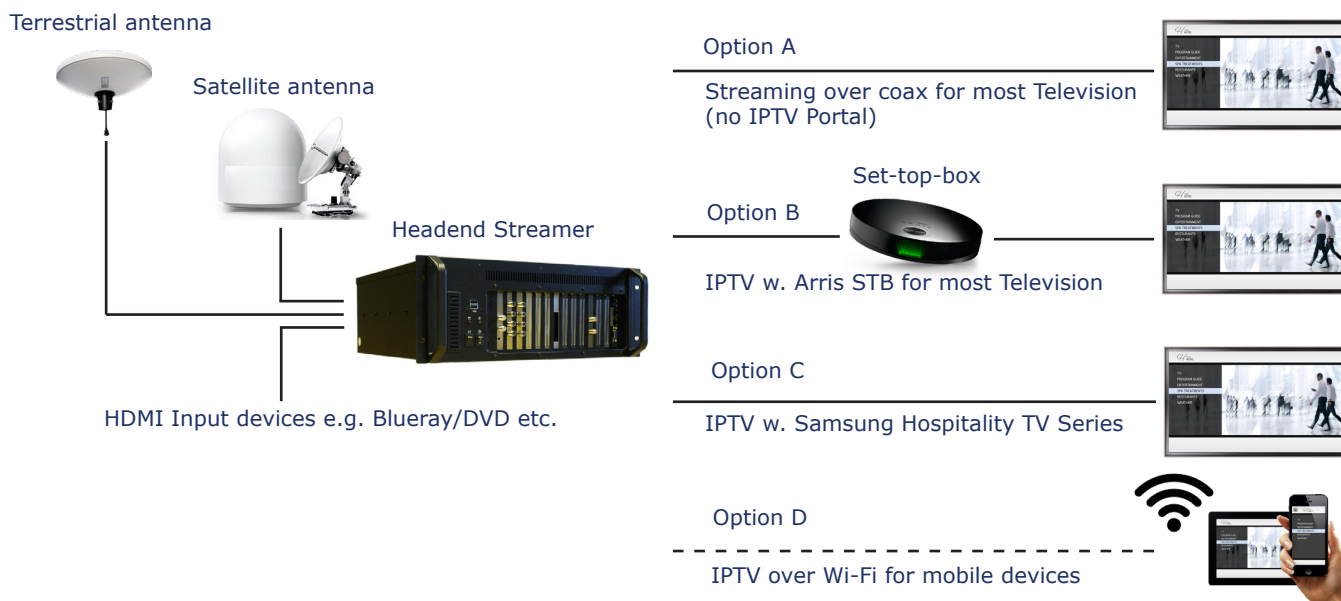
RETROFIT & NEW BUILD

The solution allows for streaming over both Coax, IP and Wi-Fi networks, making it relevant for both retrofit and new build projects. In retrofit projects, the existing network as well as televisions can often be re-used in order to keep costs down. If IPTV is required, the set-top-box is installed before the television in order to provide interactive features. However, the set-top-box is <u>not needed</u> if Samsungs smart hospitality television series is used.

FUTURE PROOF

The streamer is running on SEAS Gnu/Linux OS, which makes it the perfect choice for customers that need a flexible and robust system ready to meet future demands.

HARDWARE OVERVIEW FOR DIFFERENT REQUIREMENTS/OPTIONS

Terrestrial antenna

Satellite antenna

Headend Streamer

HDMI Input devices e.g. Blueray/DVD etc.

Option A

Streaming over coax for most Television (no IPTV Portal)

Set-top-box

Option B

IPTV w. Arris STB for most Television

Option C

IPTV w. Samsung Hospitality TV Series

Option D

IPTV over Wi-Fi for mobile devices

SYSTEM REQUIREMENTS

The headend unit must be installed in a rack dedicated for electrical/network equipment. The customer is responsible for the overall distribution network (Coax/IP/Wi-Fi), in which the streaming signal is delivered into, from the headend unit.

All specifications stated are subject to change without notice.

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TECHNICAL SPECIFICATION

Hardware	
Size	4U High (12 PCI slots)
Housing	19" rack-mountable chassi
Operating System	SEAS Gnu/Linux OS
Disk/Storage	Optional Harddrive, 2TB or 4TB (for VOD and TVOD services)
DVB interface	DVB-S QPSK inputs DVB-T OFDM inputs DVB-ASI inputs
Analog interface	Composite, S-video, Stereo audio
RF interface	RF TV
Descrambling	The system decodes multiple channels from different satellite inputs simultaneously by using a PRO CA module.
Ethernet interface	1x10/100/1000 Base-T port for outgoing data 1x10/100/1000 Base-T port for management
Stream output	Unicast/Multicast Multiple MPEG-2 "single program" transport streams
Input/output	Standard PC keyboard, mouse and VGA connectors
Admin/connectivity	Console, SSH, SNMP Web based interface
PAGA/Muting	External I/O module that captures up to five alarm triggers with different system responses.
General Specifications	
Input Voltage	100-240 VAC 50/60Hz.
Operating Temperature	0 to max. +40°C
EMC & Safety	
EMC	EN55024:2006-05, EN55032:2016, EN55022:2006, EN55024:1998 +A1:2001+A2:2003
CE/Safety	EN60950-1:2006

Modules

CPU Card	Build-in CPU card, 8Gb RAM + 16 Gb SSD High Performing CPU card with build-in transcoder function for Wi-Fi broad casting to mobile devices.
Satellite reciever	
Input	8 x DVB-S/S2
Frequency Range	950 - 2150 MHz
Multi reciever	
Input	4 x DVB-S/S2/T-/T2
Frequency Range	
S/S2	950 - 2150 MHz
T/T2	49 - 861 MHz
C/C2	51 - 858 MHz
HDMI modulator	
Input	1 x HDMI receiver 2 x HDMI receiver 4 x HDMI receiver
Video encoder	H264
Audio encoder	up to high profile 4.2 mpeg audio, 256 Kbps
Bitrate	1 - 16 Mbps
QAM out for COAX	
Capacity	
4-QAM	4 transponders
8-QAM	8 transponders
Modes	6.9 Msymbols, QAM 64, 128, 256
Output level	62 - 93 dBuV
Transcoder	
Capacity	8 live TV channels (Wi-FI)
Encoder format	H264, HLS

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TECHNICAL SPECIFICATION

Software Packages

IP/Wi-Fi
Enables broadcasting of content over IP and Wi-Fi networks. On wired IP network, the TV services are distributed as multicast.

TVPortal25, 25/50
Hospitality Suite Portal that provide users with modern interactive features such as recording, playback, pause, V-O-D, TV-O-D, etc.
Capacity: Up to 25 Televisions (IP) and 50 Wi-Fi connected devices.

Upto50, 50/100
Expand software for additional screens
Double total capacity to 50 Televisions (IP) and 100 Wi-Fi connected devices.

Upto100, 100/200
Expand software for additional screens
Brings total capacity up to 100 Televisions (IP) and 200 Wi-Fi connected devices.

TV-O-D
Enables users to easily record live TV channels. The recording is either programmed using the Channel program guide (requires EPG data) or in 1-hour slots (requires no EPG data).

V-O-D
Admin Software allowing movies to be copied* onto the build-in disk. Stored movies are accessed directly from the Hospitality Suite Portal and includes a feature picture and short description.

Infotainment
Software allowing the administrator to utilize common presentation software to make information and broadcast this to all or some users and groups. This also include pictures and embedded videos.

DESCRIPTION	PART NO
SEAS 9000 Streaming Headend, 12 PCI slots	9000
Satellite receivers, 8xDVB-S/S2	9110
Multi receivers, 4xDVB-S/S2/T/T2	9111
Dual CI module, 2xDecrambler CI Slots	9120
HDMI-1, 1xHDMI receivers	9130
HDMI-2, 2xHDMI receivers	9131
HDMI-4, 4xHDMI receivers	9132
Output module for coax (4 QAM out)	9140
Output module for coax (8 QAM out)	9141
Hard disk, 2TB	9150
Hard disk, 4TB	9151
Transcoder, 8 TV channels to mobile devices	9160
Muting/overide module	9170
IP/Wi-Fi software package	9010
TV Portal25, 25/50	9025
Upto50 expand software, 50/100	9050
Upto100 expand software, 100/200	9100
TVOD software package	9030
VOD software package*	9040
Infotainment software package	9050
Set-top-box	9210
Samsung ee690, 24"	9224
Samsung ee690, 28"	9228
Samsung ee690, 32"	9232
Samsung ee690, 40"	9240
Samsung ee690, 55"	9255

*) Do not use the SEAS VOD Server Function or any other application to copy materials you do not own or have the right to copy. If you are uncertain about your right to copy any material, you should contact your legal advisor.
Sea Systems Ab assumes no responsibility with regard to any content that is copied onto the SEAS9000 Streaming Solution.

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