

Telco/ISP IPTV/OTT SmartHome IoT/SmartCity Hospitality Digital Signage E-mobility Sharing

# **Product Catalogue** 2020

IPTV / Digital TV Headend / Streaming Platform / Middleware Set-top Boxes / Monitoring / Smart Apps



About ANTIK Technology	04
Partnership Programme	05
MaxIM Management System	06
Antik IPTV Management Server MaxIM	06
Antik Middleware 2.0 GUI	11
End-2-End OTT TV Delivery Platform	15
Antik Media Streamer	17
Encryption Solutions	20
Antik DVB CAS / Scrambling	20
Antik KeyRider Scrambling for Unicast/OTT	21
Monitoring	22
Antik Monitoring Room	22
Antik Stream Keeper	23 <b>24</b>
Server Schematics & Configurations Encoders / Transcoders / Modulators	24
Antik TR 6265 Transcoder	<b>20</b> 26
Antik GX 5000	28
Antik MX 5308 Receiver	30
Antik EN 8000 Encoder	32
Set-top boxes	34
Antik Nano 3	34
Antik Mini 3	36
Antik Eco 3C	38
SmartHome	39
SmartHome Mobile Application	40
SmartHome Elements	41
SmartCam	43
Antik IP Wi-Fi/LTE Camera System	43
SmartCam Mobile Application	45
End-2-End IoT/SMART City Platform	46
Antik SmarCity Network Infrastructure Gateways	47
Use Cases	49
SmartCity Elements	50
SmartCity Security	52
Antik Charging Station	53
E-mobilty	54
Antik SmartCity E-move	55
Antik SmartCity E-bicycle	56
Antik SmartCity E-scooter	57
Antik SmartCity E-scooter Light	58
Super SOCO E-motorbike TC	59 60
Super SOCO E-motorbike TS Super SOCO E-motorbike CU-X	61
B2B E-mobility	<b>62</b>
Super SOCO VT-100LD	63
End-2-End Bikesharing Software Platform	63
End-2-End X-sharing Software Platform	64
Notes	65
ANTIK Hospitality Suite	66
End-To-End IPTV for your property	67
ANTIK Hospitality IPTV Components	68
ANTIK Hotel App	70
ANTIK Digital Signage Solution	71
ANTIK Event navigation system	73
ANTIK Housekeeping and Facility Management	76
Guest Room Management System	78
ANTIK LED Panels	80
ANTIK Passenger Infotainment System	81
ANTIK Passenger Infotainment - BYOD	82
TV Scenarios	83
Schemes	84
IPTV DemoKIT 6.0	87
IPTV DemoKIT 6.0 order	89
Notes	90

## About

## About ANTIK Technology









ANTIK Technology develops End-to-End IPTV / OTT Solutions and Internet of Things platforms for operators, content providers, retailers, municipalities and governments. It is one of the few global companies with own hardware and software products for complete IPTV ecosystem from acquisition, transcoding, streaming, management, monitoring, protection to middleware and end-user devices. Our current position on global market benefits from more than 20 years of experience in the area of video processing.

ANTIK's IPTV products are supported by the team of more than 200 employees. Software development team and technical support are based in Slovak Republic (European Union) and Singapore, hardware development team in Czech Republic (EU), logistics and HW manufacturing in Shenzhen, China and customer support covering Asia, Middle East, Europe, Africa, North and South America from local offices.

Nowadays our reference clients are spread over the world, using our HD set-top boxes with free middleware and smart devices apps both in closed multicast networks and on public internet, streaming thousands of live or archived TV channels to endusers located elsewhere with low-cost Antik HLS Media Streaming Solution protected by KeyRider DRM. We deliver fully customized End-2-End hospitality IPTV to residential projects and hotels in most visited global touristic spots. Our own network of satellite acquisition centers in all important world regions equipped with Antik SAT2IP head-end receivers and HD Hi-Density transcoders together with our distribution network serve content providers worldwide to enable them to have the right linear channels in high picture quality on right place all for minimum running costs.





## Doing Business with Antik Technology

### Let's work together and deliver Hi-Tech globally

Here in Antik we believe only strong cooperation and common understanding together with top-level knowledge can create valuable results for everybody – vendors, distributors, end-customer as well as consumers. Therefore we develop and support partnerships with knowledge based, reputable companies with strong visibility on their target markets, regardless borders or segments. Here you can read how we can help to build and operate sales and support of Antik products.

### **Getting on board**

#### Get to know each other

We need to hear from you about your current position, your business goals, your target markets and what do you want to achieve using Antik products. We share with you our current operation infos as well as close future plans.

#### **Demokit**

Our top-class presentation product will serve you to explore all product features as well as to help your sales people to show what they offer directly on customer sites at later stage. We strongly encourage to use Antik Demokit everywhere you will find interested customer.

#### Visit Antik HQ

We strongly encourage your business and technical teams to tour our HQ in central Europe to see and better understand how we are different and how to best utilize Antik strengths in your market situation.

#### Distribution contract and business terms

After your evaluation we will be happy to see your ideas about the size of our future cooperation and we will share with you business conditions which will help you to create extremely competitive offers on your markets.

#### How we support you to sell Antik products

#### Marketing

Antik marketing team is ready to help you to organize Antik presence during trade-shows including costsharing on major events as well as provide customization of product brochures and catalogues.

#### **Trainings**

We regularly organize training for our partners to learn about the features of our products in details (business training) as well as technical training to provide first and second level support of Antik products in your own name. Trainings are provided both in-person in our HQs/branch-office and on-line.

#### Product Customisation

As we control all product development and manufacturing we can deliver products and software customized to your needs – starting from specific branding up to software change requests to provide features specific to your market needs.

#### **Documentation**

With our products you will receive detailed documentation to provide you with extra knowledge needed to achieve top-class presence in front of your customers.

#### Support

There is dedicated support team available on-line to help you during pre-sales and post-sales process – serving your sales guys during quote preparation as well as to help delivery phase with remote installation and configuration. We can even provide remote assistance in networking specific to multimedia delivery.

#### To start our cooperation contact us directly under info@antiktech.com

## About IPTV Management Server MaxIM

The power of Antik Technology for Telco, Hospitality and Signage!

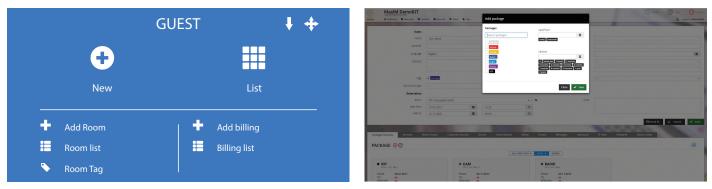


Antik Technology presents a professional cost-effective SW solution for a seamless management of your Antik set-top boxes and Mobile Applications network. MaxIM is the corner stone of Antik Middleware Server Family. You can easily define your channel packages, configure all or only selected customers' STBs, collaborate with other part of the Antik Server Family such as Antik Archive Servers, Antik Mosaic Servers and VoD servers. The MaxIM management server SW can be easily connected to your billing or to the customer care application, so that your users' set-top boxes will be automatically activated and monitored using the same software your employees are familiar with.

### **Key Features**

- Simple channel and channel packages management
- Full remote control of set-top boxes and remote restart features (even in public internet)
- Remote set-top box firmware update
- Electronic Programme Guide database management and seamless EPG content import
- Integrated with other components of Antik Server Family
- STB management and user database
- Viewer statistics (users, channels, time,...)
- SNMP Communication Support
- Instant messaging to STBs
- Digital Signage Promotions and Event Navigation Solution
- Integration and control of Mobile Application
- Hospitality features, welcome message, background image, language options etc. in the same platform

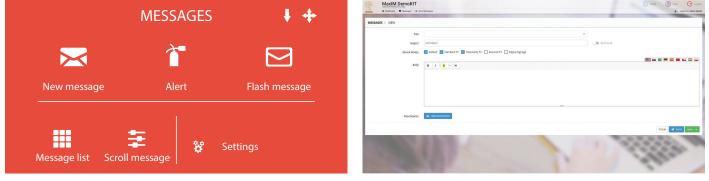
### User / Guest module



Assigned packages and channels to guest/users.

USER/GUEST Module brings an opportunity to manage data about guests/users and products, As well as services provided and activated to the guests/users. There is also a possibility to create groups of guests/ users according to different constants (e.g. in case of hotel, there can be an apartment, VIP room, non-smoking room, etc.).

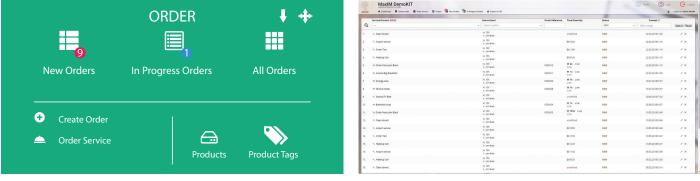
#### **Messages module**



New message configuration

The MaxIM allows the user to send a message to a specific STBox, or to a group of STBoxes. You can send three types of messages - normal (send to the message box in the GUI menu), flash (instant messages for a selected group of set-top boxes), scroll messages.

## **Order module**



#### List of orders

ORDER Module is providing opportunity to guest/users to order products and services and it also includes the tools for managing, creating and adding new products or services. The user of the MaxIM administration panel can add both food menu content and services content to make it available for the guests to order through ORDER module. Doing so, the MaxIM user should edit the GUI menu, i.e. add already created content.

## **TV** interface module



GUI menu item's tools.

TV INTERFACE Module provides full-scale content management system to adapt user interfaces based on your visual identity and insert all necessary TV features and information.

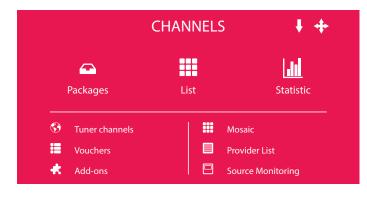
## **EPG** module



Multi EPG preview.

An electronic program guide (EPG) is an application to list current and scheduled programs that are or will be available on each channel and a short summary or commentary for each program. EPG Module of the MaxIM brings single EPG (EPG filtered by a specific channel), Multi EPG and monitoring of EPG.

## **Channels module**

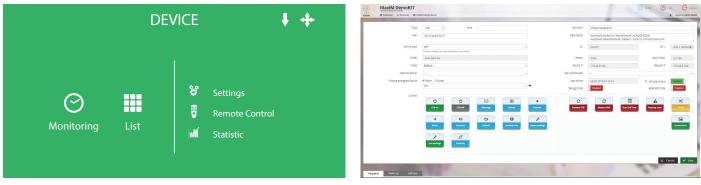


MaxIM DemoKIT	p A Coortee	kape 🕼 Channahi 🔠 Providans				(1) mole (1) Look	G o
Name Fi	anily				Color	0	
ib soring in	AMLY				Aout:		
1744	20				1	Advanced OHN X Cancel	✓ Sa
TV All available channels		TV Channels added to the Package	Q Deleter Al.	Radio     All available channels	+ Selem Al	Radio Channels added to the Package	
Name	۹	Name	۹	Name	٩	Name	۹
Ø List emptyt	,	Arth Content (Burry	0	Europa2	0	@List empty	
		Correct Day	0	und Rock Radio	0		
		Autor Today Centrest Broats Inter	0	Radio Paradise	0		
		Content Diper Jun	0	Content Rivertine	0	>	
		Outs Ty Control (Educate)	0	Content (Bins) and	0		
		TAS CONTENT DITE 1	0	Content (Enviro	0		
		Hotel Promo	0	Radio 7 Content (Brindler	0		
		FILE Film Europe content to the surger	0	Conce Radio	0		
		Rest and Fundor	0	Connect Without In	0		
		NHK World HD	0				
		Right Box content the former.nd	0			and the second sec	A
		Consent diccourses	0	Camera			
		Boomerang	ο.	All evaluable channels	+ Science	Camera Channels added to the Package	
	_			Name	9	Name	٩

Advanced options of channel settings.

CHANNELS Module involves the administration of TV channels, Radio channels, Cameras and TV packages. The user has the opportunity to sort them to the packages and assign specific packages to specific user/ guest.

### **Device module**



Device editor screen.

It gives an overview of the registered devices and provides the tools for administration of devices, their monitoring, remote control or the possibility to assign a new device to room or a guest and define a mode, in which a new device should operate.

### System module



Hospitality mode switch in System Settings.

SYSTEM Module is designed for the management of the system settings within the MaxIM administration panel, including global settings, user, application info, statistic, open API log, backup, and user roles.

#### **Hospitality features**

#### **Promotion module**

	PROMOTION	+ +	MaxIM DemoKIT	Deput Spraye	(i) Profile (ii) Loss Ce Logaria (iii) Loss Ce Logaria (iii) Loss Market Market
			Active Mode Name Date from	Autorem	Type @ Sarrage () @ Votes Pricety () () () () () () () () () () () () ()
÷			Horizonial image		versonen. EMPTY
New	List		Panels	Dist, Hilling	the end of the second sec
			-	₽ XIRONAMORT	in leger brideer fan Drei e

Promotion editor screen.

Promotion Module is designed for creating, editing and managing promotions such as event promotions, advertisements, campaigns, special offers, and others. Once created, promotions are then showcased on the digital signage panels, located in public areas in the hotels, companies, etc. It allows to add pictures and videos in most popular formats.

## Facility management module

FACIL	ITY MANAGEN	1ent 🖡 💠	Andrewski Room Detail - Tasks	×	A Logg	ed in: Attila Pósa
			FACILITY MANAGEM     Status Team User Name     Feb 22,2018     Maintenance Undefined Checkin Task	/ ×	E Teams 4	© Settings
			All Suites A	1×		0
		•.•		/×	iberMaid1 iberMaid2	0/3
		- <u>8</u>	tan Suited 🗰 =		iberMaid3 enance Person1	7/19
			⊙ New Task	ciose	enance Person2	
Room Plan	Tasks	Teams	mon %1 mos %1	Insper	2	
			Apartmans		ibermaid Manag ibermaid Inspect	
			lim Apart.1 ★		enance Manage	
				Attila	enance Inspecto Pósa	or
			1 Elos			

Display of assigned tasks to the room.

It provides with the housekeeping solution and you can manage and track cleaning progress in hotel rooms, assign various tasks and manage teams responsible for cleaning process. There are three main features, namely room plan, tasks, and teams which allow you to control the operation of facility management.

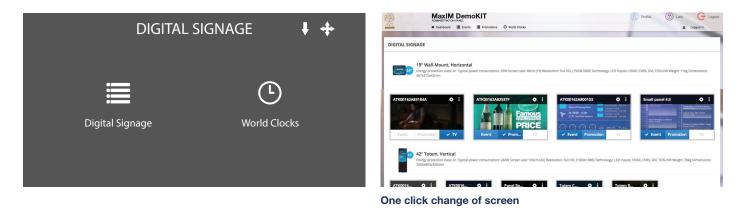
### **Events module**

EVE	NTS 🖡 🕂	EVENTS > EDIT	a 🖀 Event-Nooma 🔳 Deptal Sepage				(1) Profile (1) Look (2) Look	Cogood in Admin Maurie
		Tride Subtride Date from	How to successfully promote an event 27.02.2019	) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	Font size 1 Font size 2 Date to	Mini	11:00	* *
		Hifo panel		i 0000 O	info panel Navigation panel	27.02.2019	1400	0
Here     New   Events	<ul> <li>New Event Room</li> <li>Event Rooms</li> </ul>	Lago		n 196010 sealess and mar fil you i 1968.	Event Room	374455		~
		Description	III				Carce	cel Savr

Event editor screen.

It offers event management solution that helps you to streamline event planning and with this module, you can keep your event management up-to-date, create new events and event rooms, as well as access and edit planned events and event rooms.

## Digital signage module



DIGITAL SIGNAGE Module is where you find the tools to manage digital signage devices and its metadata. Built-in tools provide an opportunity to set up mode, screen, screen rotation, background, event calendar, navigation to the event rooms, assign promotions, and view or edit the default world clocks.

## Antik Middleware 2.0 GUI



Basic menu

Very fast, clear and easy to navigate.



Archive by genres (Catch-Up TV)

World unique way to access catch-up TV content. All programs are automatically sorted in "VOD style" UI for easy access.



#### **Channel Filtering**

Find the channel of your requirement easier. Now you can filter the channel according to the language, genres, favourites or you can search by a keyword.



#### Cameras

Linear streams from camera sources can be placed in separate category. Support of ONVIF Camera Control Protocol inside GUI.



Archive by channels

Archive is sorted by channels according to the time it was broadcasting.



#### VoD

Complete VOD GUI supported by Antik VOD Server Solution. Choose a movie from the database or search some new in your favorite category. Watch trailers, movie description or rank the movie.



#### Mosaic

Mosaic UI gives end-user chance to watch dozens of channels at once and decide for the favorite one. Delivered by Antik Mosaic generator - low-cost mosaic encoder engine.



#### **PVR**

Choose program from EPG and record it on HDD or USB in set-top box. Make your own video library and watch your favourite movie whenever you want.



#### YouTube

Easy to navigate, adapted to Tv screen. Full access to YouTube movie content.



#### Weather

Access to predefined cities weather forecast up to 7 days.



My channels

As soon as you will install chosen plugin, it is automatically added to the list of your own channels. You can find them in the main menu, Channels-My channels.



#### Media Player

Connect STB with PC or USB key and create multimedia center based on DLNA technology. Watch photos, listen to music and watch videos.

## Antik Middleware 2.0



#### SmartHome

Managing your household has never been easier. SmartHome menu offers you to change the temperature in the room, turn on the light, or let you know in case of unwanted visit.



In-menu promotion

Learn about the news we offer by going through menu. If something interests you, order it by one click.

## **Pre-roll advertising**

With Antik ads you can reach potential customers and have them take action before they watch or search for archived channel. It is managed with Digital Video Ad Serving Template (VAST), that is script that gives video players information about which ad to play, how the ad should show up, how long it should last and whether users are able to skip it.







Package order

Now you don't have to go to branch or to call centre if you decide to add a new channel package, you can do it easily from your set-top box.



Product Shop

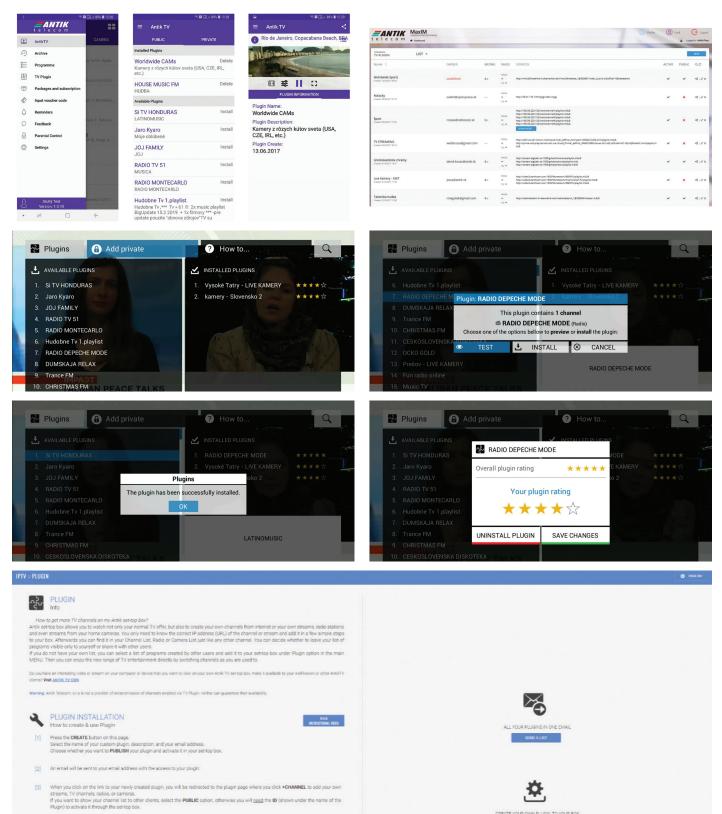
With the menu in set-top box you can comfortably get information, review or buy anything you need, e. g. Smart Home, IT devices, accessories or vouchers etc.

## **TV** Plugin

## BYOC CONCEPT INSIDE STB

Antik set-top box allows you to watch not only your normal TV offer, but also to create your own channels from internet or your own streams, radio stations and even streams from your home cameras. You only need to know the correct IP address (URL) of the channel or stream and add it in a few simple steps to your box. Afterwards you can find it in your Channel List, Radio or Camera List just like any other channel. You can decide whether to leave your list of programs visible only to yourself or share it with other users.

If you do not have your own list, you can select a list of programs created by other users and add it to your set-top box under Plugin option in the main MENU. Then you can enjoy the new range of TV entertainment directly by switching channels as you are used to.



## End-2-End OTT TV Delivery platform

## **OTT Streaming - Management - Encryption - VOD - Archive and more!**





Antik brings to your TV operations full mobile Tv solution for your clients smart phones, tablets, TVs and more. Fully integrated to MaxIM Management system it enables unlimited entertainment including linear TV with EPG, catch-up TV, VOD, all secured with 128 bit encryption. Unique Antik TV Plugins add-on gives end-users chance to enhance its channel line-up with its own or internet located linear content. State-of-art live snapshots apps design in channel list is available for iOS phones and tablets, Android phones, tablets, boxes and TVs as well as Windows C, tablets and Apple TV boxes, not to forget Antik Linux set-tops. We provide full service with registration and updates to major application stores. Typical setup includes MaxIM Management System, Antik HEVC transcoders, Antik Live Streamers, Antik Archive and VOD systems.

## Antik TV app

- Antik linear TV
- Catch-up TV
- VOD
- Electronic Programme Guide
- In-app purchase
- TV Plugin: Self-Service end-user channels add-on

#### **Requirments:**

Antik TV for smartphones

Android 5 or iOS 9 (smartphone or tablet)

#### Antik TV for set-top boxes and TV

Android Box:

Android 5 and higher 2GB RAM H.264 ++AAC support LAN, WLAN Android TV: Android 5 and higher

# Apple TV Box:

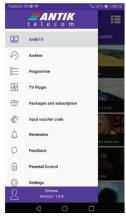
iOS 10 and higher ATV4

App Store

Android









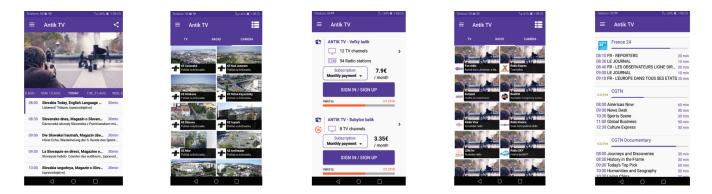








## End-2-End OTT TV Delivery platform



## Android TV:







## Apple TV:



## Antik Media Streamer

## End-to-End TV Everywhere delivery system.

Antik Media Streamer provides you with end-to-end way to create, deliver secure and manage your local or global content delivery network. It uses robust HTTP Live Streaming (HLS) protocol to reach your customers even in areas with limited quality of public internet.

Thanks to the years of Antik Media Streamer development you can benefit from modules covering all the areas of live streaming, VOD, state-of-art catch-up TV (archive of linear TV) over public internet as well as timezone shifting together with durable fully adjustable replication and mirroring modules combined with stream protection.

Antik Media streamer can be successfully used inside of managed networks of telco operators to provide their customers with interactive OTT content (VOD, catchup TV) as well as for global OTT content providers who can benefit from the robustness of Antik live streaming with mirroring and replication technology to achieve 24/7 access of huge number of users distributed around the world.



#### Free trial on www.antiktech.com

- Antik linear TV
- Catch-up TV
- VOD
- Electronic Programme Guide
- Customer Zone
- In-app purchase
- TV Plugin: Self-Service enduser channels add-on

AN techno	TIK Stream	1.00			TIK CDN 1 BRANCH: testing	, BUILD:	2012-10-09 (	09:12:59			REFR	ESH IN: 2, CONN	ECTION OK	Logout
<ul> <li>Primary</li> </ul>	y stream for cha y stream for cha orized stream fr	nnel 2 Cacao T	is OFFLINE	(Module: Ir	igest)	nel 2 "N	ational Geo	graphic" (Modul	e: Ingest)					
Manageme	ent & System mo	nitoring												
	TPROCESS 2: 4d 21h		ERVER NING		PHP FAST-CGI RUNNING			INT AUTH		Tem Monitor Running		GURATION 10-18 21:06:45	LICENSE OK, <u>DETAIL</u>	
CPU	LOAD	IOWAIT	STORA	GE	RX		ТХ	AUTHORIZED S	ESSIONS	RAID	INTERFACES		DATETIME	UPTIME
2%	0.75	0%		97 GB 8 TB	20Mbit/s	1	OMbit/s	0		ОК	bond0	Wed Oct	24 13:58:54 CEST 2012	26d 23h
Ingest	F	2X Total: 14.56 I	Abit/s St	ream repli	cation	_							RX Total: 2.	.03 Mbit/s
_	UDP/RTP IP autho			STATUS	RX	NAME	DESTINAT	TIONS					LAST START, U	
	Show setti	ngs	1	RUNNING	2.03 Mbit/s	Planko	10.254.9.1	0:9191					2012-10-19 16:06:4	15 (4d 21h)
RUNNING	1 Planko													
0.00 bit/s	rtp://@232.23			ve streami									RX Total: 12.	
	http://aaa:bbb authorization enat			STATUS RUNNING	RX 2.01 Mbit/s		Planko	PLAYLIST S	EGMENT DUI 10/5	R/CNT			LAST START, U 2012-10-19 16:06:4	
RUNNING		neu. <u>Jilow seum</u>	2	RUNNING		0	acao TV	OK	10/5				2012-10-19 16:06:4	
0.00 bit/s	rtp://@232.1	222 64 2-5004	3	RUNNING	Contract of the second second second		acao TV sature TV	OK	10/5				2012-10-19 16:06:4	
	http://aaa:bl			RUNNING			cifology	OK	10/5				2012-10-19 16:06:4	
RUNNING	3 Feature TV	-	5	RUNNING			Karaoke	OK	10/5				2012-10-19 16:06:4	
1.76 Mbit/s	http://aaa:bbb	@10.254.9.202:2	001 6	RUNNING	1.81 Mbit/s		/ Mickey	OK	10/5				2012-10-19 16:06:4	
2.12 Mbit/s	http://aaa:bbb	@10.254.9.202:2	002 7	RUNNING	1.81 Mbit/s		Film+	OK	10/5				2012-10-19 16:06:4	18 (4d 21h)
RUNNING	8 Sclfology													
1.77 Mbit/s	http://aaa:bbb	@10.254.9.202:2	001	mezone sh	hifting							Storage used: 1	75.88 MB RX Total: 2.	.05 Mbit/s
RUNNING	5 Karaoke			de: hdd										
1.77 Mbit/s	http://aaa:bbb	@10.254.9.202:2	001 ID	STATUS	RX	NAME	PLAYLISTS			NT DUR/CNT			LAST START, U	
RUNNING	6 TV Mickey		1	RUNNING	2.05 Mbit/s	Planko	00:10 OK	175.88 MB	1	0/5			2012-10-19 16:06:4	18 (4d 21h)
1.77 Mbit/s	http://aaa:bbb	@10.254.9.202:2	001 A	chive reco	rding	_		Stora	used: 178	.69 GB Total rec	ording time: 2m 24d	Remaining time	: 1m 24d RX Total: 2.	01 Mbit/s
RUNNING	7 Film+		ID	STATUS	RX	NAME	PAUSES	STORAGE USED			-		LAST START,U	
1.77 Mbit/s	http://aaa:bbb	@10.254.9.202:2		RUNNING		1. Income of the second		178.69 GB	10 / 2		0 (0sec) Integr		2012-10-19 16:06:4	
			A	chive mirr	oring								Storage used: 4	79.22 GB
			ID	STATUS	NAME	S		VER LA	ST SUCCES	SFUL SYNC	STORAGE US	ED	LAST START, UPTIME	
			4	RUNNING			10.254.9.15		OK (-59		479.22 GB		12-10-19 16:06:44 (-4d	

## **Live Streaming**

- Powerful scalable HTTP Live Streaming Solution for global live content delivery. Ideal for low-speed and unstable access network conditions
  and OTT distribution thanks to state-of-art segment streaming feature.
- Allows unicast streaming using HLS protocol.
- Allows to stream up to 2Gbps of traffic per individual server (based on your server hw e.g. when using 1mbps stream system can serve up to 1000 users simultaneously, increase of streaming capacity is possible).
- Allows to pre-buffer the content into client device memory.
- Fast-zapping support- using burst data transfer which can pre-fill buffer rapidly to decrease zapping time.
- Full recovery of the stream in case of network drop-out (up to 30s) non-visible for the viewer.
- Includes segmenter which push segments into RAM to increase system performance.
- Allows to setup length and number of segments stored in playlist of the server.

3	RUNNING	1.65 Mbit/s	TV MUSIC	OK	10/5	2012-10-16 12:46:01 (43min)
8	RUNNING	1.65 Mbit/s	Cacao	OK	10/5	2012-10-16 12:46:01 (43min)
5	RUNNING	1.65 Mbit/s	Children TV	OK	10/5	2012-10-16 12:46.01 (43min)

## Catch-Up TV Modul (TV Archive)

Ar	chive record	ing				Storage used. 18.9	0 GB Total recording time. 2r	n 26d Remaining li	me. 2m 2d RX Total. 1.87 Mbit/s
ID	STATU S	RX	NAME	PAUSES	STORAGE USED	DAYS ARCHIVED	TODAY INTEGRITY	INTEGRITY	LAST START, UPTIME
1	RUNNING	1.97 Mbit/s	Planko		18.90 GB	2 / 20	GAPS: 20 (35min 13sec)	Integrity	2012-10-16 12:46:55 (43min)

- · Records all content of the specific stream and allows access to it using EPG information
- Includes segmenter which creates 10s files- directly enables to use HLS protocol for content delivery
- High availability even currently played program can be accessed (less than 2 minutes from original playback time)
- Uses HLS protocol for streaming, so all the features described in Live Streaming can be utilized
- Allows to define time breaks in broadcasting to save space during black screen period
- Large scale archiving (depends on storage capacity)
- Intelligent erasing mode identify oldest records and deletes them to free-up diskspace for new recordings
- Integrity analyser detects content drop-outs and enables them to other CDN components

# DATE	TIMELINE	STORAGE USED	GAPS	GENERATED AT
1 2012-10-16 Tuesday	0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23	11 39 GB	1: 00:00 27 -00:00:50 : 23sec 2: 00:02 42 :00:03:00 : 24sec 3: 00:04 45 :00:05:30 : 42sec 4: 00:19:37 :00:20:00 : 23sec 6: 00:22:10 :00:22:18 : 23sec 6: 00:22:02 : 00:22:28 : 23sec 7: 00:23:46 : 00:23:56 : 20sec 9: 09:18:31 : 09:19:10 : 38sec 10: 09:25:24 : 60sec 11: 09:27:26 : 09:57:16 : 46sec 13: 10:13:25 : 10:14:54 : 1min 25sec 13: 10:13:25 : 10:14:54 : 1min 25sec 13: 10:13:25 : 10:14:54 : 1min 25sec 10:05:25:24 : 10:25:56 : 00:14:54 : 10:12:25 : 10:14:55 : 10:152:55 : 10:14:54 : 10:12:25 : 10:152:55 : 10:155:55 : 10:155 : 10:155:55 : 1	2012-10-16 13:30:2

## **Archive Snapshots Module**

- · Creates snapshots for each video segment which was recorded by Catch-up TV module
- Allows comfortable end-user seeking in archived TV content
- Recorded pictures can be easily used for other Streamer modules
- Different snapshots profiles- profile name, picture size, resize method (LetterBox, Pan&Scan, Fill-in), background color (for LetterBox resize method), picture format
- (gif, bmp, jpeg), picture quality, jpeg compression quality, brighten effect



## **Archive Mirroring Module**

- Archive mirroring from other CDN server to overcome content distribution problems on large distances or variable quality networks when continuous live stream is unavailable
- It can be effectively used to achieve high scalability using mirroring together with Load Balancer Module

## **Streamer and Storage**

It is a module of the Antik Media Streamer which secures placement of the video content and provides it to the client's devices. The content must be prepared in form of a media package, which is an output of the VOD Encoder product. The VOD streamer provides the content through the HLS protocol, which enables a fluent and stable streaming also in slower networks. Thanks to the buffering it is capable of overcoming a short network downtimes without having the client side noticing it. Thanks to a real time streaming, it's not necessary to wait for the download of the whole movie to the client's device. The storage cooperates with the Load Balancer, and thus allows a scaling of the content into multiple servers while increasing the capacity and the load balancing. At the same time, the Load balancer is authenticating client and allowing an access to a secured content. As this module is an application of the Antik Media Streamer, there are all the monitoring functions and tools of this application available.

## Antik Media Streamer

## Video-On-Demand

This is an End-2-End system for a movie content preparation (encoding), storage, balancing the load, streaming and protection. Our robust segment streaming and buffering SW enables you to deliver content even in a lower quality Internet networks. The replication SW enables you to hold the VOD data load under control around-the-clock and ensure a non-stop operation even in the unlucky situation of partial server hosting drop-out. The VOD is the easiest way of watching movies online. The user is able to watch a movie just by a few clicks on his/her remote control. This video content will start immediately, the user doesn't need to wait on the full movie download as it is instantly streamed to the end-devices.

- Searching by the title, year, actor, genre, news and others
- Rate the movies or choose the movie with the highest rating amongst your network
- Filter by date, name, rating
- Virtual keyboard controlled by remote control or IPTV Multimedia keyboard
- Read movie description and watch movie trailer
- In more detailed view of movie description are also displaying similar movies
- Billing system connector

## **GUI and Management**

It is a web based Middleware, which secures the management of the VOD content and presents the user interface for an access to the VOD from the client's device (set-top box). It's able to scale the application on a large numbers of devices. It contains the billing connector module, which enables a secure invoicing for the seen content. It also cooperates with the Load Balancer to enable an immediate playing of a video content straight after a movie has been purchased meanwhile, it reserves the VoD storage capacity.

## **VOD Encoder**

This device encodes the VoD content into the HLS format, so that it can be stored on the CDN servers. It also supports an automated transcoding thanks to a transcoding queue. It offers many supported video formats like .avi, .mp4, .mpg, .and, DVD ISO images and lots of others. The VoD Encoder is easily controlled through the web interface which allows upload of big files into the queue. The Multi user support allows the sharing of the transcoding service. Multiple audio tracks are also supported as well as the DVB subtitles used in the DVD discs.

## **Time-Zone Shifting Modul**

Tin	nezone shift	ing		a la contra da la co			Storage used: 174.10 MB RX Total: 2.05 Mbit/s
ID	STATUS	RX	NAME	PLAYLISTS	STORAGE USED	SEGMENT DUR/CNT	LAST START, UPTIME
1	RUNNING	2.05 Mbit/s	Planko	00:10 OK	174.10 MB	10/5	2012-10-16 12:46:02 (43min)

- Shifts the playback time of live stream
- Modul is targeted to be used in case of streaming to global time zone different than the timezone of content origin
- More shifted streams from one source Allows multiple time off-sets of the same content (TV channel) using the same data to save storage
- Support long playback time off-sets (storage size is the only limit)
- Uses HLS protocol for streaming, so all the features described in Live Streaming can be utilized

## Antik TV Stream Cache

The global TV streams delivery is now even more stable and reliable with the Antik StreamCache System. It secures a good quality linear, timeshifted or archive TV distribution around the world at reasonable costs even to areas with expensive backbone connections.

- Automatically routes stream request to the appropriate
  - cache server based on:

.

.

- Servers utilisation
- Rules
- Routing tables
- Cache servers ingests only streams which are used by at least one end-user device which leads to significant bandwidth savings on channels entered into streamer nearest cache server selection based on IP address group rules (e.g. geography, provider IP block)
- Alternative cache server prioritization based on routing tables enables to create robust redundant content delivery networks
- Multiplatform STBs, mobiles, tablets, PCs as end devices

#### 

## Load Balancer

The managing CDN server cluster, checking in periodical intervals and their status, and forwarding clients to each server depending on required service. In case of a failure of a CDN server, the Load Balancer will redirect end customers to a working CDN server. It allows an authentication of the end customer devices and manages the access to the content and services. It contains statistical functions for the analysis utilization rate and the recording data about the watched content for the billing purposes and for the audience measurement. It also contains the monitoring interface for the CDN server cluster surveillance.



## Antik DVB / IP CAS / Scrambling

## Multicast and Cable TV (DVB-C/T/T2) Scrambling System

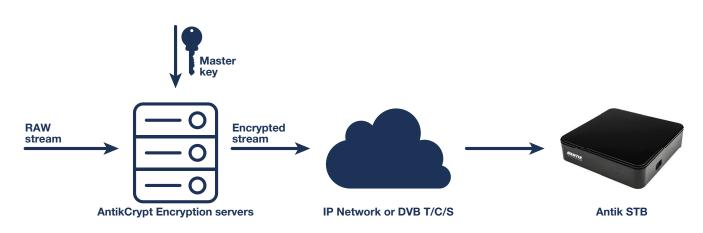
ANTIKCrypt stream encryption system provides an efficient and secure way of protecting streams, including IP, DVBT/C/S. It can be quickly and easily deployed in existing headend infrastructure. Single Encryption can be utilised in both coax and IP networks.

Encryption engine is based on robust Antik Media Streamer platform as its module and it can be easily installed on any virtual or bare metal server, lowering the initial cost.

Encryption is based on a 2-level model, with combination of CAS encryption with fast key rotation, which is further secured with AES256 encrypted master key. ANTIKCrypt player is already embedded ANTIK set-top box FW which provides fast and easy deployment, with minimal configuration.

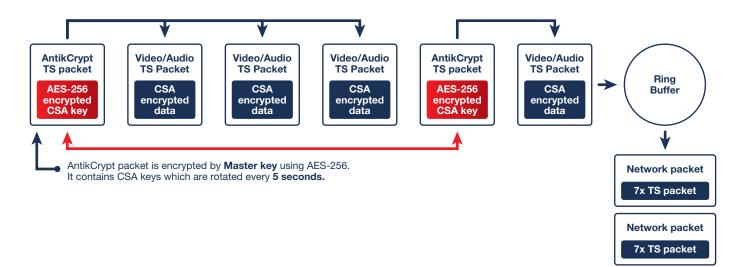
**Key Features** 

- Advanced 2-level encryption based on CSA + AES256 with fast key rotation
- Fast and easy deployment using commodity virtual or bare metal servers
- Suitable for IP, DVB T/C/S
- Player already included in standard ANTIK set-top box firmware



## **Encryption scheme**

Scheme shows 2-level encryption. CSA keys are rotated and transmitted in special TS packets encrypted with AES256 master key.



## Antik KeyRider Scrambling for Unicast/OTT

### Protection management for your content monetization

Protect your system against unauthorised viewing and dangerous server overflow. Uses strong AES 128 encryption required by content owners.

The Key Server defines keys and assigns them to specific channels. The Key server continuously generates a new version of keys in defined intervals (for each key the interval can be defined independently) - the key rotation. The Media Streamer periodically downloads new versions of keys and enciphers the channels which it finds in the keyserver definitions using a strong AES-128 algorithm. There is a mediaplayer decypher in playlist KeyID for each video segment included. The player asks the KeyServer for the exact key using the http XML request which is protected by an even stronger AES-256 algorithm. The KeyServer either does or does not answer with a key based on the client database. To communicate with the KeyServer each client has been assigned a unique cypher key. In case of compromising the unique end-user device, it is possible to block this device separately, without endangering the whole system. To allow operating with the archive (catch-up TV) the keys are stored on the KeyServer up to one year.

### System components

- Antik Media Streamer
- Key Server
  - CPE devices:
    - STBs
       Smar
      - Smartphones (iOS, Android, Win8) Tablets
    - Tal
       PC
- Customer database

## **Key Features**

- Multiplatform solution STB, Android, Win8 and iOS
- Designed for TV Everywhere (OTT) environment
- Using above industry standard AES-128 algorithm -128bit long key!
- Protects live streaming, catchup (archive), VOD and PVR
- Easy to install and operate on standard HW equipment
- AES 256 used for data exchange between servers and devices

technology VERSION:, BRA	NCH: , BUILD	t						Logo
Monitoring								
ETH: primary (eth0) RAM	CPU	LOAD	REDIS	RAM USAGE FIREWALL DATETIME, UPT	ME			
TX 0Mb /500Mb 193.97 ME RX 0Mb /500Mb /3.87 GB	B 0%	0.00 /4 cores	35.	.99MB ENABLED Sun Mar 17 08:42:10 0 Show rules 16d 6h	CET 2013			
Encryption keys	Refresh							
Accounts	Search by	Key ID						
Channels				Submit				
Client requests				Submit				
All requests	Active key							
Error requests	Active Key	ID	RENEW	ACTIVE VERSION	LATEST VERSION		OLDEST VERSION	VERSIONS
Known clients				Version 1363506100	Version 1363506100	Version	1361444344	
CDN requests	Detail	STV1	1min	Generated         2013-03-17 08:41:40 (-34sec)           Value         386363a8f0d5ff06d4f572599e3363ee	Generated         2013-03-17 08:41:40 (-34sec)           Value         386363a8f0d5ff06d4f572599e3363ee	Generate Value	d 2013-02-21 11:59:04 (-23d 20h) 85d5e87996142c83c0b9bee4a4ef9140	30866
Known CDN servers				Version 1363506100	Version 1363506100	Version	1361444344	
All requests	Detail	MARKIZA	1min	Generated 2013-03-17 08:41:40 (-34sec) Value 4d6503b31877862fd6431e40b4b4190	Generated 2013-03-17 08:41:40 (-34sec) 8 Value 4d6503b31877862fd6431e40b4b41908		d 2013-02-21 11:59:04 (-23d 20h) 98a87c756607b8e6f18dbbc8dab05a89	30864
Logs				Version 1363506100	Version 1363506100	Version	1361444344	1
Main process	Detail	STV2	1min	Generated 2013-03-17 08:41:40 (-34sec) Value 1ce82e4c904aab9754be9f05b7c841ff	Generated 2013-03-17 08:41:40 (-34sec) Value 1ce82e4c904aab9754be9f05b7c841ff		d 2013-02-21 11:59:04 (-23d 20h) 169278c5b8ec0dcd64bddbdb7e1a66bf	30861
Client import				Version 1363506100	Version 1363506100	Version	1361444344	
Channel import	Detail	DOMA	1min	Generated 2013-03-17 08:41:40 (-34sec) Value 5b25e6e2b79d12c5b0d7eef877f57591	Generated 2013-03-17 08:41:40 (-34sec)		d 2013-02-21 11:59:04 (-23d 20h)	30858
Errors				Value 5b25e6e2b79d12c5b0d7eef877f57591 Version 1363506100	Value 5b25e6e2b79d12c5b0d7eef877f57591 Version 1363506100	Value	fc390413c57fe2e6a2ba25ecf69e4255	1
Test utils	Detail	JOJ	1min	Generated 2013-03-17 08:41:40 (-34sec) Value c0afad39c9fd976f46b336f19e890f00	Generated 2013-03-17 08:41:40 (-34sec) Value c0afad39c9fd976f46b336f19e890f00		d 2013-02-21 11:59:04 (-23d 20h) 9f10dedb3bd8d92a7606f6b97ddac0d2	30856
	Detall	JOJPLUS	1min	Version         1363506100           Generated         2013-03-17         08:41:40         (-34sec)           Value         a6747bfc1696cbbff2ed7e3d4d0e13e9	Version         1363506100           Generated         2013-03-17         08:41:40         (-34sec)           Value         a6747bfc1696cbbff2ed7e3d4d0e13e9	Version Generate Value	1361444344 d 2013-02-21 11:59:04 (-23d 20h) 7a8dd99d615a2c638e5972761b74b424	30855
	Inactive ke	ys						
		ID	RENEW		OLDEST VERSION	VERSIONS	5	
	Detail	TEST	1min	Version         1361374775           Generated         2013-02-20 16:39:35 (-24d 16h)           Value         723f2547d34ff7d45a47ec016d11e34a	Version         1361284328           Generated         2013-02-19         15:32:08         (-25d 17h)           Value         92d941a7b5bd5c933236c6f4cd196dfd	1468		
				Version 1361374775	Version 1359374149			

## Antik Monitoring Room - New Version 5.0

### Software based and cost-effective and high-performance tool for IPTV monitoring

The Antik Monitoring Room is a software based and a cost-effective but high performance IPTV monitoring tool, which displays 1 or more streams on submonitors and controls their quality. Every error is displayed immediately in the Log file, where the admin can see when an incident started, ended, in which input it has occurred and its description (audio, video, blackout, etc.).

## **Brief introduction**

- Software based and cost-effective but high-performance IPTV monitoring tool
- Supports a powerful mosaic overview for multiple services
- Supports various alarm detection to ensure QoE and QoS
- Provides a scalable pricing policy for an easy entry and extension
- UDP, RTSP protocols in format TS, RTSP, RTMP, HTTP streaming, HLS
- SNMP support

The Bluetop MultiViewer is suitable for various types of streaming media IP protocol. It can monitor audio and video alarms, display monitoring results on monitoring wall, which can provide the most effective broadcasting quality guarantee for IPTV/OTT. It supports most of the audio and video coding formats. The Buletop MultiViewer has flexible and convenient layout and configuration function, more suitable for all kinds of application scenes, and it is using GPU decoding technology, greatly improve the decoding efficiency.

## **Key Features**

- Dual output resolution up to 1920 x 1080
- Video decoding: MPEG-1, MPEG-2, MPEG-4, H.264, H.265, AVS/AVS+
- Audio decoding: MPEG1, MPEG2, MPEG2 AAC, MPEG4 AAC, MPEG4 HE-AAC, AC-3, Dolby 5.1, DRA
- IP source: UDP, RTSP, RTMP, HTTP, HLS
- Resolution: SD, HD
- Detections: Freeze frame , black , color bar , audio loss, video loss, loudness
- Alarm: 1 OSD(on-screen visual alarm )2 Alert tone 3 Database records 4 SNMP traps
- Log: <u>1</u> Alarm log storage <u>2</u> Query by time/ program name /error type
- Round-robin;
- Audio waveform spectrum;
- Layout too:
  - Provide templates for quick launch
  - Customization template with which customer could draw rectangles flexibly
  - Support both analogue and digital clock
  - Support GIF picture and customized text
  - Support main TV wall and secondary TV wall
  - Encode: Support single program encode output and full screen encoding
    - (Video: 352\*288, 720\*576, 1280\*720, 1920\*1080 Audio: AAC MP3)

## **Other Features**

- Web based control
- Layout tool provide templates for quick launch, also customization template with which customer could draw rectangles flexibly
- Support both Analog and digital Clock
- Support GIF picture and customized TEXT
- Support main TV wall and secondary TV wall
- Support round-robin
- Multiple rotating mosaic screens



## Monitoring



## Antik Stream Keeper

Multicast Parallel testing for maximum speed. With default settings, StreamGuard can test 10 channels simultaneously in 3 seconds. That means 200 channels in one minute. Specified number of retries while channel is marked as offline/warning can minimize small network-related problems. Self-monitored Ajax Web-based client application allows to remotely monitor one StreamGuard probe from many locations, or monitor more StreamGuard probes in one or more locations. Web application contain indicators of browser-server connection and server process status. Channel status history tracks all status changes for downtime analysis. Sound alarm to indicate any stream downtime. Automatic channel import/synchronization from your channel database using standard XML format.

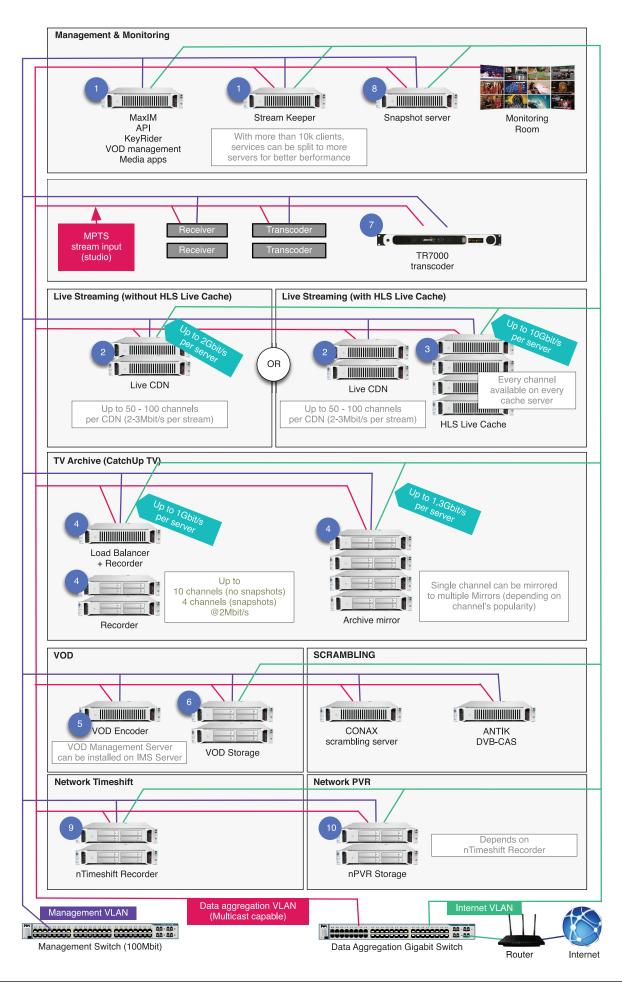
## Antik Stream Keeper

Ajax Web Application User Interface

Quick over	erview	Probe server title	Server	daemon pro	ocess indicator	Browser-server connection indicat	tor
						/	
AI	TIK Stream	Keeper Antik C	ore	SERVER WORK	NG (load: 2.01)	REFRE SH TIMER: 2, CONNECTION OK	
	STATUS - OVERVIE	W			HISTORY (200)		
OFFLINE	WARNING UNTESTED	ONLINE ALL	CONTRACTOR OF THE OWNER O	TUS CHANNEL	STREAM	DURATION	
1	1 0	185 187	100AY 2010.07.19 04:56 (-3h 46min) Wa	mine (M) Adme	400		
	and the second se		and the second states and the second states and	roing AXN Sci-Fi	10/10 10/10	tmin	
Oldest test: 2010-07		est 2010-07-19 08:42:09 (-0min)	01.52 (-6h 49min) Off	and the second second second	Change		
	STATUS - CHANNE	LS	01.39 (-7m Sepin) Off		Day delimiter	Status du	Iratio
OFFLINE (1)	/		0.00 (-8h 41min) 113	mion CS Film	(to.//@	60	
Sidlisko nad Jazoro	m dalla	- Kbillis - Omin	2010.07			1. Mar. 1997	
WARNING (1)	Low State	1	23.53 8h 48min) Wa		tp//@	1min.	
Russian Travel Guid	e deviliĝ	36Kbit/s - Omin	23:49 (-81,52min) Of	or the same of the lot		1h 15min	
ONLINE (185)		- Income and the second	22.52 (-9h 4) min) Off	ine Sidliskon N Sci-Fi	Indicates that status i	1 min	
Sat	de/lig	6458Kbit/s - Omin			still active (there is no	1 min	
ent channel status	dellig	2703Kbit/s - 0min 2447Kbit/s - 0min	Status with n	0	newer status for given	6h 59min	
Animal Planet	10.10 A	2369Kbil/s - 0min	indicator - this st	alus	channel)	1min	
Anixe (HD)	20	5415Kbil/s - 1min	no more latest s	06 . D1		1min	
ARD	de/l@	5282Kbitis - Omin	for given chann	iemax 2	dp.//@	1min	
ARD (H	1	9314Kbit/s - Omin		iemax	de//@	1min	
Arte Link op	ens stream in new	6409Kbit/s - 0min	19.03 (-13h 38min) Wa	ming Polonia 1	(tp.//@	1min	
Arte (H brow	ser window with	10613Kbill/s - Omin	18:49 (-13h 52min) Wa	ming AXN Sci-Fi	de//i@	1min	
Astra I embe	edded VLC player	12167Kbib's - 1min	18:45 (-13h 56min) Wa	ming Polonia 1	de.//@	15min	
Autobu sorra sumou	LEADER LEADER	2352Kbills - Omin	17:28 (-15h 13min) Wa	ming Fashion TV	de.//@	9min	
Autobusová stanica	-vestibul dp//g	3317Kbit/s - Omin	16.38 (-16h 4min) Wa	the state of the s		38min	
AXN	de.lig	3282Kbill/s - 1min		Contraction of the local division of the loc	10.000	1min	
AXN Crime	de.lig	3124Kbib/s - Omin			te.li@	1min	
AXN Sci-Fi	de/10	2713Kbillis - Omin			de.//@	1min	
BBC Parliament	to//@	4408Kbit/s - 0min	15:18 (-17h 23min) Wa	ming Fashion TV	10/102	TOP OFFLINE CHANNELS	

List of chnnels with largest downtime for last week and month

## Server Schematics and Configuration



Minir testir	nal ng or low-cost setup		Recommended commercial use (high performance and date integrity)	-
	ng: this configuration for commercial use without hardware / unreliable SATA drive can lead to service malfunction a		Tested server (guaranteed compatibility): HP DL 160G8 / DL 360G8 / DL380G8 RAID (if needed): P410 or P420	
1	CPU: Intel Core i5 RAM: 4GB HDD: 1x 100GB SATA Ethernet: 100Mbit OS: Linux Debian 8 64bit	Up to 1000 users	CPU: Intel Xeon Dual / Quad Core RAM: 8GB HDD: 2x 300GB SATA or SAS (recommended) RAID: LSI Megaraid od HP P4XX or compatible Ethernet: 1x 1Gbit/s OS: Linux Debian 8 64bit	
2	CPU: Intel Core i5 RAM: 8GB HDD: 1x 100GB SATA Ethernet: 1Gbit/s OS: Linux Debian 8 64bit	Up to 20 channels	CPU: Intel Xeon Dual / Quad Core RAM: 16GB HDD: 2x 100GB SATA RAID: Software Ethernet: 1x or 2x 1Gbit/s OS: Linux Debian 8 64bit	Up to channels
3	CPU: Intel Core i5 RAM: 8GB HDD: 1x 100GB SATA Ethernet: 1Gbit/s OS: Linux Debian 8 64bit	Up to 500 streams	CPU: Intel Xeon Quad Core RAM: 32GB HDD: 2x 100GB SATA Ethernet: up to 10Gbit/s OS: Linux Debian 8 64bit	Up to 0 streams
4	CPU: Intel Core i5 RAM: 4GB HDD: 1x 500GB SATA Ethernet: 1Gbit/s OS: Linux Debian 8 64bit	Up to 4 channels 50 streams	This controgatate of the trib to the bacho	Up to channels ) streams
5	CPU: Intel Core i5 RAM: 2GB HDD: 1x 500GB SATA Ethernet: 100Mbit OS: Linux Debian 8 64bit		CPU: Intel Core i5 / i7 /Xeon RAM: 2GB HDD: 1x 1TB SATA RAID: optional OS: Linux Debian 8 64bit	
6	CPU: Intel Core i5 RAM: 4GB HDD: 1x 500GB SATA Ethernet: 1Gbit/s OS: Linux Debian 8 64bit	Up to 50 streams	CPU: Intel Xeon Dual Core RAM: 8GB HDD: min. 8x 500GB - 1TB SATA RAID: LSI Megaraid or HP P4XX with 512MB cache or compatible OS: Linux Debian 8 64bit	Up to 0 streams
7	CPU: 1.4GHz RAM: 2GB HDD: 30GB Graphic Card: support DirectX 9.0c OS: Microsoft Windows 7 Ult. 32/64bit		CPU: 1.4GHz RAM: 2GB HDD: 30GB Graphic Card: support DirectX 9.0c OS: Microsoft Windows 7 Ult. 32/64bit	
8	CPU: Intel Core i5 RAM: 8GB HDD: 1x 100GB SATA Ethernet: 1Gbit/s OS: Linux Debian 8 64bit		CPU: Intel Core i7 / Xeon RAM: 8GB HDD: 1x 100GB SATA OS: Linux Debian 8 64bit	
9	CPU: Intel Core i5 RAM: 4GB HDD: 1x 100GB SATA Ethernet: 100Mbit OS: Linux Debian 8 64bit	Up to 10 channels 50 output streams	OS: Linux Debian 8 64bit 50	Up to channels 0 output treams
10	CPU: Intel Core i5 RAM: 4GB HDD: 1x 500GB SATA Ethernet: 100Mbit OS: Linux Debian 8 64bit	Up to 400 hours of video 50 output streams	OS: Linux Debian 8 64bit 50	Up to 0 hours of video 0 output treams

## Server Schematics and Configurations

## Antik TR 6265 Transcoder

### HiDensity IP-to-IP HEVC FullHD transcoder



New ANTIK Hi-Density HW Transcoder is great for telco-grade IP-to-IP FullHD H.265 transcoding for all operators and OTT providers scenarios.

## **Key Features**

- MPEG2
- MPEG4 part2
- H.264/AVC
- AVS

## **Video Encoding Specifications**

- H.265 MP@level 5 main tier and H.264BP/MP/HP@level 4.2 video encoding
- maximum 12 x 1080p @ 30 fps or 24 x 720p @ 30 fps encoding
- VBR or CBR mode
- Low-delay endocing
- Encoding of multiple ROIs

## Transcoder TR6265 interface

### **Video Encoding Specifications**

- H.265/HEVC (Main/Main 10 profile @ level 5.1)
- H.264/AVC (BP/MP/HP @ level 5.1)
- VP9 (Profile 0/Profile 2 @ level 5.1)
- MPEG 4/2/1, VC 1/WMV9, VP8/VP6, AVS, REAL 8/9/10, DivX 3/4/5/6 and some other legacy codecs

MANTIK	ANTIK Technology								Profile     Cogout	
technology	# Home	Ø₀º System	ing 🛔 Users							Logged in: Admin Admin
			100		100		1 2 2 1	120	-	and the second se
SYSTEM INFORMATION										
CPU Usage (%)		100 50 0		Cont Conz Cons	/ usage	SYSTEM INFO: Hardware version: Firmware version: System time: System uptime: O SYSTEM DETAILS	ARK TRADIS TAL Jan 16. (2019) OR 101 (2 Kil Days TRADIS CETUP SYSTEM		CONNECTION INFO: Hostname: Interface: MAC: Connection type: IP: Mask: Gateway: Internet:	Available
E MODULES INFORMATION  CPU USAGE ON MODULES  PUBLICE ON MODULES PUBLICE ON										
MODULE 1 - STATE: RUNNING		0	MODULE 2 - STATE: RUNN	ING	0	MODULE 3 - STATE: RUNNIN	G	0	MODULE 4 - STATE: RUNNI	NG 🗘
Destination: Status: RU	JNNING X: 1.46 Mbps TX	2.16 Mbps	4. EROXXX H265 Source: Destination: Status: Bitrate: 12. Disney H264 Source: Destination: Status: Bitrate:	RUNNING RX: 7.51 Mbps TX: 2.84 Mbps	• •	8. DORCEL H264 Source: Destination: Satur: Bitrate:	RUNNING Carelay Maga		5. BRAZZERS H264 Source: Destination: Status: Bitrate: 21. Task 21 Source: Destination: Status: Bitrate:	C     RUNNING     R22231Mbps     T2231Mbps     C     RUNNING     RC112Mbps     T2245Mbps
MODULE 5 - STATE: RUNNING		0	MODULE 6 - STATE: RUNN	ING	0	MODULE 7 - STATE: RUNNIN	G	0	MODULE 8 - STATE: RUNNI	NG 🗘

## Trancoder TR6265 task configuration

C C N O I O G V # Home 0¢ System ≕ Transcoding Lusers		Logged in: Admin A
TASK CONFIGURATION		
1. EROX H264 (STATUS: AUMINING) BASE SETUP: Task Ible	CODEC SETUP: Video codec *	PTASK TASK SETUP SSAVE TASK SETUP
Stot	Video resolution	
Source (Paddress *	Video profile *	
Source audio channel *	Video bitrate *	
Source video channel *	Audio codec *	
Destination IP address *	Audo samplerate *	-
Destination port *	Audo birate *	
Okaput video PID		
Oceput audio PID		
2. EROX H265 (STATUS: RUNNING)		STOP TASK SETUP
3. EROXXX H264 (STATUS: NOT AVAILABLE)		

## **Detailed specifications**



## ITU-T H.265 Main Profile @ Level 5 main-tier encoding

- Motion compensation with 1/2 or 1/4 pixel precision
- Three prediction unit (PU) types (32 x 32, 16 x 16, 8 x 8) for intraframe prediction
- Two PU types (16 x 16, 8 x 8) for intra-frame prediction
- Skip mode and merge mode with a maximum of two candidate points to be merged
- Three transmission unit (TU) types (16 x 16, 8 x 8, 4 x 4)
- Context-adaptive binary arithmetic coding (CABAC) entropy encoding
- De-blocking (DB) filtering
- Sample adaptive offset (SAO)
- Inter-Precessor Communications Module (IPCM) encoding

## ITU-T H. 264 High Profile/Main Profile/Baseline Profile @ Level 4.2 encoding

- Motion compensation with 1/2 or 1/4 pixel precision
- Two sub-block types (16 x 16 and 8 x 8) for inter-frame prediction
- Prediction modes of intra 4 x 4, intra 8 x 8 and intra 16 x 16
- Rans 4 x 4 and trans 8 x 8

## Support for multiple input image formats

- Semi-planar YCbCr4:2:0
- Planar YCbCr4.2.0

- CABAC and context-adaptive variable-length coding (CAVLC) entropy encoding
- DB filtering
- **IPCM** encoding

## 1080p @ 30 fps H.265/H.264 multi-stream encoding Configurable image resolutions

- Minimum image resolution: 128 x 128 (H.265) or 256 x 128 (H.264)
- Maximum image resolution: 1920 x 2048

## Region of interest (ROI) encoding

- Encoding of at most eight ROIs
- Separate enable/disable control of the encoding function for each ROI

Image width or height step: 2

- Package YUYV

## **Encoders / Transcoders / Modulators**

## **Antik** GX 5000

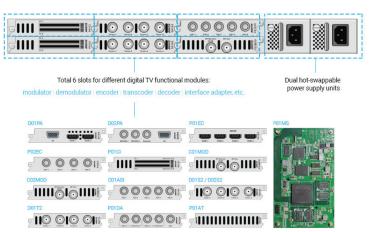
## **Digital Contents Processing Platform**



Antik Digital Contents Processing Platform GX 5000 brings a compact, powerful and flexible solutions that allow the users to build or update DTV or IPTV headend to meet the requirements of today's new network architectures. GX 5000 is a compact 1U platform capable of processing a high number of steams. By inserting up to 6 optional functional modules and pluggable MUX/Scrambler extended modules, GX 5000 integrates all DTV headend functions, such as DVB signal reception, descrambling, encoding, transcoding, remultiplexing, scrambling and modulation into one single unit.

## **Key Features**

- Maximum data throughtput 49Gb/s
- 16 TS processors on the main board, 10Mb/s bandwidth for each TS processor
- 2SFP BbE IP ports with maximum 920Mbps input and output data rate
- Up to 256 MPTS/SPTS TS/IP input and 512 MPTS/SPTS output without IP-FEC
- Up to 24 MPTS/SPTS TS/IP input and 24 MPTS/SPTS output with IP-FEC
- PSI/SI edition and re-generation, PID re-mapping and filtering
- Control and monitoring by Front Panel, Menu, Web and SNMP
- Total 6 slots for different digital TV functional modules: modulator, demolator, encoder, trans-coder, decoder, interface adapter, etc.
- Removable cooling fan assembly with alarm & speed control
- Dual hot-swappable power supplies units
- 1RU rack with display screen, 6 buttons, RS-232, USB



#### P01MS (reMUX & Scrambler Extension Module)

- 15 Gbps data processing capability
- 32 independents TS reMUX's and Scramblers
- PID filtering, remapping, pass through & mapping
- Insert & Edit PSI/SI tables

#### D01T2 (4 x DVB-C/T/T2 Demodulator Module)

- 4 x F type Female, 75Ω
- Input Frequency: 48 ~ 860 MHz (DVB-C), 104 ~ 862 MHz(DVBTT2)
- Input Level: -15~ 15dBm (DVB-C), -70 ~ -20dBm (QEF, DVB-T/T2)

#### P02EC (4 x SDI In Encoder/Transcoder Module)

- 4 x SDI, BNC Type Female, 75Ω
- Audio Input: SDI Embedded
- Sampling Rate: 48 kHz
- Input: MPTS/SPTS, MPEG2 MP@ML MP@HL, MPTS/ SPTS, H.264/AVC Main/High, Baseline Profile @ L4.0

- PCR re-stamp & calibrate
- Local or remote CAS synchronous simul-crepyt processing
- Self-temperature monitoring
- Symbol Rate: 1 ~ 7 MSps (ITU J.83 Annex A DVB-C)
- DVB-T2 v 1.3
- Bandwidth: 6/7/8 MHz
- Input Return Loss: 7 dB

or less (but not FMO, ASO & RS of Baseline)

 Output: MPTS and/or un-stuffed TS, MPEG2 MP@ML, MPTS and/or un-stuffed TS, H.264/AVC Main/High/Baseline Profile @ L4.0 or less (but not include FMO, ASO & RS of Baseline)

#### Encoders / Transcoders / Modulators

#### P01AT (4-Way HD/SD H.265 to H.264/MPEG-2 Transcoding Module)

 Input: Compliant with H.265 /HEVC), H.264/AVC Baseline, Main & High Profile @ L4.0 or less & MPEG-2 MP@ML

#### D01S2/D02S2 (4 x DVB-S/S2 Demodulator Module)

- 4 x F type Female, 75Ω
- Input Frequency Range: 950 ~ 2150 MHz •
- Input level: -65 dBm ~ -25 dBm
- Symbol Rate: 2 ~ 45 MBaud (DVB-S QPSK), 2-31 MBaud (DVB-S2 8PSK)

#### P01DA (2 x DS3 Input/2 x DS3 Output/1 x ASI Adaptor Module)

- 5 x BNC Female, 75Ω •
- Standard: DVB-ASI, EN50083-9 / ITU-T G.703
- Frame Structure: ITU-T G.752 / ITU-T G.804

#### P01CI (4 x CI De-encryption Module)

- 4 x Independent Common Interface (DVB-CI) slots
- Multiple programs CSA or BISS-1/E De-encryption

#### C01MOD (8-carrier QAM or 2-carrier COFDM Modulator Module)

- 2 x F type Female, 75Ω(1 x main output, 1 x -20 dB monitor output)
- Support ATSC/QAM (Annex A/B)/COFDM/DTMB Modulation . (Can't work simultaneously)
- ITU-T J.83 Annex A, B
- RF output range: 48 ~ 996 MHz, step by 1 KHz
- FFT Mode: 2K/4K/8K
- Symbol rate: 2.5 ~ 6.99 MBauds

#### C02MOD (4-carrier Un-Adjacent Frequencies QAM/ATSC/COFDM/DTMB Modulator Module)

- 2 x F type Female, 75Ω (1 x main output, 1 x -20 dB monitor output)
- Support ATSC/QAM (Annex A/B)/COFDM/DTMB Modulation (Can't work simultaneously)
- ITU-T J.83 Annex A, B
- RF output range: 48 ~ 996 MHz, step by 1 KHz •
- FFT Mode: 2K/4K/8K
- Symbol rate: 2.5 ~ 6.99 MBauds

#### C01ASI (5 x ASI Input/Output Module)

- 5 x BNC Type Female, 75Ω
- Standard: DVB-ASI, EN50083-9
- Input or Output: Switched by Web Control

#### P01EC (4 x HDMI in Encoder/Transcoder Module)

- 4 x HDMI, type A
- Coding Profile & Level: H.264/AVC BLP, MP, HP @ L4.0 or less & MPEG-2 MP@ML
- Audio Input: Embedded
- Cording Standard: MPEG1 Layer II, MPEG-2/4 AAC-LC, HE-AAC (V1, V2)
- Sampling Rate: 48 KHz

#### D01PA (2 x H.264/MPEG-2 Decoder Module)

- 2 x HDMI 1.3, 1 x D-sub 15 Female (2 pairs CVBS out adapter)
- Video Bit Rate < 50 Mb/s

#### D02PA (2 x H.264/MPEG-2 Decoder Module)

- 2 x DSI outputs, 1 x Genlock input, BNC Female 75Ω, 2 x CVBS outputs by D-sub 15 to RCA convertor
- Video Bit Rate < 50 Mb/s
- Sampling Rate: 32 KHz, 44.1 KHz, 48 KHz
- Analog Video Output: CVBS, 2 x RCA, (DB15 adapter) •
- CVBS Standard: NTSC, PAL, SECAM
- CVBS Resolution: 576i x 25, 480i x 29,97

- Output: MPTS and/or un-stuffed TS, MPEG2 MP@ML, MPTS and/or unstuffed TS, H.264/AVC Main/High/Baseline Profile @ L4.0 or less (but not include FMO, ASO & RS of Baseline)
- Roll Off factor: 0.35 (DVB-S QPSK), 0.35/0.25/0.2 (DVB-S2 8PSK)
- LNB Polarity Selection Voltage: 0,13 V, 18 V selectable •
- LNB Band Selection Tone: 0/22K selectable
- DiSEqC 1.0
- ASI Input or Output can be switched by Web Control
- DS3 bit rate: 44.736 Mbps
- Support of CAM watchdog
- RF total output level: 80 ~ 100 dBuV
- MER > 36 dB
- Spurious rejection > 55 dB •
- Output return loss -10 dB
- Spurious rejection > 55 dB •
- Output return loss -10 dB
- RF total output level: 80 ~ 100 dBuV
- MER > 36 dB•
- Spurious rejection > 55 dB
- Output return loss -10 dB •
- Spurious rejection > 55 dB
- Output return loss -10 dB •
- Input and Output Bit Rate ≤ 216 Mb/s •
- Support T2-MI
- Input: MPTS/SPTS, MPEG2 MP@ML, MP@HL, MPTS/SPTS, H.264/AVC Main/High/Baseline Profile @ L4.0 or less (but not FMO, ASO & RS of Baseline)
- Output: MPTS and/or un-stuffed TS, MPEG2 MP@ML, MPTS and/or un-stuffed TS, H.264/AVC Main/High/Baseline Profile @ L4.0 or less (but not including FMO, ASO & RS of Baseline)
- Output Level: -30 ~ + 7 dB (Adjustable, 0 dBm/600Ω)
- Closed Caption: EIA 608, EIA 708
- Output Level: 1.0 Vp-p ± 5 % (with standard test stream)
- Output Impedance: 600 (Balanced)Ω
- Output Mode: Left, Right, Mono, Stereo •
- Output Level: 30 ~ + 7 dB (Adjustable, 0 dBm/600x) ٠
- Closed Caption: EIA 608, EIA 708 ٠
- Genlock: Support •
- BNC Output Mode: SDI Output/ASI Input/ASI Output can be • switched by Web Control

## Antik MX 5308 Receiver

## 8 x Tuner DVB-T/T2/C/S2/ISDB-T



The MX-5308 is a high-density, modular and CI decryption professional TS processor equipped with 8 independent tuners, which can be any of the DVB-T/ T2, DVB-S2/S, DVB-C, DTMB, ISDB-T or ATSC type. It supports a wide range of application by combining 8 tuners processing capability with industry standard outputs including ASI and TS/ IP. The MX-5308 has 8 DVB common interface slots capable of working with the most of the well-known CAS in the market to de-crypt multiple pay TV services.

The MX-5308 provides operators with an ideal solution for multi receiving, remultiplexing, descrambling and TS over IP operations, the compact 8 tuners and the powerful 8 CI decryption design which makes it one of the most competitive products in the head-end market.

## **Key Features**

- 8 x Tuners Input, Supports variety of input options DVB-T2/T/ S2/S/C/DTMB/ATSC/ISDB-T
- Supports DVB-S2 Input Stream Identifier (ISI, optional) and DVB-T2 Multi PLP and SFN MIP pass through
- Built-in TS re-multiplexer receives from ASI, CI Slot1 to CI Slot8 and TS/IP inputs
- 8×DVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption

BS

 8xASI output the transport stream from CI Slot1 to CI Slot8 or BISS

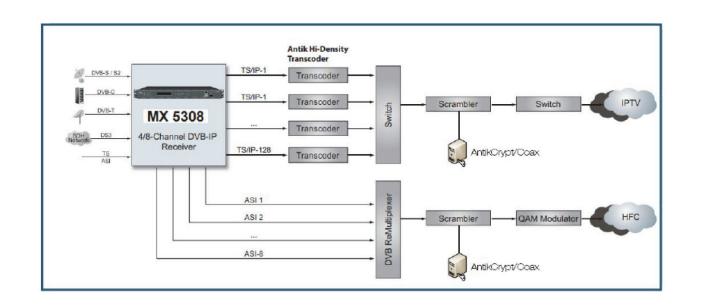
D/3T2

 1xchannel full duplex TS over IP or 9xchannels IP out without IP input

ISDB-T ATSC

- Remote Control and Supervision by SNMP v2, HTTP WEB and Proprietary HDMS software
- On Site software update through IP or USB
- RSSI, received signal strength, Eb/N0, C/N and BER monitoring
- Redundant power supply

DV3C



**3** S2



DTMB

## **Specifications**

### **DVB-S/S2 Tuner Input (ISI Factory Optional)**

- Connector Type 8×F type female 75Ω for Input •
- Input Frequency Range 950 ~ 2150MHz Input Level -25 ~ -65dBm Symbol Rate 2 ~ 45MBaud • •
- •
- Roll-off Factor (DVB-S QPSK: 0.35/DVB-S2 8PSK: 0.35, 0.25, 0.2)
- FEC Code Rate:
- DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8

#### **DVB-C Tuner Input**

- Connector Type 8×F type female 75 $\Omega$  for Input .
- Input Frequency Range 51 ~ 862MHz Input Level 51~75dBµV .
- Symbol Rate 1~7MBaud (ITU J.83 Annex A)

#### **DVB-T/T2 Tuner Input**

- Connector Type 8×F type female 75 $\Omega$  for Input •
- Input Frequency 104 ~ 862MHz (VHF/UHF) Input Level -20 ~ -70dBm
- •
- Constellation (DVB-T: QPSK, 16QAM, 64QAM/DVB-T2: QPSK, 16QAM, 64QAM, 256QAM Bandwidth 6MHz, 7MHz, 8MHz
- FFT Mode DVB-T: 2K, 8K •

#### **DTMB Tuner Input**

- Connector Type 8×F type female 75Ω for Input .
- Input Frequency Range 46.5~866MHz
- Input Level -87~-29dBm
- Symbol Rate 7.56MBaud Bandwidth 6MHz/7MHz/8MHz

#### **ATSC Tuner Input**

- Connector Type 8×F type female 75 $\Omega$  for Input
- Input Frequency Range 54~864MHz Input Level -75~-7dBm(ATSC 8VSB) •
- Symbol Rate 10.762MBaud

#### TS Processing

- TS Input Management Demux and Remux among ASI, TS/IP and CI Inputs •
- TS Output Management Demux and Remux for ASI output
- Service and PID Management Service and PID level for Remux, filtering and remapping

#### **ASI Output**

- Connector Type 9 independence BNC female, 75Ω,
- Standard DVB-ASI, EN50083-9

#### **ASI Input**

- Connector Type 1×BNC female,  $75\Omega$
- Standard DVB-ASI, EN50083-9

#### TS over IP

Connector Type 1×RJ-45, 100/1000 Base-T Effective Bit Rate 200Mb/s for 9 channel IP out without IP in and IP channel 1 to IP channel 8 just pass through the TS from CI or BISS, the IP channel 9 can output the TS from ASI in or Remux. 80Mb/s for full duplex 1 channel

#### Alarm

Connector Type 1×D-sub 9 male

#### Control and Monitoring

- Connector Type 1×RJ-45, 10/100 Base-T,for equipment IP Control
- Remote Control SNMP, HT T P (Web Interface), Proprietary HDMS (Headend Device Management System)

#### **Physical**

- Dimension 44mm x 255mm x 430mm
- Weight 3 5kg
- Power Supply AC 90V ~ 250V, 50/60Hz Power Consumption 30W (exclusive of LNB power)

#### Certification

- EMC: .
- EN 55024:1998+A1:2001+A2:2003. •
- EN 55022:2006+A1:2007, • EN 61000-3-2:2006,
- EN 61000-3-3:2008

- DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9,9/10
- DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9,9/10 LNB Polarity Selection Voltage 0, 13V, 18V selectable LNB Band Selection Tone 0/22KHz selectable • .
- Satellite Selection Command DiSEqC 1.0
- ISI ID 1 ~ 255 user configurable
- Constellation 16QAM, 32QAM, 64QAM, 128QAM, 256QAM Bandwidth 6MHz, 7MHz, 8MHz .
- Input Return Loss 7dB (typ.)
- DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K
- Guarding Interval
- DVB-T: 1/4, 1/8, 1/16, 1/32 • DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32,1/64, 1/128
- FEC Code Rate
- DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8
- DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 •
- Input Return Loss 7dB (typ.) .
- Constellation 4QAM-NR,4QAM,16QAM,32QAM,64QAM .
- Guard Interval PN420, PN595, PN945 •
- Roll-off Factor 0.05 •
- Interleaving Depth 240,720 .
- FEC Code Rate 0.4, 0.6, 0.8 .
- Constellation 8VSB •
- Roll-off Factor 0.115
- Bandwidth 6MHz
- PSI/SI PSI/SI table regeneration, NIT and SDT edition, LCN Edition and Re-generation .
- Descrambler DVB Common Scrambling Algorithm (CSA)
  - BISS Mode BISS-1, BISS-E
- Common Interface 8 x PCMCIA slots, compatible with major CA CAMs in the market •
- Output Bit Rate ≤ 200Mb/s
- TS Processing 8xASI out pass through the TS from CI 1 to CI8, 1xASI Out from Remux •
- Input Bit Rate ≤100Mb/s
- Connector Type 1×BNC female, 75Ω
- Protocol UDP / RTP, Multicast / Unicast, IGMPv3, ARP
- Switching Condition User Defined •
- Local Control LCD display and 6-key keypad
- Serial Port 1×RS-232 D-sub female, for debug use only •
- Equipment Upgrade Embedded FTP loader, Telnet and http •
- Operating temperature 0~45°C •
- Storage temperature -10~60°C .
- Operating Humidity 10~90%, non-condensed •
- FCC: .
- Part 15 Class B • LVD: •
- EN 60950-1:2006 + A11:2009

## Antik EN 8000 Encoder

### 4/8-way Integrated Encoder



ANTIK EN 8000 consists of two 4-way (total 8) H.264 / MPEG-2 encoder modules, TS reMultiplexer. All encoders are real time and independent operated. Each encoder accepts one stereo program through its HDMI (HD or SD) input, or CVBS(SD) Input. These programs encoded are multiplexed onto one Transport Stream (TS). The essential PSI/SI tables of the TS, including LCN (Logical Channel Number), are generated automatically and are editable by user. This TS Stream is also available through the TS/IP port on the front panel with 3 modes: Full Duplex, 128 IPTV & 32 IPTV with 2 RJ-45 ports. EN-800 is accommodated in a standard 1U x 19 rack mountable chassis.

## **Key Features**

- Compliant with H.264/AVC HP@L4.0 & MPEG-2 MP@ ML
- Supports MPTS & SPTS, Re-multiplexed integrated
- Total bitrate up to 400Mb/s at 128 IPTV Mode
- Total bitrate up to 200Mb/s at 32 IPTV Mode with both RJ-45 port
- Total bitrate up to 80Mb/s at Full Duplex Mode

- HD/SD Video Resolution: 1080p, 720p, 576i, 480i
- MPEG1-L2, MPEG-2/4 AAC-LC/HE-AAC Audio Encode
- Remote control/monitoring with SNMP and HTTP/Web
  interface
- Two Redundant Power Supplies

## **Back Panel Interface**

#### EN-8000-82H



#### EN-8000-42H



#### EN-8000-82C



#### EN-8000-42C



## **Specifications**

#### Video

- Input Interface: HDMI, type A (EN8000, HD/SD) RCA, 75Ω (8100, SD)
- Encode Standard: H.264/AVC HP@L4.0&MPEG-2 MP@ML (EN8000, HD/SD) H.264/AVC MP@L4.0&MPEG-2 MP@ML (8100, SD)
- Chrominance Sampling Format: 4:2:0
- Video Resolution & Recommend range for H.264: 1080i(1920x 1080)@25Hz, 29,97Hz, 30Ht: SMPTE274M: 1~13Mb/s 720p(1280x720)@25Hz,29,97Hz,30Hz:SMPTE296M: 1~13Mb/s
- 480i(720x480)@25Hz:SMPTE656M:600K~10Mb/s 56i(720x576)@25Hz:SMPTE656M:600K~8Mb/s
- Video Resolution & Recommend range for Mpeg2: 480i(720x480)@25hz:SMPTE656M:3,5~8Mb/s 576i(720x576)@25Hz:SMPTE656M3,5~8Mb/s
- Other Output Resolution: Manually enter, Arbitrarily
- Aspect Ratio: 4:3 or 16:9, configurable

#### TS/IP, Mode 3: 32 IPTV Output from two RJ-45 port

- Standard: IEEE 802.3, 10/100/1000 Base-T
- Maximum Bit Rate: 200Mb/s
- Data Encapsulation: UDP, RTP, SPTS or MPTS
- Protocol: ICMP, ARP,IGMPv2/v3

#### **Rear panel**

- HDMI IN: HDMI (see model list) x 8
- CVBS & Audio IN: RCA, 75Ω (see model list) x 8

#### **Front panel**

- Control: RJ-45, 100/100 base-T x 1, USB x 1
- TS/IP: RJ-45X2, 10/100/1000 Base-T x 2; 1Back up Output only
- Display: 2 x 16 LCD module

## **Back Panel Interface**

#### Audio

- Input Interface:
- HDMI, x8 or RCA x 8 pairEncode Standard:
- Encode Standard: MPEG1 Layer II MPEG-2/4 AAC-LC, HE-AAc (V1,V2)
- Sampling Frequency: 48KHz
   Encoder Bit Rate Range MPEG1 Layer II:32~192Kbps (Mono), 64~384Kbps (stereo) MPEG2/4AAc-LC:24~256Kbps(Mono), 48~512Kbps (Stereo) MPEG2/4 HE-AAC(V1/V2): 16~128Kbps (Mono), 32~256Kbps (stereo)

#### TS/IP, Mode 1:Full Duplex, Single TS in Single TS out

- Standard: IEEE 802.3, 10/100/1000 Base-T
- Maximum Bit Rate: 80Mb/s in + 80Mb/s out
- Data Encapsulation: UDP, RTP, SPTS or MPTS
- Protocol: ICMP, ARP,IGMPv2/v3

#### TS/IP, Mode 2: 128 IPTV Output Only

- Standard: IEEE 802.3, 10/100/1000 Base-T
- Maximum Bit Rate: 400Mb/s
- Data Encapsulation: UDP, RTP, SPTS or MPTS
- Protocol: ICMP, ARP,IGMPv2/v3

#### Others

- Inpt AC Voltage Range: AC100~ 260V 50/60Hz
- Operating Temperature: 0~40°C
- Storage Temperature: -10~60°C
- Operating Humidity: 10~90%, Non-condensed

	Description	Encoder input	Encoder Way	TR/IP (Full Duplex/ IPTV Output)	Audio Encode (AAC)
01	EN-8000-82H	HDMI	8	Y	Y
02	EN-8000-42H	HDMI	4	Y	Y
03	EN-8000-80H	HDMI	8	Ν	Y
04	EN-8000-40H	HDMI	4	Ν	Y
05	EN-8000-82C	CVBS & Audio	8	Y	Ν
06	EN-8000-42C	CVBS & Audio	4	Y	Ν
07	EN-8000-80C	CVBS & Audio	8	Ν	Ν
08	EN-8000-40C	CVBS & Audio	4	Ν	Ν
09	EN-8000-82S	SDI	8	Y	Y
10	EN-8000-42S	SDI	4	Y	Υ
11	EN-8000-80S	SDI	8	Ν	Y
12	EN-8000-40S	SDI	4	Ν	Y

## Antik Nano 3



Hybrid/OTT IP+DVB Set-top Box



## **Key Features**

- CPU 4 x Cortex A53 (15000 DMIPS)
- GPU Mali-450
- 4K HDR or dual Full HD decoding
- High Efficiency Compression Codecs Decoding VP9 Profile 2 Support
- Wi-Fi 802.11 ac Access Point (optional)
- Modem
- SmartHome Z-Wave (optional)

#### **Back Panel Interface**





Nano 3 OTT

Nano 3 S (DVB-S2+IP)



Nano 3 Giga



Nano 3 - 4 PORT (side panel)

### Set-top boxes

### **Side Panel Interface**





Nano 3 C/T (DVB-C2/T2+IP)

## **Specifications**

#### Video

- H.265/HEVC (10-bit)
- H.264/AVC
- VP9 (10-bit), VP6/VP8
- MPEG-1/2/4 •
- VC-1/WMV9
- Real 8/9/10
- Divx 3/4/5/6 •

#### **Audio**

- AAC (HE-AAC v2 Profile)
- Dolby Digital (AC-3) •
- MPEG-1/2 (layer I/II) •
- MP3 •
- FLAC, Vorbis •

#### Streaming

- MPEG-2 transport stream
- Multicast or Unicast
- TS over UDP •
- TS over RTP
- HTTP streaming
- RTSP (with trick play support) for VoD
- Teletext and subtitles •
- IGMP v2 & v3 •
- HLS

#### Inputs / Outputs

- HDMI 2.0a
- AV output (CVBS, L+R audio) •
- TOSLINK (S/PDIF optical audio interface) •
- 1x RJ45 (Ethernet 10/100BaseTx) ٠
- 1x USB 3.0 + 1x USB 2.0 ٠
- CI Slot (NAno 3S)
- external IR sensor •
- antenna RF input (only on selected models) •

#### **Technical Specification**

- Dimensions 115mm x 115mm x 32mm (without packaging)
- Power Consumption 6W
- Power Input 12V/1A DC •
- Power Adaptor 90-250V/50-60Hz AC •
- Operating Temperature 0°C to 45°C
- Operating Humidity 8%-95% (non-condensing) •

#### CAS/SCRAMBLING/DRM

- AntikCrypt
- Conax
- Widevine ٠

#### Software Integration

- Operating system Linux 3.18 / 4.4 ٠
- Copy Protection HDCP 2.2 •
- Ekioh SVG integrated

#### Middleware

ANTIK MaxIM Middleware 2.0

#### Accessiories (optional)

- IR2 Extender cable
- AV Cable adaptor •
- **RCA/SCART** cable .
- **Ethernet Cable** •
- Full size/Compact Keyboard ٠
- Bluetooth Remote control
- WiFi Adapter •

#### **Application**

- Telco IPTV .
- Hotel IPTV
- OTT IPTV •
- DTH .
- **Digital Signage** •

#### Hardware

- CPU: HiSilicon Hi3798MV200 4x ARM Cortex-A53 (15000 DMIPS) .
- GPU: ARM Mali-450 •
- DRAM: 1GB DDR4 •
- Flash: 8GB eMMC
- Wi-Fi: 802.11 b/g/n (2.4GHz , 1T1R, 150M) •
- 868 MHz SmartHome gateway (optional)
- DVB-S/S2/T/T2/C tuner (optional) •
- CAS Card reader slot (optional) .
- Modem
- Lorawan Gateway Optional

#### Hidden STB with external IR sensor 2nd IR receiver in the guest room and HDMI-CEC control



## Antik Mini 3



### Hybrid IPTV +DVB Set-top Box

New ANTIK Mini 3 quad-core Linux / Android set-top box with Hi3798C V200 central processing unit has great features to satisfy highest demands for video decoding, power consumption, price and performance. It is a 4K HDR or dual full HD DVB & IPTV set-top box with VP9 video decoding at 3840 x 2160 resolution at 60fps. Fully integrated with Antik MaxIM management system.

## **Key Features**

- Enhanced Host CPU performance (15000DMIPS)
- Hybrid device with IP + DVB tuner (optional)
- L2 managed switch up to 1Gbps
- 4K HDR or dual Full HD decoding
- Decoding and display capability compatible with HDMI 2.0a
- Wifi 802.11 ac Access Point
- Wake on HDMI CEC, IR/BT RC input
- Smart Home HUB (Z-Wave)
- Modem
- OLED display (optional)



## **Back Panel Interface**





Mini 3 Pure IP



Mini 3 ST

Mini 3S



Side Panel Interface

# **Specifications**

#### **Highlights**

- 4K (2160p60) video support and crystal clear digital audio
- Interactive TV Support Multicast TV, Electronic Program Guide, VOD, Mosaic
- PVR and Network PVR support
- Major DRM systems integrated
- Segment streaming and buffering for OTT delivery even in lowspeed networks

#### Video

- H.265/HEVC (10-bit)
- H.264/AVC
- VP9 (10-bit), VP6/VP8
- MPEG-1/2/4
- VC-1/WMV9
- Real 8/9/10
   Diver 2/4/5/6
- Divx 3/4/5/6

#### Audio

- AAC (HE-AAC v2 Profile)
- MPEG-1/2 (layer I/II)
- MP3
- FLAC, Vorbis

#### Accessiories

- IR Remote control
- Power supply adaptor
- HDMI cable
- Batteries
- Manual

#### Streaming

- MPEG-2 transport stream
- Multicast or Unicast
- TS over UDP
- TS over RTP
- HTTP streaming
- RTSP (with trick play support) for VoD
- Teletext and subtitles
- IGMP v2 & v3
- HLS

#### **Technical Specification**

- Dimensions 205mm x 145mm x 50mm (without packaging)
- Weight 540 g (without accessories and packaging)
- Power Consumption 8W
- Power Input 12V/2A DC
- Power Adaptor 90-250V/50-60Hz AC
   Operating Temperature 0°C to 45°C
- Operating Temperature 0°C to 45°C
   Operating Humidity 8% 05% (assumed)
- Operating Humidity 8%-95% (non-condensing)

### Software Integration

- Operating system Linux 3.18 / 4.4
- Copy Protection HDCP 2.2
- Ekioh SVG integrated

- Hybrid broadcast-broadband TV (HbbTV) support
- Hardware generated Picture-in-Picture
- Intelligent low power consumption management
- Ideal for Digital Signage system

#### Accessiories (optional)

- IR2 Extender cable
- AV Cable adaptor
   RCA/SCART cable
- RCA/SCART cable
   Ethernet Cable
- Ethernet Cable
- Full size/Compact KeyboardBluetooth Remote control
- WiFi Adapter

#### CAS / SCRAMBLING / DRM

- AntikCrypt
- Conax
- Widevine

### Application

- Telco IPTV
- Hotel IPTV
- OTT IPTV
- DTHDigital Signage

#### Inputs / Outputs

- HDMI 2.0a
- AV output (CVBS, L+R audio)
- TOSLINK (S/PDIF optical audio interface)
- 4x RJ45 (Èthernet 10/100/1000BaseTx) / 1x RJ45 (Ethernet 10/100BaseTx)
- 1x USB 3.0 + 1x USB 2.0
- CI slot (Mini 3S)
- external IR sensor
- antenna RF input (only on selected models)

#### Hardware

- CPU: HiSilicon Hi3798MV200/Hi3798CV200 4x ARM Cortex-A53 (15000 DMIPS)
- GPU: ARM Mali-450/Mali-T720
- DRAM: 2GB DDR4/DDR3
- Flash: 8GB eMMC
- ETH: 4-port GbE managed switch (only on selected models)
- Wi-Fi: 802.11 ac/b/g/n (2.4/5GHz , 2T2R, 867M) + Bluetooth 4.2 (optional)
- 868 MHz SmartHome gateway (optional)
- DVB-S/S2/T/T2/C tuner (optional)
- CAS Card reader slot (optional)
   Modem

#### Middleware

ANTIK MaxIM Middleware 2.0

# Antik Eco 3C

#### Super low-cost DVB-C/T box



Antik Eco 3 DVB-C



Antik Eco 3 DVB-C back panel

# **Specifications**

#### Video

- H.264/AVC
- MPEG-1/2/4
- VP6/VP8
- MPEG-1/2/4
- VC-1/WMV9
- Real 8/9/10
- Divx 3/4/5/6

#### Audio

- AAC (HE-AAC v2 Profile)
- MPEG-1/2 (layer I/II)
- MP3
- FLAC, Vorbis

#### Hardware

- CPU: HiSilicon Hi3716MV330 (ARM Cortex-A9)
- DRAM: 128MB DDR3
- Flash: 64MB NOR/NAND
- DVB-C tuner
- CAS Card reader slot (optional)

#### Inputs / Outputs

- HDMI 1.4b
- AV output (CVBS, L+R audio)
- 1x RJ45 (Ethernet 10/100BaseTx)
- 1x USB 2.0
- external IR sensor
- antenna RF input

#### CAS/SCRAMBLING/DRM

- AntikCrypt
- Conax



Antik Eco 3 DVB-T



Antik Eco 3 DVB-T back panel

#### Streaming

- MPEG-2 transport stream
- Multicast or Unicast
- TS over UDP
- TS over RTP
- HTTP streaming
   RTSP (with trick
- RTSP (with trick play support) for VoD
- Teletext and subtitles
  IGMP v2 & v3
- IGMPHLS

#### Application

Cable TV

#### **Technical Specification**

- Dimensions 190mm x 125mm x 30mm (without packaging)
- Power Consumption 6W
- Power Input 5V/1.5A DC
- Power Adapter 100-240V/50-60Hz AC
  Operating Temperature 0°C to 45°C
- Operating Humidity 8%-95% (non-condensing)

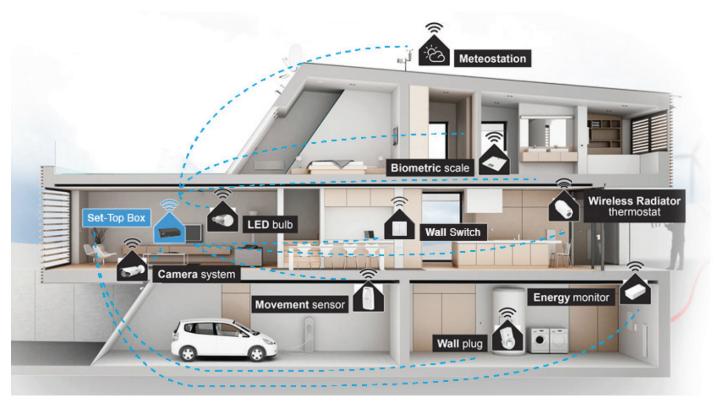
#### Accessiories

- IR Remote control
- Power supply adapter
- AV cable



# Antik SmartHome Systems

**COMFORT** and **SAFETY** for your customer experience



Create difference to your telco products and add state-of-art smarthome features to your multiplay offers. From remote control of lighting, heating/AC, home devices and home security to control over power and other resources consumption. Set typical usage profile and home is in a holiday mode within seconds. We are offering you the possibility to prepare for winter unexpected home arrival simply by activating heating and lights on the access road by app. The most important places, movement tracking, temperature sensor, water and gas leakage and more can be monitored in real time...security component of ANTIK Smart Home solution. Antik is continuously developing and improving its own set-top boxes with integrated Smart Home Smart Home.



You can access and manage your SmartHome devices through web portal, mobile application or set-top box.

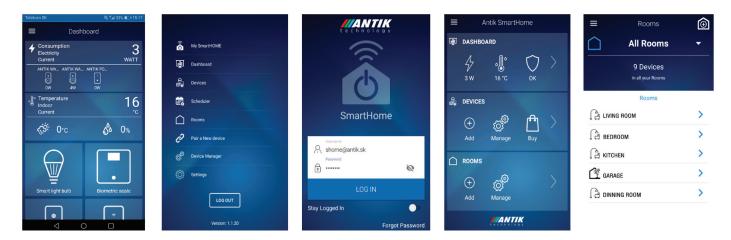
### Set-top box



#### **SmartHome**

#### **Mobile Application**

Have your household under the control no matter where you are with SmartHome app. With app, you can manage and monitor your power consumption, plan turning on and off the wall switch, as well as to control movement sensor and others. To monitor your lifestyle with Antik Biometric Scale you won't have troubles anymore. You can easily download it for Android or iOS systems and you will connect it with Antik Mini 2, Mini 3 or Nano 3, which are embedded with Antik SmartHome Hub.



#### Download ANTIK SmartHome app.





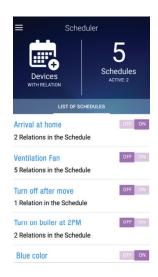
### Web Portal



#### Scheduler

With Scheduler, you can manage all the relations between your devices through any computer or tablet connected to internet, as well as to plan the actions based on the events or time. Create your own scenario Plan to change the color of Smart LED Bulb in case Movement Sensor detects somebody arriving, or change the temperature of your household with wireless radiator thermostat in case it cools under 25°C. If your lights turn on at six o'clock you can be sure you won't oversleep for work again.

	HOME In CUSTOME		MY TELEVISION	My TELEPHONE	MY INTERNET	
	mart Home Schedul ere you can edit dependencies ised on events.		1 actions	A Devices	Rooms	b.
s	mart Device Schedul	es				2.6
	ATHOD162481D6E5	<ul> <li>Add new schedule</li> </ul>				
	) Thele	RollP1 Items count	TulTMAN) items count	Status	_	
	7 Primad Kernav	1	2	On .		
	8 Verelator	1	4	om		
1	9 Pohyla skančili vyamuda	1	1	on		
1000	0 014.00 seprete spotrebila		1	off		
	4 Madra ferbe		1	On		



# **SmartHome** Elements

#### **Energy monitor**



Have your home constantly under control. Make an overview of the consumption of your appliances and your whole household, so you can see what appliance has the highest consumption. In addition to measuring consumption, it also measures temperature, humidity and intensity of the light.

#### Wall Plug



Measure the consumption of your refrigerator or your TV by using the Wall plug. Through the LED lights, it will signalize which of your appliances are too costly. Replace them effectively and save on monthly electricity bill. Control any, even non-smart, appliances remotely! Thanks to the mobile application, you not only check but can also comfortably turn them off.

#### **Wireless Radiator Thermostat**



Wireless radiator valve provides a convenient way to set the temperature in your home. Remote control even allows you to set up different temperature in every room. You can also plan the change in temperature during the day, or to set up a weekly heating schedule at home.. With Antik Wireless Radiator Thermostat, you save the cost of heating without reducing home comfort.

#### Intelligent LED Bulb



Brighten up your home with your favourite colors without painting. Intelligent color bulb contains not only white but also color LED, which allows to create light of any color. It works on the LED base with an output of 9 W (white color), which is equivalent to 60 W regular bulb. The bulb has an integrated wireless communication module that allows remote operating.

#### **Biometric Scale**



Maintaining your optimal body weight has always been a challenge. Thanks to biometric scale this process becomes much easier and your goal achievable. Intelligent scale works on the principle of analys ing biometric impedance. Based on this measurement and counting individual variables such as age, height, gender and activity level, the device is able to calculate body fat percentage, muscle mass and water and thus reveal the strengths and weaknesses of your lifestyle.

#### **Movement Sensor**



Protect your household against the actual distraction. If you often forget to close the window and lock the door, do not worry about the safety of your own home. Intelligent sensor will alert you to an open window and inform about the arrival of an unexpected visit. Set the standby mode as needed. Report on the movement inside the house is displayed in your set-top box or mobile app, giving you an overview of the security of the home.

#### **Meteo Station**



Get a complete overview of the weather and always be ready to head out of the house. It measures both temperature and rainfall, as well as wind direction and speed, humidity or the pressure. Measured values are kept, so you know to evaluate long-term trends and to some extent predict future developments.

# **SmartHome** Elements

### Smart Display



Important information or measurement results can be available immediately. Smart Display communicates with a set-top box and gets the data that interests you. In the morning it reminds you today's fitness plan or TV show. Smart Display also alerts you to current weather conditions, so you know what to wear and inform you of an upcoming visit.

### Wall Switch



The best way to control conventional light circuits is to use ANTIK Wall Switch and make the standard lighting a part of SmartHome. It is possible to manage it centrally through mobile app, or set it to automatically adapt to adjusted impulse from other system devices or time of the day. You can choose from three models, one-pole, two-pole or model with the dimming feature.

#### 4 Button



Device has 4 buttons. In the scheduler you can assign the action to every button. Then you can easily push the button and with on you can turn on the light, other can switch on the wall plug or you can switch the channel on you TV.

### **Flood Detector**



Whether it is a radiator or washing machine springing a leak, water can cause a lot of damage in short time.Protect your home from flooding. With the Antik Flood Detector you can quickly detect broken pipe hidden behind the kitchen, or if the flood is coming. You can protect the interior from damages.

#### SOS button



Button is used to promptly call the help. Alarm is activated by simple pressing the button, that starts siren and dial the numbers saved in unit and sends a notifications. The main advantage of the button is that it shortens the time to call assistance and is easily available.

#### **Gas detector**



Compact design allows to install it on the wall or ceiling. It has high sensitivity helps to show presence of Oxide Carbone (CO), LPG & natural gas, so it protects you and your household. If the sensor detects the presence of one the above, the siren starts and LED indicator blinks and sends a notification.

#### **Smoke detector**



Protect your household against the fire. The sensor is powered by a long-life battery, allowing easy and wireless installation on the wall or ceiling. You can make sure that your household is fully prepared in the case of fire in the kitchen, electric short circuit or other dangerous fires.

#### SmartCam

# Antik IP Wi-Fi/LTE Camera System

Antik video surveillance with Wi-Fi technology solution brings every moment and every detail about your family to your smart phones and tablets. Both, indoors and outdoors, provide solution to keep you connected to ensure you will not miss any precious moment in your family and ensure you about safety of your home.

### **ANTIK SmartCAM SCI 10**

- HD resolution 1,3 MP
- IR 10m
- 120° horizontal view angle
- Two-way audio
- Micro SD card memory



#### **ANTIK SmartCAM SCI 55**

**ANTIK SmartCAM SCE 35** 

HD resolution - 1,3

72° horizontal view

Micro SD card

memory or cloud Exterior, IP 67

- Full HD resolution -3MP
- IR 10m

MP

IR 30m

angle

- 95° horizontal view angle
- Two-way audio
- Digital input/output
- Micro SD card memory or cloud
- Interior camera



0

MANTIN

#### **ANTIK SmartCAM SCI 15**

- HD resolution 1,3 MP
- IR 10m
- Horizontal rotation: 0-355°, tilt: 90°
- Two-way audio
- Micro SD card memory or cloud
- Interior



#### ANTIK SmartCAM SCE 30

- HD resolution 1,3 MP
- IR 30m
- 72° horizontal view angle
   Micro SD card memory or cloud
- Exterior, IP 67



# Antik SmartCAM SCE 40

- HD Resolution 2MP
- IR 10 m
- Field of View: 111 (H), 58 (V), 133 (D)
- 16 x digital zoom
- Micro SD card memory
- Exterior



### **ANTIK SmartCAM SCE 50**

- Full HD resolution 1080p
- Horizontal rotation: 0-355°, tilt: 90°
- Micro SD card memory or cloud
- Exterior IP 66, IK 10



#### SmartCam

### Antik SmartCAM SCI 05

- HD Resolution 2 MP
- IR 10 m
- 8 x digital zoom
- Field of view: 115 (H), 62 (V), 137 (D)
- Two-way audio
- Micro SD card memory
- Interior



### Antik SmartCAM SCI 20

- HD Resolution: 2 MP
- IR 10 m
- Horizontal rotation: 355, tilt 90
- 3 x digital zoom
- Two-Way Audio
- Micro SD card memory
- Interior camera



### Antik SmartBell ASB 30

- HD Resolution 2Mp
- IR sensor 5m
- Field of View 140 (H), 158 (D)
- 2-way bidirectional talk
- Micro SD cloud memory



#### Antik SmartBell ASB 31

- HD Resolution -2MP
- IR sensor 5m
- Field of View: 140 (H), 158 D)
- 2-way bidirectional talk
- Micro SD card memory



### Antik SmartRecord ASR 10/11

- 4/8 Channel IP Camera Input
- HDMI/VGA video out
- Max 80Mbps Wired input

### **ANTIK SmartRecord AS1101**

- Max 80Mbps incoming bandwidth
- HDMI/VGA video output
  Support 1 SATA HDD, 2
- USB2.0
- MIMO support of faster connection



### **ANTIK SmartCAM SCI 85**

- Full HD resolution 1080p
- IR 30m
- Horizontal rotation: 0-355°, tilt: 90°
- 4x optical zoom
- Micro SD card memory or cloud
- Interior



#### Antik SmartCAM SCE 55

- HD Resolution 2MP
- IR 10m
- Field of View: 115 (H), 62 (V), 137 (D
- 8 x digital zoom
- Two-way audio
- Micro SD card memory
- Exterior

44





# **SmartCam Mobile Application**



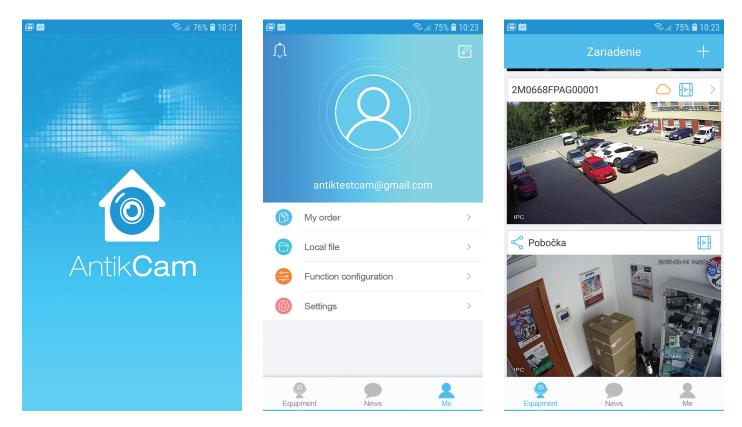
#### **App Store**



Android



Indoor and outdoor wireless camera system from Antik will provide an overview of any event or details in your home. With Antik SmartCam App you are not only able to check the security of your home or your restfully sleeping child, but you can also remind yourself unrepeatable moments with your family.



Do you want to enjoy an evening movie without waking up your baby sleeping next door? After pairing with the set-top box Antik, camera will alert you about every movement in the room directly on your TV screen or you can watch both, TV and camera screen at the same time (in a smaller window).



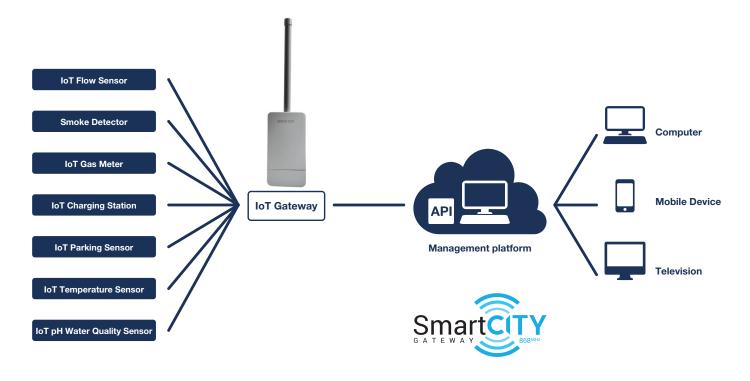
# End-2-End IoT/SMART City Platform



The need for smart city solution has been mandated by urbanization and growing importance of information and communication technologies. Beside it is improving the quality of citizens life, Smart City is also future enabler in accelerating economic growth.

Smart City rely on everything being connected to each other. Antik's portfolio of smart city products use digital, informational and communication technologies and it ranges from traffic and waste management optimisation of energy consumption to home and public safety.

Antik Technology's solutions are in the hands of its own inhouse research and development team that is responsible for software development (sensor firmware, back-end cloud management, API interface to 3rd parties front-ends) and hardware design - IoT Gateways and sensors itself. Besides own production we offer professional consulting services.



# Antik SmartCity Network Infrastructure Gateways

Antik SmartCity Infrastructure brings to your community everything need to upgrade it to SMART level. Durable Antik LoRaWAN Transmitters, Management Platform and easy integration to any 3rd party system covers the city or region with unbeatable data connection for all ultra-narrow-band scenarios for incredible costs.

#### **Benefits**

- Large coverage with low CAPEX
- Quick network roll-out
- 10 years lifetime of sensor without battery change
   Ideal for areas without power grid and data petwork
- Ideal for areas without power grid and data networks



#### **ANTIK SCN 10**

- Omnidirectional LoRaWAN Transmitter
- Gigabit ethernet Interface to connect to Antik SmartCity cloud

# **Key Features**

- 802.3af PoE powered, typical consumption 10W
- Mast mount, IP54 enclosure
- Omnidirectional +3dBi antenna
- 470/868/915MHz frequency bands
- Support 8 channels
- Sensitivity -142dBm
- Output power up to 23dBm
- Range up to 15km (line of sight)
- Operational temperature range -40 to 80°C



#### ANTIK SCN 20

- Omnidirectional LoRaWAN Transmitter
- Solar power and battery
- 3G/4G modem to connect to Antik SmartCity cloud



#### **Cloud Management System**

It categorizes all elements of the network (sensors based on clients or projects).

- Seamlessly enable collected data via state of art API
- API allows to flexible integrate and 3rd party analytic or processing software or visualization platform such as smartphone, tablets, PC's or digital signage

All data are pre-processed for visualisation or control databases. Various authorization options. High level of security on the way from sensors to cloud, inside cloud and on delivery to 3rd party applications. Each device uses its own keys, it is authenticated by QR code which after authorization by system the devices are allowed to communicate with cloud.

Smart

# Key Features

- Compact design
- Smart measurement
- Borderless usage flexibility
- Close to zero power consumption
- No service operation
- Smart dependences definition across devices
- Network Monitoring System

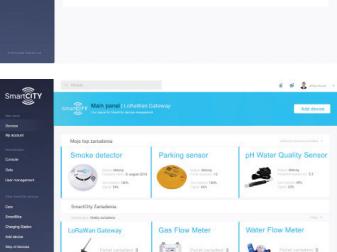
# Consulting

- IoT Rollout strategy
- IoT network Topology Plan
- Strategies for integration 3rd parties hardware design
- IoT software Analyzes
- PoC various option for piloting and proofed concepts

# **SmartCity User Interface**

Monitoring and managing cities is more seamless with the new user interface for management system released by Antik Technology. The system offers help to customers with tracking traffic conditions, monitor energy usage, check water quality and even predict when certain assests- such as lifts and water pumps are due to.

Smart CTY	Q Hlada	<i>L.</i>			6	💉 🤱 Attila Sma
	Smar		r <b>anel   LoRaWan Gatewa</b> ) x BrantCity devices menagement			Add device
My account	LoBa	Wan Gatewa	IV			
Administration		Status	Name / IP	Broadcasting	Connected devices	
Console		Active	192.168.1.1	Yes	31	Device detail
Data	٢	Active	192.168.1.2	Yes	277	Device detail
User management	٢	Active	192.168.1.3	No	2	Device detail
Other SmartCity services						
Cars						
SmartBike						
Charging Station						
Map of devices						
© 2018 Antik Telecom Ltd.						



# AntikLoRaWAN Tester

Antik LoRaWAN Tester is a practical device to measure SmartCity/IoT availability

RETY Main panel | LoRaWan Gatewa



🖌 🤱

Add de



# **Use** Cases

### **Transparent parking**

The parking sensor has a wide usage Besides directing a driver to the nearest parking space you can ensure that ruthless driver won't occupy the access roads for fire brigades or VIP parking lot.

# **Traffic Light Control**

With low cost of Antik SmartCity Network operation you can easy control city-wide traffic light system from centralised location.

## Simplify traffic flow

If there is reconstruction on the roads, so city has to close the streets, road signs can easily advice drivers days and hours when it is closed. It will also navigate them where to go.

#### More Accurate control of Air Pollution

You can monitor and analyse important parameters of the air as temperature, humidity, dust, CO, CO2 and others. The low costs of Antik SmartCity sensors and network operation enables your city to monitor environment at street level to deliver to your citizens precise information.

#### Improved data collection for better air quality monitoring

Sensor are easy to install and so cheap to run that an entire city can be covered, enabling dozens of metrics to be tracked such as humidity, temperature, air quality and more. With increased availability of data, it's easy to build interactive, real-time mapping of air pollution and improve pollution prediction.

#### Waste Management

A full or overturned container won't surprise you anymore. In that event it will immediately sends alert to company responsible for collection. It presents double victory, satisfied citizen and effective company that can follow the history and effectively plan replacing of container according the needs.

#### **Optimized refuse collection routes**

Collection routes can be optimized to save time, energy and money with low-power connected sensors that indicate the level of waste in dumpsters. The sensors also provide valuable data about dumpster usage, emptying cycles and more.

### **Smart Cameras**

Cameras can secure that your parking lot won't be occupied by anybody else. If it detects car with another vehicle licence number it will notify you and the police.

### Safety on the Streets

Make sure, that objects are at their places. E. g. you can control, if the hatches or fire protection equipment haven't disappear or the cables are not dropped and so increase the safety. In case abnormal movement happens, sensor sends notification, so you can arrange quick action.

# **Collect consumption data effortlessly**

Put an end to manual on-site meter readings and data-processing of water, gas and electricity consumption. You can now monitor and optimize your remote assets in real-time, detecting issues such as leaks and breakdowns. Service companies can also automate billing and remotely activate and deactivate services. IoT enabled meters can transmit data immediately with no pairing or configuration required and no need to replace or recharge batteries for years.

### **Portable Water Monitoring**

Water is irreplaceable, so we have to monitor the quality of water. Sensor is suitable for monitoring potable water, chemical leakage detection, water pollution, corrosion prevention and sedimentation, evaluation of quality condition for aquatic animals and plants.









# SmartCity Elements

#### **Parking sensors**

Antik LoRaWan parking sensor, the solution for Smart Cities that allows citizens to detect available parking spots. Antik LoRaWan parking sensor monitors parking lot uses high sensitivity geomagnetic sensor, which measures all changes of magnetic field above the sensor. The device is manufactured in two variants: 1.surface mount variant – easy to deploy, no need to dig holes to the road surface 2. buried variant – need hole in road surface, takes little more time to deploy, but final solution is more robust and resistant against winter time road maintenance.

### Street Light Module

To manage street lighting is important part of modern smart cities. Antik LoRaWan Street light control unit brings way how to control lights using LoRaWan protocol. Module has IP68 coverage and standard ANSI C136.41 connector. Device uses DALI protocol to control LED lamp driver. There is also embedded energy meter to measure actual and longtime consumption of whole lamp. GPS module provides exact time information for scheduled operations. Ambient light sensor provides information for autonomous operation depend of actual lights conditions.

#### Industry sensors platform

Antik LoRaWan Industry sensors device is platform to collect data from standard industry sensors powered from 12 to 24V equipped with RS485 bus and MODBUS communication protocol. Device is designed to be powered from primary lithium batteries or with solar panel rechargeable batteries. Device is able to read-out data form multiple sensors and transmit collected data in configurable interval. Typical types of sensors: Temperature, Pressure, Water quality (PH sensor, Dissolved Oxygene sensor), Ultrasonic water level sensors etc.

### **Trash Bin Sensor**

One of the key role for "Smart City" is to find the efficient way how to get rid of the trash to maintain clean city. Antik LoRaWan Trash Can monitor, uses ultrasonic sensors to detect level of trash in waste bin. Sensor can be used for waste management company to plan optimal path for trash collecting cars.

### **Temperature and Humidity Sensor**

Antik LoRaWan Temperature and Humidity sensor is designed for outdoor and indoor use. It uses very precise digital sensor with  $0.1^{\circ}$ C and  $0.5^{\circ}$ RH resolution. Industrial enclosure provides IP54 coverage rating. Internal lithium battery guarantees sensor life time up to 10 years.

# Wall Plug Smart City

SmartCity Wall Plug is remotely controlled devices with you can easily detect in case of power is down. It also measures the power consumption, so you can see what has the highest consumption.

















# SmartCity Elements

# **Electricity Meter**

Antik LoRaWan Energy Metering device is designed to sense information about energy consumption from any type of energy meter used in house or flats. Energy meter status is periodically transmitted.

### Gas Meter

Antik LoRaWan Gas Metering device is designed to count pulses from pulse output of gas meter. Gas meter status is periodically transmitted.

# **Abnormal Movement Sensor**

Antik LoRaWan abnormal movement sensor is solution to detect unwanted movement of fixed objects. In case of object is moving, sensor alerts you. Sensor uses very sensitive 3 axis accelerometer sensor to detect unwanted movement.

# Water Level Sensor

Antik LoRaWan Water level sensor monitors level of water in rivers, lakes or other water reservoirs. Sensor sends alert in case water reaches maximum level.

### Water Meter

Antik LoRaWan Water Metering device is designed to use with pulse output water maters. Device counts pulses from two independent water meters. Water meters status is periodically transmitted.









# End-2-End IoT/SMART City Platform

# **SmartCity** Security

#### **Basic**

#### ATK-B201-MIRP+

Static bullet 2Mpx camera with night vision max. 60 m and with the option to set focal length.







ATK-HSD201-IRP+ High-speed rotating 2Mpx camera with 25-times option to zoom and with night vision up to 100 m.

Camera with panoramic view of an area

with the viewing angle up to 180° and

Camera with functionality of reading

vehicle licence plate within 10 m,

suitable for example for car parks.

ATK-X201-IRP+

with night vision up to 30 m.

ATK-LPR201-IRP





# ATK-B401-MIRP

**Extended** 

Static bullet 4Mpx camera with night vision up to 50 m and with the option to set focal length.



#### ATK-D401-MIRP

Static dome 4Mpx camera with night vision up to 50 m and with the option to set focal length.





ATK-X301-IRP+ Camera intended to count people going in and out of the area with night vision

up to 10 m.





ATK-LPR202-IRP Camera with the ability to read vehicle license plates from one traffic lane with max. speed up to 200 km/hour.



**ATK-NVR1601-4K** Recorder with the ability to connect 16 cameras with smart image processing features for basic cameras.



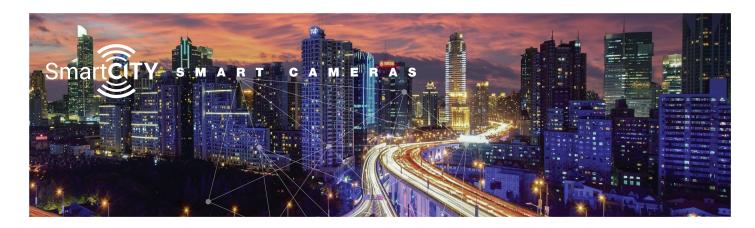


Recorder with the ability to connect 16 cameras with smart image processing for extended cameras.

ATK-NVR1602-4K

**ATK-K02** The highest model of control keyboard for controlling ANTIK cameras with touch monitor and additional keyboard.





# Antik Charging Station

Considering scarce energy resources and increasing pollution concerns, interest in use electric vehicles also increases. As people need to find the way to keep their cars on the move, Antik brings a new charging management platform, billing and variety of chargers.



ATK.CS.EV1.03.00



ATK.CS.EV1.00.07 ATK.CS.EV2.07.07



ATK.CS.EV2.07.55 ATK.CS.EV2.22.55

Charging station type	EVSE mode 1	EVSE mode 3	EVSE mode 3
Charging connector	1x CEE 7 / 4 16A	1x / 2x IEC Type2	1x / 2x IEC Type2
Maximum output	3,6kW	7,4W/22kW	7,4W/22kW
Connectivity	LoRaWAN/NB-IoT	4G/Ethernet	4G/Ethernet
User interface	LED	7 ich LCD	55 ich LCD
Operating temperatures	-20 to +60 °C	-20 to +60 °C	-20 to +60 °C
Electrical connection	1 x 16A	3 x 32A	3 x 63A
Protection rating	IP66	IP54	IP54
Built in 230V outlet	Yes	Yes	Yes
Electric car	-	Yes	Yes
Electric bike	Yes	Yes	Yes
Electric motorbike	Yes	Yes	Yes
Complies with regulations for MH SR grant for electric chargers for municipalities	-	Yes	Yes



SCC-EV-DC-180M

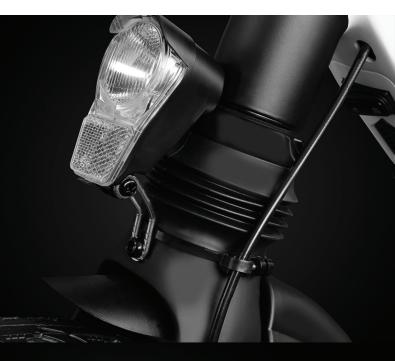


SCC-EV-DC-120

Specific input voltage	380VAC ± 15%	380VAC
Output voltage	200-500/350-700VDC	200-500/350-700VDC
Output power	30kW, 60kW, 120kW, 180kW	30kW, 60kW, 120kW
Input frequency	50Hz ± 10%	50Hz ± 10%
Short-circuit protection	Yes	Yes
Overheat protection	Yes	Yes
Battery discharge protection	Yes	Yes
IP Rating	IP55	IP54
Working temperature	-25°C ~ 55°C	-25°C ~ 55°C
Ambient humidity	90°C	90°C

# **E-mobility**







# Antik SmartCity E-move

Unique design of electric SmartCity bike is great option for comfortable moving across the city. You can get to school or to work at the speed up to 25 km/h and drive up to 45 km per one charge. Thanks to its low weight and simple folding it is easy to fit to every car and it is ideal vehicle to use at vacation. You can choose from two colour variants, white and black.



	Model 250W	Model 350W
Dimensions (unfolded)	1200mm*615mm*985mm	1200mm*615mm*985mm
Dimensions (folded)	1235mm*536mm*270mm	1235mm*536mm*270mm
Weight	≤ 18 kg	≤ 18 kg
Load capacity	≤ 120 kg	≤ 120 kg
Max. speed	20 km/h	25 km/h
Endurance distance	35 - 45 km	35 - 45 km
Charging time	3 - 5 h	3 - 5 h
Battery capacity	8.8AH	8.7AH
Battery type	Lithium	Lithium
Rated voltage	36V	48V
Rated power	250W	350W
Engine type	Brushless motor with gears	Brushless motor with gears
Torque	6.6 N.M	6.6 N.M
Protection against overrun	13A ± 1A	13A ± 1A
Protection against voltage	30 ± 1V	40 ± 1V

# Antik SmartCity E-bicycle

Electric bicycle allows you to get with your own power and little help from the electric motor where you would otherwise have to drive a car. The electric bike will release you and get you out. Thanks to this you can use bike more comfortable, easier and without so much effort compared with classic bike. You can select the degree of help from 4 levels.



	SCBSTY/SCBSTS	SCBSLW
Rated voltage	36V	36V
Battery	36V/4.4AH	36V/5.8AH
Endurance distance	40 - 45 km	50 - 60 km
Rated power	240W	240W
Engine type	German technology of high speed brushless engine with gears	German technology of high speed brushless engine with gears
Torque	10 N.M.	10 N.M.
Battery type	18 650 lithium battery	18 650 lithium battery
Overcurrent protection	13A	13A
Low Voltage protection	31.5V	31.5V
Charger	110 - 240 V; 50 - 60 Hz	110 - 240 V; 50 - 60 Hz
Charging time	2,5 - 5 h	2,5 - 5 h
Electricity consumption per one charge	0,27 KWH	0,27 KWH
Frame	Aluminium 6061 - T6	Aluminium 6061 - T6
Weight	16,5 kg	16,5 kg
Maximum load capacity	120 kg	120 kg
Water resistant	IPX4	IPX4
Wheels	20 '' inflatable wheels	20 " inflatable wheels
Controller	6 x Mofstet Transister	6 x Mofstet Transister
Brake type	Mechanical disc brake	Mechanical disc brake
Product dimensions	1590 x 1015 x 595 mm	1590 x 1015 x 595 mm
Package dimensions	1400 x 230 x 850 mm	1400 x 230 x 850 mm

# Antik SmartCity E-scooter

Antik SmartCity E-scooter is the perfect companion for shorter distances. It is equipped with quality batteries that last up to 25 km and a practical foldable design that makes it easy to move around. Safe driving is assured with double brake system and powerful lights. Attractive and modern design makes it an ideal choice even for demanding users.



Battery capacity	24V/8.8AH, 36V/8.7AH
Battery type	18 650 lithium battery
Rated power	250W
Engine type	Brushless motor with gears
Material	6061 aluminium
Endurance distance	20 - 25 km
Maximum load capacity	120 kg
Water resistant	IPX4
Brake type	Electromagnetic and mechanical brake
Charger	110-240V; 50-60Hz
Wheels	8'' inflatable front wheel, 6'' solid rear wheel
Max. speed	10 km/h, 15 km/h, 25 km/h
Charging time	3 - 5 h
Weight	13 kg
Dimension (folded)	1000 x 520 x 1050 mm
Dimension (unfolded)	1090 x 520 x 345 mm
Package dimension	1085 x 15 x 245 mm

# Antik SmartCity E-scooter Light

Antik SmartCity E-scooter is the perfect companion for shorter distances. It is equipped with quality batteries that last up to 25 km and a practical foldable design that makes it easy to move around. Safe driving is assured with double brake system and powerful lights. Attractive and modern design makes it an ideal choice even for demanding users.



Battery capacity	5,2AH, 7,8AH, 10,4AH
Battery type	LG Lithium (18650)
Rated power	250W
Material	6061 aluminium
Endurance distance	20 - 40 km
Maximum load capacity	120 kg
Brake type	Electromagnetic and mechanical brake
Wheels	8" inflatable wheels
Max. speed	25 km/h
Charging time	3 - 5 h
Weight	13 kg
Dimension (folded)	1070 x 480 x 1050 mm
Dimension (unfolded)	1055 x 480 x 355 mm
Package dimension	1100 x 420 x 250 mm

# Super SOCO E-motorbike TC



Engine		Batteries	
Max. power	2400W	Max. range	55-60 km per battery
Motor type	Electric motor	Battery type	Lithium Ion
Motor brand	BOSCH	Battery capacity	60V*26Ah
Power management	FOC vector controller 2.0	Charging time	6-7 hours
Max. motor torque	120Nm	Charger	90V-240VAC
Max. climbing angle	15°		
Measurement		Features	
Wheel base	1320 mm	Lights	LED (front, rear, flashing)
L*W*H*	1889 x 702 x 1056 mm	Display	LCD
Seat eight	770 mm	Remote key	3 pieces
Ground clearance	198 mm	Interactive system	BMOS
Front Wheel	70/100-17 inches		
Rear Wheel	100/70-17 inches		
Seats	2		
Max. loading weight	150 kg		

# Super SOCO E-motorbike TS



Engine		Batteries	
Max. power	3000W	Max. range	60-70 km per battery (110-120km with 2 batteries)
Motor type	Electric motor		(110-120km with 2 batteries)
Motor brand	BOSCH	Battery type	Lithium Ion
Power management	FOC vector controller 2.0	Battery capacity	60V*30Ah
Max. motor torque	150Nm	Charging time	6,5-7,5 hours
Max. climbing angle	17°	Charger	90V-240VAC
Measurement		Features	
Wheel base	1320 mm	Lights	LED (front, rear, flashing)
L*W*H*	1889 x 702 x 1300 mm	Display	LCD electronic pointer
Seat eight	770 mm		instrument
Ground clearance	198 mm	Remote key	3 pieces
Front Wheel	90/80-17 inches		
Rear Wheel	110/70-17 inches		
Seats	2		
Max. loading weight	150 kg		

# Super SOCO E-motorbike CU-X



Engine		Batteries	
Max. power	2788W	Max. range	75-80 km per battery
Motor type	Electric motor	Battery type	Lithium Ion
Motor brand	BOSCH	Battery capacity	60V*30Ah
Power management	FOC vector controller 3.0	Charging time	7 hours
Max. motor torque	115Nm	Charger	90V-240VAC
Max. climbing angle	15°		
Measurement		Features	
Wheel base	1320 mm	Lights	LED (front, rear, flashing)
L*W*H*	1782 x 318 x 1087 mm	Display	LCD
Seat eight	720 mm	Remote key	3 pieces
Ground clearance	140 mm		
Front Wheel	90/90-12 inches		
Rear Wheel	90/90-12 inches		
Seats	2		
Max. loading weight	150 kg		

### **B2B E-mobility**

# B2B E-mobility

Range of electric scooter is highly adaptable and well suited to long distance, heavy duty and large loading delivery purposes – a real work horse. Provides exceptional value and an excellent business solution for businesses requiring high performance electric delivery vehicles.

- Delivery
- Sharing
- Security

### Delivery



#### Sharing



#### **Local Police**



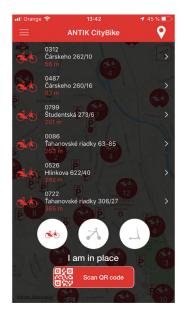
# Super SOCO VT-100LD

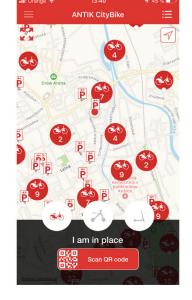


Electric Driving System		Batteries	
Max. power	4000W	Max. range	75-80 km per battery
Max. speed	80 km/h	Battery type	Lithium (removable)
Motor type	Hub motor	Battery capacity	48V/102Ah
Max. climbing angle	14°	Charging time	5-6 hours
		Charger	90V-240VAC
Measurement		Features	
Wheel base	1410 mm	Lights	LED (front, rear, flashing)
L*W*H*	1905 x 720 x 1140 mm	Display	LCD
Ground clearance	150 mm	Brake system	CBS
Front Wheel	130/60 - 13 inches tubeless	Remote key	2 pieces
Max. loading weight	160 kg		

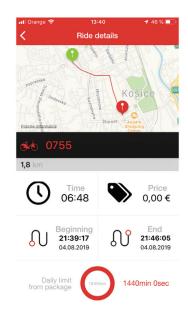
# End-2-End X-sharing Software Platform

- Easy operable mechanical gear equipped pedal bikes
- High durability full rubber tires, non-exchangeable components
- GPS/GSM controlled
- Free-floating system no fixed docking stations
- 1000 bikes in the system High-availability throughout the city
- Designed for daily commuting low-cost monthly plan
- App based user interface for bikers Android and iOS



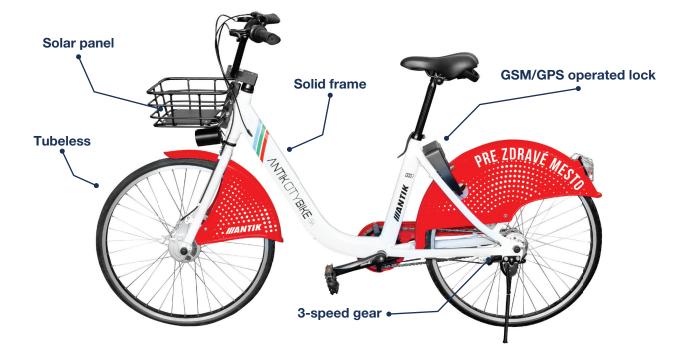


- Bicycles
- Motorbikes
- E-bikes
- Chrging stations



#### Make your own bike

- Own graphics
- Own frame color
- Own color of front and rear fender
- Own color of chain cover



## **ANTIK Hospitality Suite**

# Antik Hospitality Suite



- Guest room interactive TV
- Event navigation
- Digital Signage
- Guest APP
- Housekeeping management

# Top-level entertainment for you guests

- Crystal clear HD/4K TV channels
- Welcome screen
- All guest services on TV screen
- Hotel bill, Food ordering, Messaged and more
- On-demand movies
- Catch-up TV
- Content Management System
- Internet apps + Mediaplayer
- Quick setup
- Weather
- Sightseeing info

# **New!**

SAMSUNG TV EN Hospitality app for Stb-less experience!



Validated Integration

Oracle Hospitality

# HD/4K TV, latest entertainment options, top guest experience

Antik Hospitality delivers easy to set-up turnkey head-end and room premises equipment for live TV integrated with all premises related services and entertainment options. Using Antik HD set-top boxes you can be sure about future-proof media solution fulfilling highest guest expectations.

# **All-Property Content Distribution**

Single system to manage and deliver advertising, information, upsell and public awareness information throughout the property. All your conference rooms rented to major event organizer? With one button click distribute their promos to all your public premises displays, even show it during boot-up of guest rooms TV sets. Major sport event during dinner time? Easy switch your display remotely to specific liveTV channel while displaying your corporate client ads or upsell promo other times of the day.

# All Guest Services on TV screen

Antik Hospitality IPTV brings all your hospitality offers on your guests TV Screen. 24/7 available, easy understandable multilanguage interface increases the chance to sell your food service, relaxation, sightseeing and business guest products. All easy to setup and modify without any need of complicated coding or development.

# **Top-Notch Fun Features**

Perfect to keep your guest entertained any time of the day. Latest HD movies, local sightseeing information, or using USB mediaplayer to allow guests to view latest pictures from the busy day spent on attractions mediaplayer to share hotel entertainment database or guests USB storage to allow them to view latest pictures from the busy day spent on attractions. Instant access to web browser and most viewed apps - youtube, facebook, etc.

# **IPTV Management Server MaxIM**

The Antik Technology presents a professional cost-effective SW solution for a seamless management of your Antik set-top box and Mobile Application network. MaxIM is the corner stone of Antik Middleware Server Family. You can easily define your channel packages, configure all or only selected customers' STBs, collaborate with other part of the Antik Server Family such as Antik Archive Servers, Antik Mosaic Servers and VoD servers. The MaxIM management server SW can be easily connected to your billing or to the customer care application, so that your users' set-top boxes will be automatically activated and monitored using the same software your employees are familiar with.



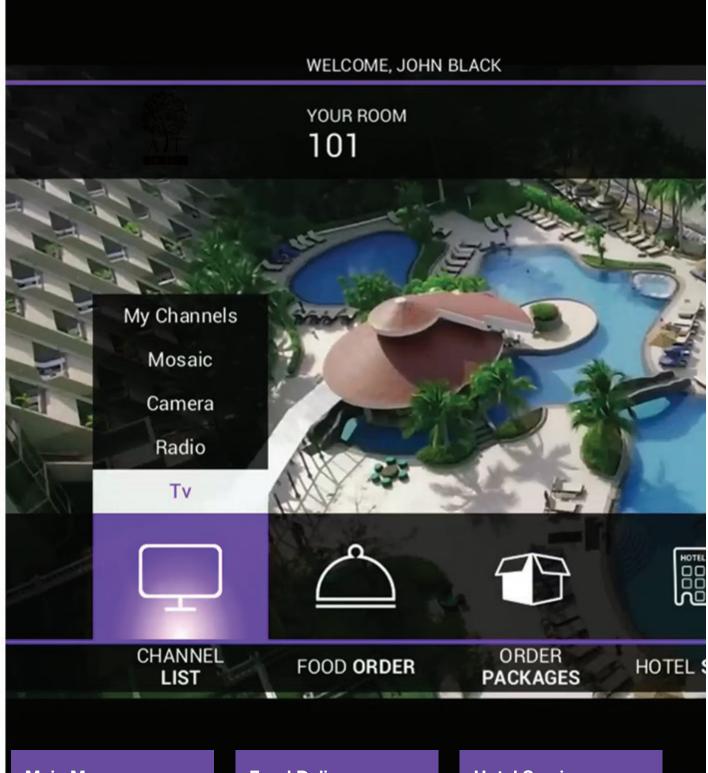
- Lift displays
- Restaurant TVs
- Lobby&Public Premises
- Outdoor Displays
- Conference Premises Screens











#### Main Menu

Easy to navigate customisable interface with direct access to food delivery, video on demand, my bill and other upsell and crosssell options.

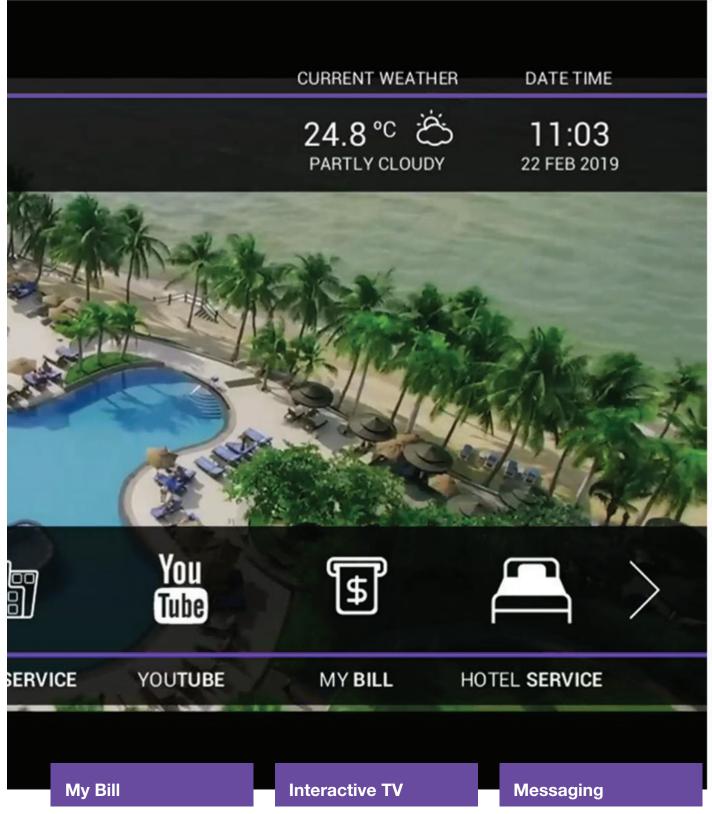
#### **Food Delivery**

All your room-service offer is now available via guest TV set. The only thing that a guest has to do is select food option and confirm by OK button. All guest requests appear on reception dashboard or in your hotel system instantly.

#### **Hotel Services**

Hotel can easily add or remove its products and services - from wakeup calls, through massages, restaurant or tours reservations to taxi orders. Everything is managed by content management system and the result appears without any intermediary work on guests TV sets.

### **ANTIK Hospitality IPTV Components**



Thanks to integration with your hotel PMS, all guest orders ordered through IPTV or other hotel departments will appear on one simple table for guest to review before check-out. UHD TV, Electronic Program Guide, timeshifted TV and movies on demand all on your guest room screens. Media Player, web access and internet apps will complete the guest experience. All messages from reception appear on TV screens immediately. Older messages are stored in guests inbox on TV, notifications as well as scrolling messages are available too.

# Antik Hotel App



Immediate response to all requests of your guests to make sure they are comfortable, without appearing invasive and compromising their enjoyment of their stay is a must. Earn your bonus in the form of increased customer engagement and revenue growth!

- Mass messages
- Orders
- Reception services
- Live chatFeedback

# Antik Hotel App has the solution

#### Maximize guests' spending

Upsell your services and earn additional revenue from services provided by hotel.

#### Gather guests' feedback

Learn how guests feel about your hotel and its services and eliminate negative reviews.

#### Address your guests in real time

No posters, no brochures. Communicate with your guests immediately.

#### **Build long-term relationship**

Address your guests after check-out and make them come to your hotel again!

- Social networks
- After stay promotion
- Language selection
- Staff efficiency



# Antik Digital Signage Solution

#### **Comprehensive Multimedia Advertising Delivery System**







# Key Features

- Complex advertising delivery system
- Combination of live TV streams with standard multimedia designing components available
- Large variety of indoor & outdoor LED TV panels
- Low power consumption
- HD & Full HD resolution
- Low operational costs

TV and many years in IPTV, we created low-investment and low operational costs LED panel system controlled by state-of-art ANTIK DS Management System MaxIM. You can either upload ready to publish campaign delivered by your advertising clients or build your own campaign. To design the campaign, all standard multimedia components can be used – pictures, music, video (even in combination with live TV channel broadcasting) all mixed with many eyecatching effects.

TV panels itself are controlled by low-power Antik DS set-top boxes. In comparison to Intel PC based panels, in each project you save significant investment money, not mentioning dramatically lower power consumption and quiet operation (no fan on set-top box necessary).

# **ANTIK Digital Signage**

#### Totem 55" vertical indoor

Typical power consumption: 250 W Screen size: 139 cm (55") Inputs: HDMI, CVBS, DVI, TOSLINK Weight: 95 kg Dimensions: 2040 x 960 x 350 mm

**Use Cases:** 4Hotel Lobby, conference centres Navigation, Shopping Mall Corridors Advertising



#### Leaflet holder 26" vertical indoor

Typical power consumption: 65 W Screen size: 66 cm (26") Inputs: HDMI, CVBS, DVI, TOSLINK Weight: 50 kg Dimensions: 1850 x 750 x 610 mm Use Cases: Retail Shops, Exhibition Stands



#### Totem 55" dual-screen outdoor

Typical power consumption: 600 W Screen size: 139 cm (55") Inputs: HDMI, DVI, VGA, USB Weight: 220 kg Dimensions: 880 x 300 x 1950 mm Use Cases: Office/Public Building Entrances, Public Places Advertising



#### Wall-mount 10"/19" horizontal panel indoor

Typical power consumption: 35 W Screen size: 25 cm (10")/( 48 cm (19") Inputs: HDMI, CVBS, DVI, TOSLINK Weight: 11 kg Dimensions: 467 x 315 x 42 mm Use Cases: Conference Room Schedule, Office Corridors Navigation



#### Totem 42" vertical indoor

Typical power consumption: 240 W Screen size: 106 cm (42") Inputs: HDMI, CVBS, DVI, TOSLINK Weight: 70 kg Dimensions: 2005 x 805 x 350mm Use Cases: Hotel Lobby, Conference centres Navigation, Shopping Mall Corridors Advertising



#### Totem 47" single-screen outdoor

Typical power consumption: 120 W Screen size: 119 cm (47") Inputs: HDMI, DVI, VGA, USB Weight: 150 kg Dimensions: 800 x 230 x 1800 mm Use Cases: Office/Public Building Entrances, Public Places Advertising



#### Totem 55" single-screen outdoor

Typical power consumption: 600 W Screen size: 139 cm (55") Inputs: HDMI, DVI, VGA, USB Weight: 220 kg Dimensions: 880 x 300 x 1950 mm Use Cases: Office/Public Building Entrances, Public Places Advertising



#### Wall-mount 42" horizontal panel indoor

Typical power consumption: 240 W Screen size: 106 cm (42") Inputs: HDMI, CVBS, DVI, TOSLINK Weight: 38 kg Dimensions: 1075 x 335 x 150 mm Use Cases: Retail shops Advertising, Hote Lobby Navigation



# Antik Event Navigation System

State-of-Art digital content delivery system to improve your vision experience

## **Key Features**

- Flexible event planning tool
- Variety of visual templates
- Easy adaptable to your visual identity
- Remote control of end-points
- Mixed digital signage and navigation roles
- Indoor and outdoor durable HD screens
- Weather info, world clock and other metadata

## Content Management System MaxIM

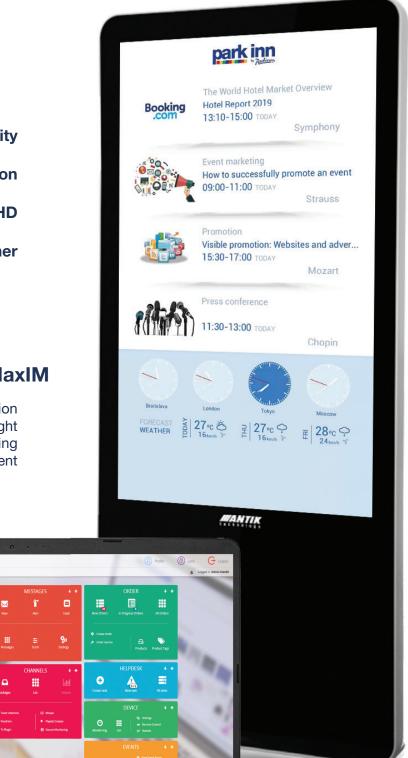
Manage the information displayed on navigation panels. Make sure your guests get right guidance to be on time at the right meeting point. Easy operation enables very fast content update.

Ļ

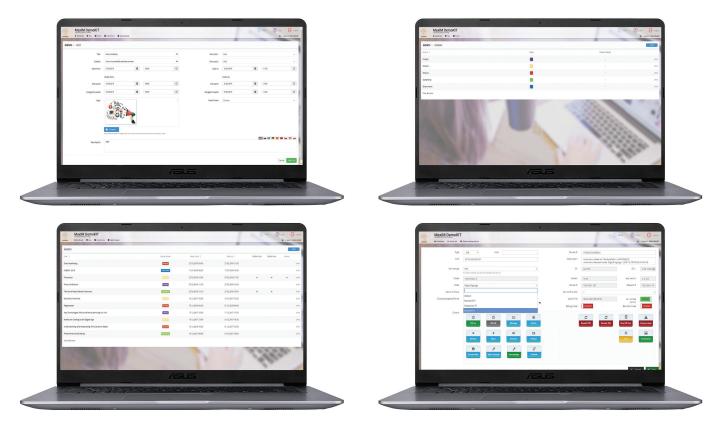
0

e

MaxIM DemoKIT



## Event planning tool



## Remote screen control



One-click change of screen role



# **Variety of templates**

## Navigation totem



## Room entrance daily schedule

8:00	14:00	The World Hotel Market Overview
18:30	14:30	Hotel Report 2019 Duration: 1h 50min
9:00 Event marketing	15:00	Duration: In Somin
19:30 How to successfully promote an Duration: 2h	event 15:30	Promotion
0:00 Duration: 2n	16:00	Visible promotion: Websites and advertisi.
0:30	16:30	Duration: 1h 30min
1:00	17:00	
Press conference	17:30	
2:00	18:00	
Duration: 1h 30min	18:30	
3:00	19:00	
13:30 The World Hotel Market Ove	erview 19:30	
Hotel Report 2019 4:00 Duration: 1h 50min	20:00	

## Room entrance screen



## Room entrance with advertising



## Vertical navigation screen

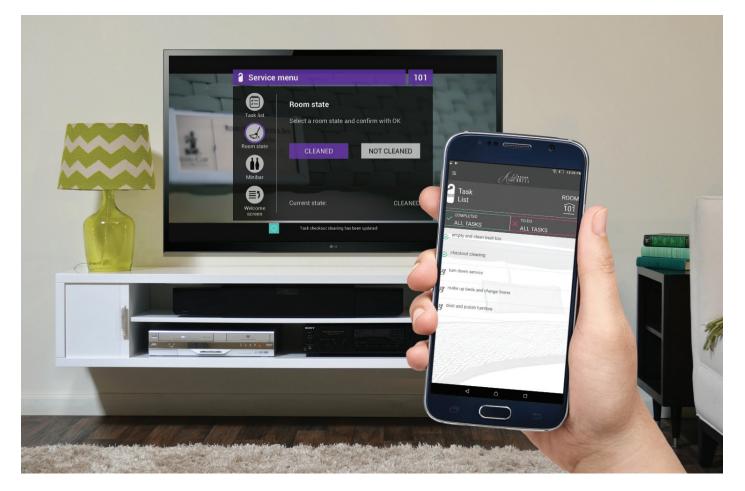


### Vertical navigation totem combined with advertising



# Antik Housekeeping and Facility management

Smart cleaning and maintenance under control-anywhere



Antik Housekeeping and Facility Management helps you to bring your guest satisfaction to another level. Fully integrated to your PMS, system check data about room occupancy and based on your own predefined templates creates every day cleaning tasks – automatically! It allows you to copy typical chambermaids room allocation from any day from the past to simplify your morning routines. Due to the system flexibility you can add manual tasks anytime. On the simple dashboard you can follow, what is the cleaning and inspection status of the rooms. System automatically reports to PMS when the room is done, so next guest can be checked-in quickly – without unnecessary waiting in the lobby. Your inspectors and managers can overlook the situation from any place as the interface is easily readable on tablets or any other smart devices – no need to return back to the office. Based on your selection, housekeepers can confirm their tasks either on guest room TV sets or via smartphone applications. SOS button for chambermaids to bring attention in unusual situations.

## **Key Features**

- Automated housekeeping tasks planning tool
- Personnel task allocation cloning to simplify daily routines
- Daily tasks status under control in dashboard
- Repeating cleaning tasks templates definition tool
- Fully integrated to major PMS
- Room maintenance tasks queues
- PC, Tablet, SmartPhone and TV apps for managers, inspectors, maintenance and housekeepers



Validated Integration

**Oracle Hospitality** 

### **ANTIK Housekeeping and Facility Management**

### Roomlist



My room plan



## My room plan 2



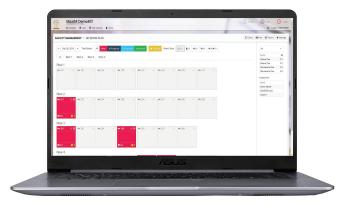
## **Room detail**



## Room plan settings



## Teams of cleaners and maintenance



## Housekeepers Service menu on guestroom TV

### Task list



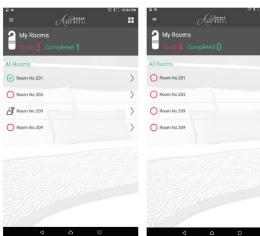
### Enter an acess code

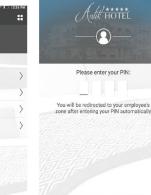
Mini bar - add an item



### Room state - cleaned











Housekeepers App for Android Smartphone

### Maintenance Engineer App for Android Smartphone

#### www.antiktech.com

# Antik - SmartHotel

With ANTIK guest room management system (GRMS) hotel is able to manage different scenario in each guest room. Lighting, temperature or curtains are controlled by guest with touch panel situated in the room or centrally by the hotel. System provides the key to efficiently and centrally manage guestroom energy consumption, gives more comfort, higher security to the room and easy maintenance system.



### **GRMS – Guest room management system**

### **Central unit**

- Display type: color OLED
- Resolution: 128x128/1:1 aspect ratio
- Visible area: 26 x 26 mm
- Maximum number of units: max. 32 units to one BUS line
- Communication speed: 100 Mbps
- Supply voltage/tolerance: 27 V DC, -20/ +10%
- Dimensions: 90 x 105 x 65 mm

### **Glass card holder**

- Switching voltage: 230 V AC or 30 V DC.
- Operating temperature: -20 .. +55 °C.
- Glass card holder supports RFID media with a carrier frequency of 13.56 MHz. Supported card types are MIFARE Ultralight, DESFire 2K, Plus S 4K.
- The Glass card holder unit is equipped with an 8A relay output and an AgSnO2 contact.
- Glass card holder are designed for mounting into an installation box.
- **Dimensions:** 142 x 94 x 36 mm.

### **Touch Screen With Display**

- Supply voltage/tolerance: 27 V DC, -20 / +10 %
- Aspect ratio: 3:4
- Visible area: 52,5 x 70 mm
- Backlight: active
- Touchpad: 4-wire resistive
- **Display:** 3,5"
- Dimensions: 94 x 94 x 36 mm

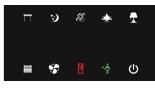
### **Glass Switch Panel**

- Number of control buttons: 10
- Temperature measuring: YES, built-in temperature sensor
- Resolution: by setting 10-bit
- Installation BUS: BUS
- Supply voltage/tolerance: 27 V DC, -20 / +10 %
- Dimensions: 142 x 94 x 36 mm









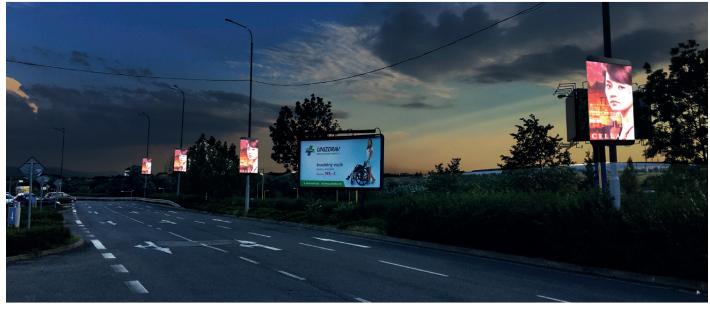
### ANTIK LED Panels

# Antik Street LED Panels

- Remote control and managing of monitor units •
- Wireless communication through 4G network
- Low operating costs Modern futuristic design

- Sharp picture at an 8 meters distance Pillar installation/220V power supply Wireless communication via 4G network with own SIM card
- Weather resistant
- Image visible even in daylight
- Creative combinations of displayed themes





# Passenger Infotainment System



# Grant your customers an enjoyable journey with **Antik Infotainment System**

Let us introduce our new interactive IPTV solution – ANTIK Infotainment system for public transport. Explore new dimensions of active travelling with relaxation, fun and socializing all in extraordinary comfort.



### Information and Entertainment



# Passenger Infotainment - BYOD



## **Key Features**

- On demand Video and Music VOD, MOD
- E-books, Social networks and Games
- Up-to-date Voyage information
- Low running costs

- State-of-art features
- Easy and fast updating of content
- Easily accessible
- Food Order

Transform your vehicles into entertainment friendly ones while minimizing installation costs. Use devices of your passengers to entertain them and provide information about the journey directly on their smartphones or tablets.





# **TV Scenarios**

**TELCO** operator

### Using multicast (IGMP) enabled network

- MaxIM Middleware Management System
- GX5000 IRD, HDMI Encoders
- TR6265 HEVC Transcoders
- Archive System Catch-UP TV
- Video-on-Demand System
- nPRV System
- API Server for Smart Apps
- Multiroom System live matrix monitoring
- StreamKeeper stream monitoring
- Smart TV Apps for iOS, Android, AndroidTVs, AppleTV
- KeyRider HLS Encryption System
- AntikCRYPT multicast encryption
- Mini 3 IP set-top boxes
- SmartHome devices

## CABLE operator

## Using Coax digital DVB-C/T network with DOCSIS or parallel GPON for data services

- MaxIM Middleware Management System
- GX5000 Transmodulator DVB-S2-DVB-C/T
- TR6265 HEVC Transcoders
- Archive System Catch-UP TV
- nPRV System
- Video-On-Demand System
- Multiroom System live matrix monitoring
- StreamKeeper stream monitoring
- API Server for Smart Apps
- Smart TV Apps for iOS, Android, Android TVs, Apple TV
- KeyRider HLS Encryption system
- AntikCRYPT SVB-C/T encryption
- Nano 3C/T+ IP hybrid set-top boxes
- SmartHome devices

## HOSPITALITY Project

### Multicast (IGMP) enabled network

- MaxIM Middleware Management System
- Digital Signage System
- Event Navigation System
- Facility Management System
- Hotel Guest App
- GX5000 IRD, HDMI Encoders
- TR6265 HEVC Transcoders
- Archive System Catch-Up TV
- Video-on-Demand System
- Nano 3 IP set-top boxes

## **TELCO** operator

### Using non-multicast enabled network

- MaxIM Middleware Management System
- GX5000 IRD, HDMI Encoders
- TR6265 HEVC Transcoders
- Live streamers HLS streaming of linear TV streams
- Archive System Catch-UP TV
- nPRV System
- Video-on-Demand System
- Multiroom System live matrix monitoring
- StreamKeeper stream monitoring
- API Server for Smart Apps
- Smart TV Apps for iOS, Android, AndroidTVs, AppleTV
- KeyRider HLS Encryption System
- Mini 3 IP set-top boxes
- SmartHome devices

## **OTT Content Provider**

### Broadcasting over public internet

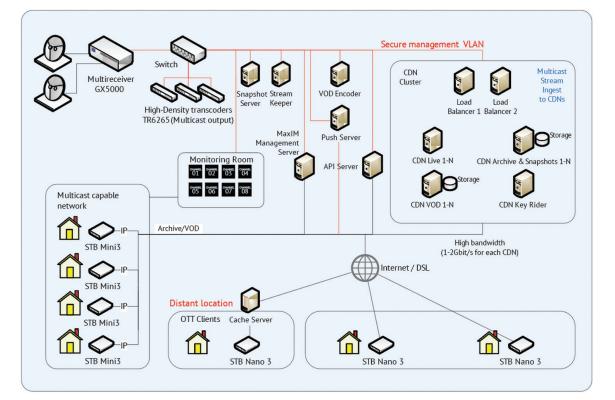
- MaxIM Middleware Management System
- GX5000 IRD, HDMI Encoders
- TR6265 HEVC Transcoders
- Live streamers HLS streaming of linear TV streams
- Archive System Catch-UP TV
- Video-on-Demand System
- nPRV System
- Multiroom System live matrix monitoring
- StreamKeeper stream monitoring
- KeyRider HLS Encryption System
- API Server for Smart Apps
- Smart TV Apps for iOS, Android, AndroidTVs, AppleTV
- Nano 3 IP set-top boxes
- SmartHome devices

## HOSPITALITY Project

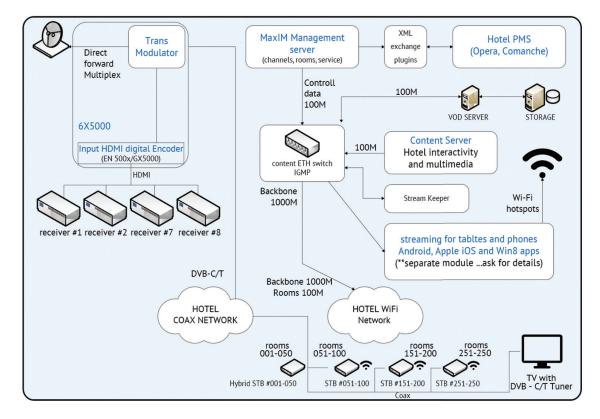
#### Coax Network with wifi or non-multicast IP network

- MaxIM Middleware Management System
- Digital Signage System
- Event Navigation System
- Facility Management System
- Hotel Guest App
- GX5000 Transmodulator DVB-S2-DVVB-C/T, HDMI Encoders
- TR6265 HEVC Transcoders
- Archive System Catch-Up TV
- Video-on-Demand System
- Nano 3 C/T+IP hybrid set-top boxes

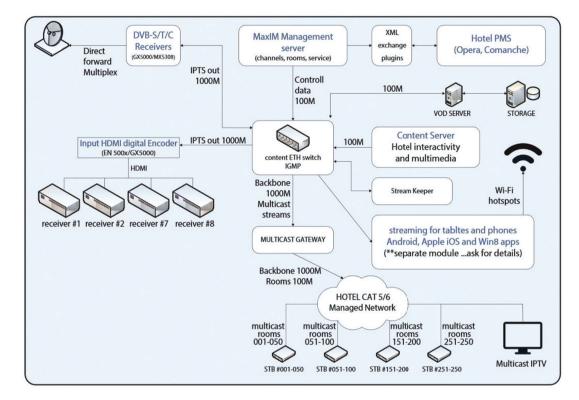
# **Schemes** Telco/ISP/OTT/ANTIK Digital Headend



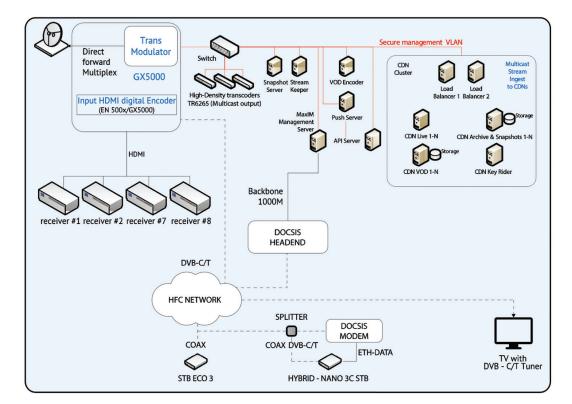
# Hospitality Cable+IP Scenario



# Hospitality IPTV (Hotels, Hospitals, Schools)



# Cable Operator (DVB-C/T + IP)



## Digital Signage Scenario - Public Internet



MaxIM Management Server

Digital Signage Scenario – Corporate Network



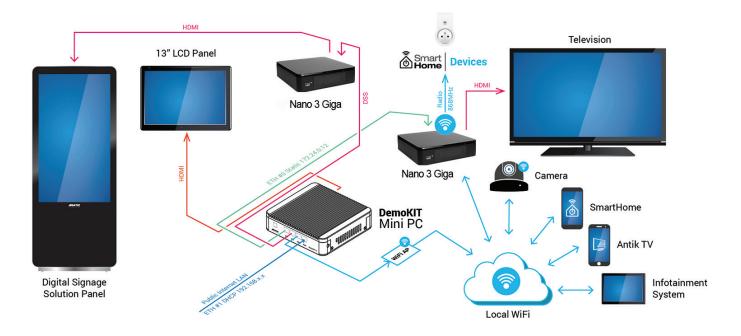
## IPTV Solution all-in one Most of Antik in one valuable pack

Antik IPTV Demokit offers you the possibility to check all the important features of Antik products. It serves as proof-of-concept of your next IPTV project and gives you chance to become familiar with major SW and HW components. Demokit you can easily run in your network or lab. Preinstalled OS Nano PC with all necessary SW servers such as IPTV Management Server, EPG, Streaming Server, Hospitality Suite, etc. are all part of delivery. 2 4K set-top boxes enabled to use on public internet as well as in multicast network are included. Pre-recorded content includes SD and HD streams, radios, TV archive and cameras. Technical support covers (incl. in price) all necessary help with IPTV demokit setup.



- UHD, HD & SD streams
- Catch up TV/TV Archive
- Timeshift
- MediaPlayer
- VOD
- Hospitality IPTV
- Event navigation
- Housekeeping Management
- TV Plugins
- EPG
- Digital Signage
- IPTV Management MaxIM
- SmartHome included





## **Key Features**



### State-of-art User Interface

Easy operation for your SmartTV applications. Browsing web pages will be fast with embedded trackball. Browse the internet without turning the TV off.



### **Hospitality TV**

Easy-to-learn and customizable access to all Hotel services as 4K TV, Food order, Youtube and much more.



### VOD

Choose a movie from the database or search some new in your favorite category. Watch trailers, movie description or rank the movie.



### MaxIM Management System

Single Web Interface for all systems setup and control from devices, channels, CMS to signage and housekeeping.



### Archive by genre

Enables control of archive program feature which allows users to pause, rewind and forward. All are categorizes by genres and series.



**NEW! Hospitality Modules** 

Digital Signage - Event Navigation - Housekeeping. All inclusive system to remote control of digital advertising, dynamic navigation through premises and facility management.

# IPTV DemoKIT 6.0 order

Customer copy-order for demo kit

### Supplier

ANTIK TECHNOLOGY (CY) LTD. Account number: 357-029048-326 IBAN: CY06 0020 0195 0000 3570 2904 8326 Beneficiary Bank Name: Bank of Cyprus Beneficiary Bank Address: Larnaca, Cyprus SWIFT Address: BCYPCY2N (Bank of Cyprus) Paypal: kolla@antik.sk

Description	QTY
NANO server with end-to-end demo licensed SW	1
Antik Nano 3	2
Antik Nano 3	2
Wireless multimedia IPTV keyboard	1
5-port GB Switch	1
8 GB Capacity USB Flash Drive	1
Wireless Acess Point for multicreen	1
demo	2
USB ETH Adapter	
ETH cables (2m)	2
Travel adapter for EU/UK/US	1
Antik STB Debug cable	1
SmartHome - Wall Power Plug	1
IP Camera SCI	
Total pcs	16 pcs
Total weight	5 kg
Total price	\$ 665
Optional	QTY

LCD Display 13.3" IP Camera SCI-10 Total pcs Total weight Total price

- Shipping Term DDU (Deliver Duty Unpaid)
- Delivery Lead Time: up to 3 weeks after receipt of payment
- Delivery Forwarder: DHL (free of charge)
- Terms of Payment: 100 % value of PO paid in advance by TT/\*All bank charges are for the account of the customer

1

18 pcs

6,5 kg

\$ 860

- Price of HW is EXW China /Country of Origin: China
- Warranty period: 23 months \* Support included

### **Customer:**

Contact Name:

Tel. Number:

Company Name:

Delivery Adress:

E-mail:

Signature:

## Purchase order for demo kit

### Supplier

ANTIK TECHNOLOGY (CY) LTD. Account number: 357-029048-326 IBAN: CY06 0020 0195 0000 3570 2904 8326 Beneficiary Bank Name: Bank of Cyprus Beneficiary Bank Address: Larnaca, Cyprus SWIFT Address: BCYPCY2N (Bank of Cyprus) Paypal: kolla@antik.sk

Description	QTY
NANO server with end-to-end demo licensed SW	1
Antik Nano 3	2
Antik Nano 3	2
Wireless multimedia IPTV keyboard	1
5-port GB Switch	1
8 GB Capacity USB Flash Drive	1
Wireless Acess Point for multicreen	1
demo	2
USB ETH Adapter	
ETH cables (2m)	2
Travel adapter for EU/UK/US	1
Antik STB Debug cable	1
SmartHome - Wall Power Plug	1
IP Camera SCI	
Total pcs	16 pcs
Total weight	5 kg
Total price	\$ 665
Optional	QTY
LCD Display 13.3"	1
IP Camera SCI-10	1

- Shipping Term DDU (Deliver Duty Unpaid)
- Delivery Lead Time: up to 3 weeks after receipt of payment
- Delivery Forwarder: DHL (free of charge)
- Terms of Payment: 100 % value of PO paid in advance by TT/\*All bank charges are for the account of the customer

18 pcs

6,5 kg

\$ 860

- Price of HW is EXW China /Country of Origin: China
- Warranty period: 23 months \* Support included

### **Customer:**

Contact Name:

**Total pcs** 

**Total weight** 

**Total price** 

Tel. Number:

Company Name:

Delivery Adress:

E-mail:

Signature:




Headquarters

Čárskeho 10 040 01 Košice Slovak Republic

Phone: +421 55 30 12345 E-mail: info@antiktech.com

### **ANTIK Technology China**

Antik Technology Co., LTD 東莞大朗百一有限公司 廣東省東莞市大朗鎮松柏朗村新園二路55號 Dongguan Dalangbai Prime Co., Ltd. No. 55, Xinyuan 2nd Road, Songbailang Village, Dalang Town, Dongguan City, Guangdong Province, China Phone: +86 15818693087

### E-mail: info@antiktech.com

This document contains the specification for a product under continuous development. Specifications may change in any manner without notice. Visit www.antiktech.com for updates. Some of the technologies mentioned in this document can be licensed by third parties. License Agreement in such cases must be obtained separately.

09 / 2019



### www.antiktech.com

**ANTIK Technology (S) Pte Ltd** SEA Rep Office

Block 4012 Ang Mo Kio Avenue 10 #06-04 Techplace 1 Singapore 569628

Phone: +65 96162725 E-mail: juiceiptv\_asia@antiktech.com

