

VERSATILE

ONE PLATFORM FOR ALL YOUR NEEDS

Flow

**DRM system**  
Installation and Setting guide

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## 1. INTRODUCTION

Ikusi Flow headend allows to encrypt contents in order to be securely transmitted in coaxial or IPTV distribution networks. In this guide the Ikusi Flow hospitality content protection (Hospitality DRM) architecture is described. Also, which are the DRMs embedded in the headend and how are they used is detailed.

Ikusi Flow incorporates the main Hospitality DRM systems: Samsung LYNK DRM, Philips VSecure and LG Pro:Idiom. These systems have been specifically designed to protect contents delivered in hospitality premises (hotels, hospitals, residences for elderly people,...) and they have been approved by the principal content producers.

The integration of those systems into Ikusi Flow have been done such that avoiding the need for an external DRM server and for additional signal encryption devices. Both functions are included in Ikusi Flow headend, improving the simplicity of the system and therefore, reducing its total cost.

## 2. IKUSI FLOW DRM SYSTEM DESCRIPTION

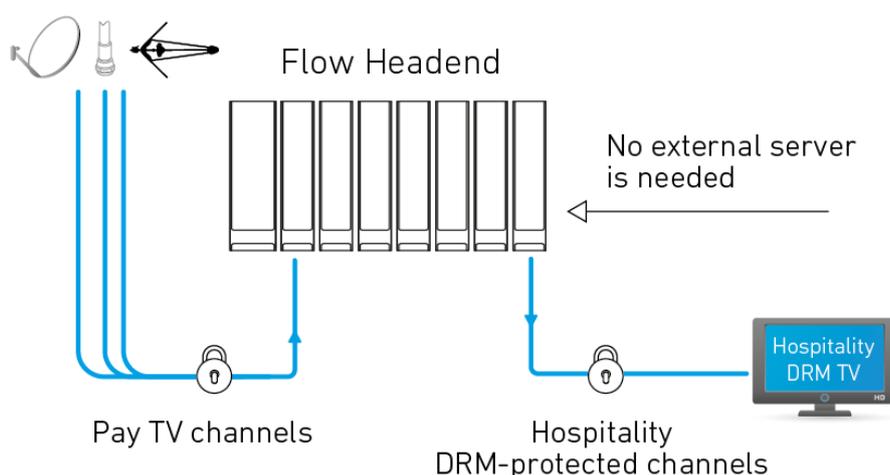
The DRM systems embedded in Ikusi Flow consist basically on two subsystems:

- DRM server. It is the server in charge of managing the encryption signalling. It resides in the FLOW HUB module. In the cases of Samsung LYNK DRM and LG Pro:Idiom, the server only works if you have installed a LYNK DRM or a LG Pro:Idiom license. If you don't have one, please contact with Ikusi Multimedia Support Department in order to obtain it.
- Encryption hardware. They are the devices in charge of signal encryption in strict sense. This hardware is embedded in the FLOW SEC and FLOW ENC modules. Therefore, only the contents that are managed by a FLOW SEC module can be encrypted (for example, pay TV channels) or by a FLOW ENC module (for example, contents coming from a STB). In the case of LG Pro:Idiom, each encryption module (FLOW SEC and FLOW ENC) must have a LG Pro:Idiom license active. If you don't have one, please contact with Ikusi Multimedia Support Department in order to obtain it.

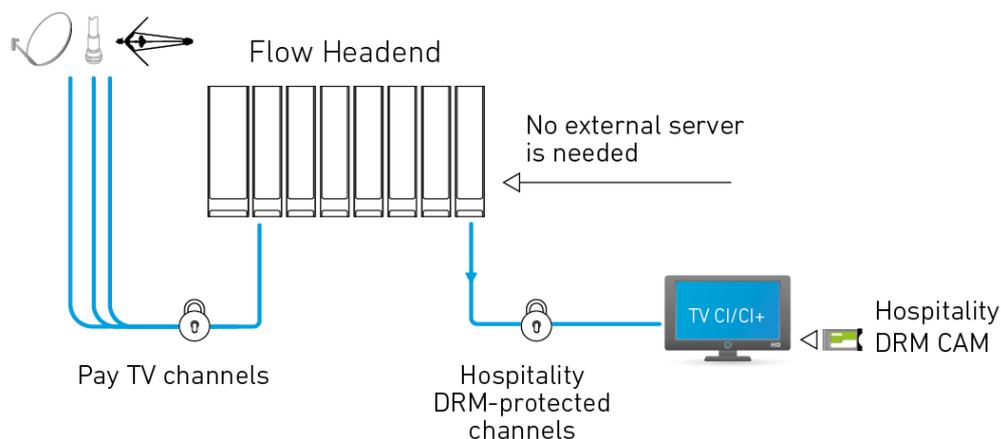
The headend, after DRM enabling, will encrypt all the contents that are managed by the FLOW SEC and FLOW ENC modules. Moreover, it will signalize the encryption, both in the RF output and in the IP output, using the specific mechanism of each DRM system.

In this way, the content is securely transmitted within the TV distribution network. The television itself is responsible for decrypting the signal. To do so, two options are available:

- The television can either include an in-built DRM, i.e., the built-in Samsung LYNK DRM TVs, Philips VSecure TVs or LG Pro:Idiom TVs.



- Or the DRM can be included in the television through a DRM end-point. In the specific case of VSecure, Ikusi offers the option of a VSecure CAM, which is compatible with any CI or CI+ television. This is a simple, cost-effective solution, with no need to use a smart card (card less solution).



In any case, management is extremely simple, avoiding the problems associated with the use of a traditional broadcast CAS.

### 3. INITIAL CONFIGURATION

#### 3.1 Enable Advanced Configuration

The management of the DRM server is performed using options of the advanced configuration. Therefore, the first step consists in enabling advanced configuration.

- Go to MENU→ADVANCED CONFIGURATION→Enable advanced configuration

### 4. DRM SYSTEMS

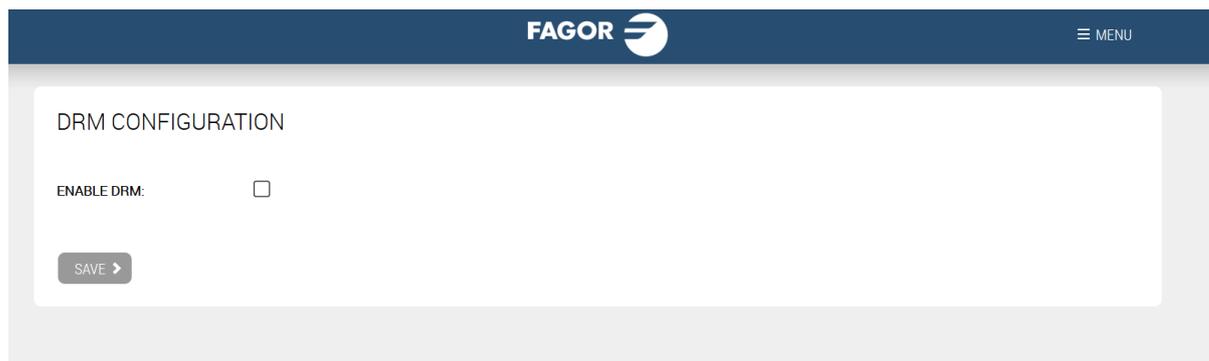
Ikusi Flow incorporates the three main Hospitality DRM systems: Samsung LYNK DRM, Philips VSecure and LG Pro:Idiom. As a result, in the case of using last generation Samsung, Philips or LG TVs, there is not need for additional hardware in the viewing devices, because the TVs itself will be in charge of decrypting the signal.

Details of how Ikusi Flow setup with these systems is performed can be found below.

#### 4.1 Samsung LYNK DRM

##### 4.1.1 Enable Samsung LYNK DRM

To enable Samsung LYNK DRM, go to MENU→ADVANCED CONFIGURATION→DRM Configuration.



Check ENABLE DRM box. After that, open SELEC DRM list and choose Samsung LYNK. Finally, push SAVE button.

The screenshot shows the 'DRM CONFIGURATION' page in the FAGOR system. At the top, there is a dark blue header with the 'FAGOR' logo and a 'MENU' icon. Below the header, the page title 'DRM CONFIGURATION' is displayed. Underneath, there are two settings: 'ENABLE DRM' with a checked checkbox, and 'SELECT THE DRM' with a dropdown menu showing 'Samsung LYNK'. At the bottom left, there is a 'SAVE >' button.

After that, Ikusi Flow will start to encrypt all the contents that are managed by FLOW SEC and FLOW ENC modules.

**NOTE:** the LYNK DRM server only works if you have installed a LYM DRM license. If you don't have one, the signal will be encrypted but the needed signalling to decryption in the TV will not be included, and the result will be a black picture in the TV. Please contact with Ikusi Multimedia Support Department in order to obtain the corresponding license.

## 4.2 Philips VSecure

### 4.2.1 Enable Philips VSecure

To enable Philips VSecure, go to MENU→ADVANCED CONFIGURATION→DRM Configuration.

The screenshot shows the 'DRM CONFIGURATION' page in the FAGOR system. At the top, there is a dark blue header with the 'FAGOR' logo and a 'MENU' icon. Below the header, the page title 'DRM CONFIGURATION' is displayed. Underneath, there is one setting: 'ENABLE DRM' with an unchecked checkbox. At the bottom left, there is a 'SAVE >' button.

Check ENABLE DRM box. After that, open SELEC DRM list and choose Philips VSecure. Finally, push SAVE button.

The screenshot shows the 'DRM CONFIGURATION' page in the FAGOR system. At the top, there is a dark blue header with the 'FAGOR' logo and a 'MENU' icon. Below the header, the page title 'DRM CONFIGURATION' is displayed. Underneath, there are two settings: 'ENABLE DRM' with a checked checkbox, and 'SELECT THE DRM' with a dropdown menu showing 'Philips VSecure'. At the bottom left, there are three buttons: 'SAVE >', 'KEY DOWNLOAD', and 'REGENERATE KEY'.

After that, Ikusi Flow will start to encrypt all the contents that are managed by FLOW SEC and FLOW ENC modules.

### 4.2.2 Encryption key download

The key that is used to encrypt the signal is stored in the headend. If you need to know it in order to generate TVs key, you can download it pushing KEY DOWNLOAD button.

A window will open, informing VSecPlain.txt is going to be downloaded. That file contains the encryption key.

### 4.2.3 Encryption key regeneration

When the system has been attacked and using a new encryption key is needed, push REGENERATE KEY button. A window will open asking for confirmation of the key regeneration. If you understand the implications of the key regeneration and you agree, push **YES**.



## KEYS FILE REGENERATION

If the keys file is re-generated, all TV-s will need to be reconfigured

YES

NO

**ATTENTION:** If you regenerate the key, you should reconfigure all the TVs in order to load the new key to them. Do not regenerate the key if you are not sure about how to perform this process (the TVs would show a black picture until they receive the new key).

### 4.3 LG Pro:Idiom

#### 4.3.1 Enable LG Pro:Idiom

To enable LG Pro:Idiom, go to MENU→ADVANCED CONFIGURATIONS→DRM configuration.

Check ENABLE DRM box. After that, open SELECT DRM list and choose LG Pro:Idiom. Finally, press the SAVE button.

In order to encrypt using the DRM, LG Pro:Idiom needs to register the Pro:Idiom licenses of the FLOW HUB module and of the FLOW SEC and FLOW ENC modules. If these are not available, please contact with Ikusi Multimedia Support Department to obtain them.

Insert the Pro:Idiom license number of the HUB module in the HUB LICENSE field and press the OK button.

**FAGOR**  ≡ MENU

### DRM CONFIGURATION

ENABLE DRM:

SELECT THE DRM: LG Pro:Idiom

HUB LICENSE: LN63-TSCJ-KQIE-40HW-SZXB-2PXZ-S4 OK

MODULE LICENSE:  OK

SERIAL NUMBER	LICENSE
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SAVE > REQUEST PRO:IDIOM KEY RENEWAL

After this, insert the Pro:Idiom licenses for the SEC and ENC modules one by one, in the MODULE LICENSE field. Press the OK button after introducing each of the licenses. A list will appear with the serial numbers of the modules and Pro:Idiom licence associated to each of them.

**FAGOR**  ≡ MENU

### DRM CONFIGURATION

ENABLE DRM:

SELECT THE DRM: LG Pro:Idiom

HUB LICENSE: LN63-TSCJ-KQIE-40HW-SZXB-2PXZ-S4 OK

MODULE LICENSE:  OK

SERIAL NUMBER	LICENSE
4311SB009293	NGZ7-JGKI-X4FS-7LB2-4YI2-CRTH-4I
4315SB017474	YPPI-ZFP6-DGTL-MHOF-U4J6-44P5-DM

SAVE > REQUEST PRO:IDIOM KEY RENEWAL

After that, Ikusi Flow will start to encrypt all the contents that are being processed by the FLOW SEC and FLOW ENC modules.

### 4.3.2 Pro:Idiom key renewal

In certain circumstances, LG may request the key used by the DRM to be changed. If this is the case, the new key will be supplied to the Ikusi Flow headend through a software update. The new key may be sent to the televisions from the Ikusi Flow headend itself. To do this, press the REQUEST PRO:IDIOM KEY RENEWAL button.

The screenshot shows the 'DRM CONFIGURATION' screen in the FAGOR interface. At the top, there is a notification: 'OK! Pro:Idiom key renewal requested'. The configuration options are as follows:

- ENABLE DRM:**
- SELECT THE DRM:** LG Pro:Idiom
- HUB LICENSE:** LN63-TSCJ-KQIE-40HW-SZXB-2PXZ-S4 [OK]
- MODULE LICENSE:** [Empty field] [OK]

Below these options is a table with two columns: SERIAL NUMBER and LICENSE.

SERIAL NUMBER	LICENSE
4311SB009293	NGZ7-JGKI-X4FS-7LB2-4YI2-CRTH-4I
4315SB017474	YPPI-ZFP6-DGTL-MHOF-U4J6-44P5-DM

At the bottom of the configuration area, there are two buttons: 'SAVE >' and 'REQUEST PRO:IDIOM KEY RENEWAL'.

After a few moments, the key renewal process will begin and the televisions will acquire the new Pro:Idiom key.

## 5. DRM STATUS CHECKING

Once the DRM system has been enabled, you can check its status in Home screen. There are three methods to check the DRM has been enabled:

- In Home Screen, in service listing you can check that services processed by FLOW SEC and FLOW ENC modules are being protected with a DRM. They will be labelled with icon .

239.255.4.5	Disney Channel	Disney Channel	eng spa	
239.255.4.3	24h	24h	qaa spa	
239.255.4.6	PARAMOUNT CHANNEL	PARAMOUNT CHANNEL	qaa spa	
239.255.4.7	GOL	GOL	nol spa	
239.255.4.8	FOX LIFE HD	FOX LIFE HD	qaa spa	 
239.255.4.9	BEIN SPORTS	BEIN SPORTS	ndl qaa spa	 
239.255.4.10	COMEDYCENTRALHD	COMEDYCENTRALHD	qaa spa	 
239.255.4.11	KIKA	KIKA	ger mis	
239.255.4.12	ZDF	ZDF	ger mis mul	
239.255.4.13	3sat	3sat	ger mis mul	
239.255.4.29	HOTEL PPV	HOTEL PPV	und	

- Clicking over a FLOW SEC or FLOW ENC module a status screen will open. Among the information shown in this window, you could see which DRM is being used (in the example, Philips VSecure).

## MODULE INFORMATION

SLOT NUMBER	5
SERIAL NUMBER	4311SB009316
HARDWARE VERSION	0
FIRMWARE VERSION	2.2.0+beta1.3.g5a74c60+d20170219
TEMPERATURE	42°C
DRM	Philips VSecure

### CAM 1



SEC

REBOOT

- In the installation overview report appears which DRM is being used in each FLOW SEC or FLOW ENC module. To obtain this report go to MENU→STATUS→ Overview. A window with the whole information of the headend in detail will open. In each box dedicated to each FLOW SEC or FLOW ENC module appears information about DRM (in the example, Samsung LYNK).

SEC	
Slot number	5
Serial number	4311SB009316
Hardware version	0
Firmware version	2.2.0+alpha10.83.g9629e95+d20170215
Temperature	40°C
Operating hours	256h
DRM	Samsung LYNK
CAM 1 Inserted	yes
CAM 1 In use	yes
CAM 1 Use level	60%
CAM 1 Manufacturer	SmarDTV
CAM 1 Model	Movistar+ Pro CAM
CAM 1 Services	FOX LIFE HD BEIN SPORTS COMEDYCENTRALHD
CAM 2 Inserted	no



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