



Technical Guidelines for BISS-CA access

Version 2 (August 2020)

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Document version

Version	Date	Comments / Changes
1.0	June 11, 2020	Initial version
1.1	June 25, 2020	Minor corrections New screenshots of the Eurovision.net portal
1.2	July 10, 2020	Minor corrections and clarifications

2	August 4, 2020	Ateme DR5000 added
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1 Introduction

Eurovision Services (ES) will use the new BISS-CA encryption standard starting in 2020.

BISS-CA is a conditional access system based on open cryptographic standards. It uses a combination of symmetric and asymmetric ciphers to protect the transmitted content and entitle or revoke in real time any receiver in an interoperable manner.

This document provides guidelines to upgrade decoders to receive BISS-CA encrypted signals. Specific instructions are included for decoders provided by ES to selected partners and broadcasters.

To receive BISS-CA transmissions, broadcasters need:

- A compatible decoder
- The right software version and BISS-CA licence
- The decoder to be registered on the www.eurovision.net website
- The decoder public key to be provided to the ES team to be inserted into the ES database. The public key is the unique identifier used to authorise each individual decoder to decrypt the received signal.

This document explains the step-by-step the procedure to obtain BISS-CA access for broadcasters' equipment. An overview diagram is provided on page 3.

2 Equipment

As of the creation date of this document, the following decoder models have been tested by ES and validated for BISS-CA use:

- MediaKind RX8200
- Ateme DR5000 (added August 2020)

- Nevion MI-FA

This list of equipment will continue to be updated as soon as new models are tested and proved to be fully compatible with the standard. ES is working closely with various equipment manufacturers to ensure the interoperability of the standard.

ES does not assume any responsibility if broadcasters use decoder models that have not been tested or validated.

2.1 Decoder upgrade campaign for units sold or owned by ES

ES is running an upgrade campaign that applies to the following models:

- a) MediaKind RX8200 owned by ES
- b) MediaKind RX8200 sold by ES
- c) Ateme DR5000 sold by ES

Units owned by ES (a) will be provided with a licence and support free of charge. Units sold by ES (b, c) will be provided a licence and support for a fee.

2.2 Models not eligible for the upgrade campaign

Any model not included in section 2.1 is not covered by this upgrade campaign, including MediaKind RX8200s and Ateme DR5000s purchased from a third party. In these cases, broadcasters are requested to contact the equipment manufacturers to upgrade their units to BISS-CA and to register them on the ES website www.eurovision.net. (See section 3.2).

3 Upgrade process

The upgrade process for all decoders is composed of different steps. These are mandatory and must be completed sequentially. The process will differ for units that are part of the upgrade program (see section 2.1) where ES provides the BISS-CA licence, and for decoders that were purchased from a third party, as shown in figure 1.

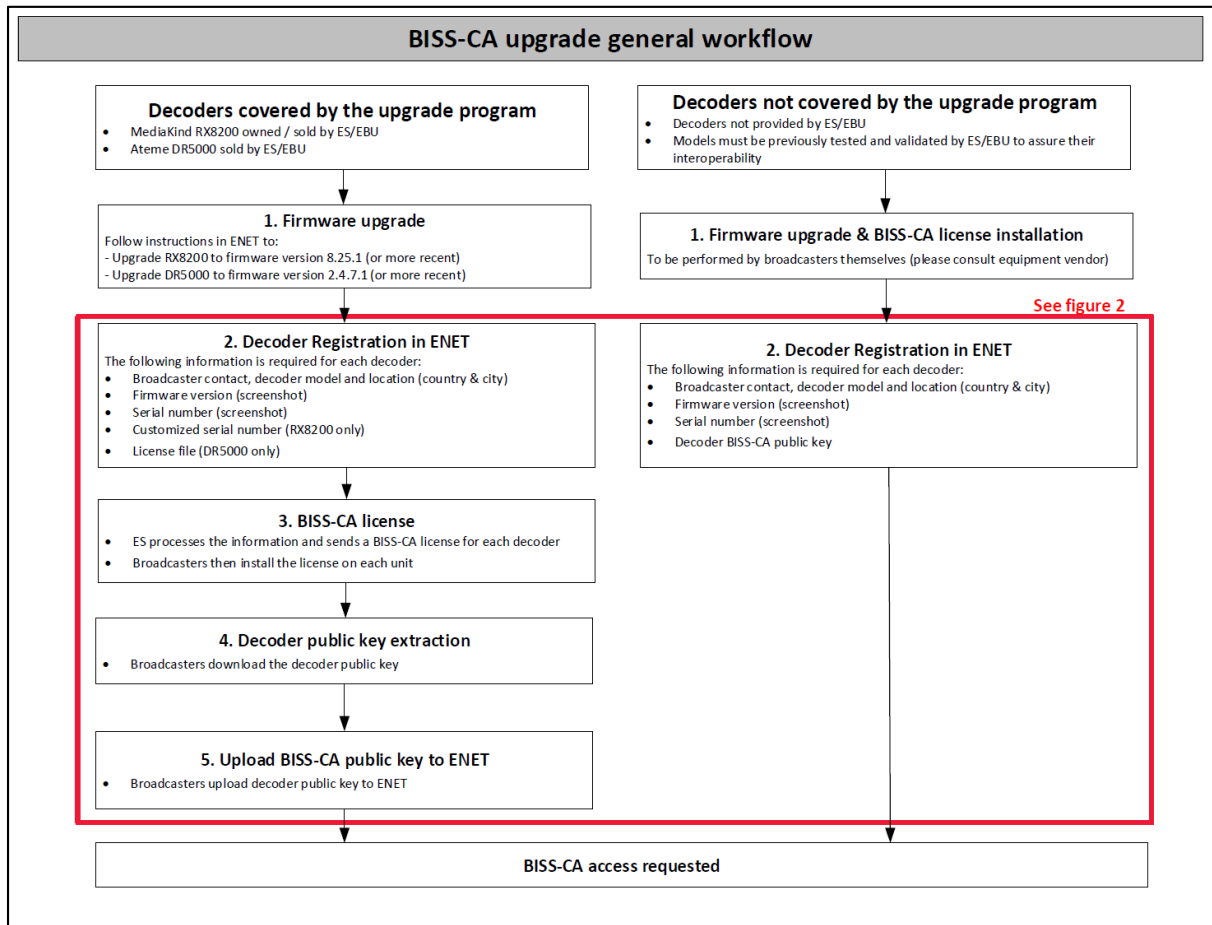


Figure 1 - Overview diagram of BISS-CA upgrade process

3.1 Firmware upgrade

All relevant documents and files can be found on the following page:

<https://www.eurovision.net/insights/technical/biss-ca-migration-files-download>

3.1.1 MediaKind RX8200

To receive BISS-CA transmissions, RX8200 units must run on firmware version 8.25.1 or newer.

The technical notice “BISS-CA MediaKind RX8200 – Upgrade Procedure FW 8.25.1” describes the firmware upgrade process for the MediaKind RX8200 model.

3.1.2 Ateme DR5000

To receive BISS-CA transmissions, DR5000 units must run on firmware version 2.4.7.1 or newer.

The technical notice “BISS-CA Ateme DR5000 – Upgrade Procedure 2.4.7.1” describes the firmware upgrade process for the Ateme DR5000 model.

3.1.3 Other models

For other models, broadcasters must contact the manufacturers directly.

Please ensure decoders have the firmware updated before registering them on the Eurovision.net equipment registration portal (see section 3.2).

3.2 Registering decoders on www.eurovision.net

ES has created an equipment registration portal to register and request BISS-CA access for decoders, which can be found at the following address:

<https://www.eurovision.net/biss-ca-migration>

Broadcasters can log in using the same credentials they use for Eurovision.net. If you need to create an account for Eurovision.net, please use a professional e-mail address as public domain accounts such as Gmail, Yahoo etc. are not supported.

Figure 2 on the next page shows a summary of the registration process.

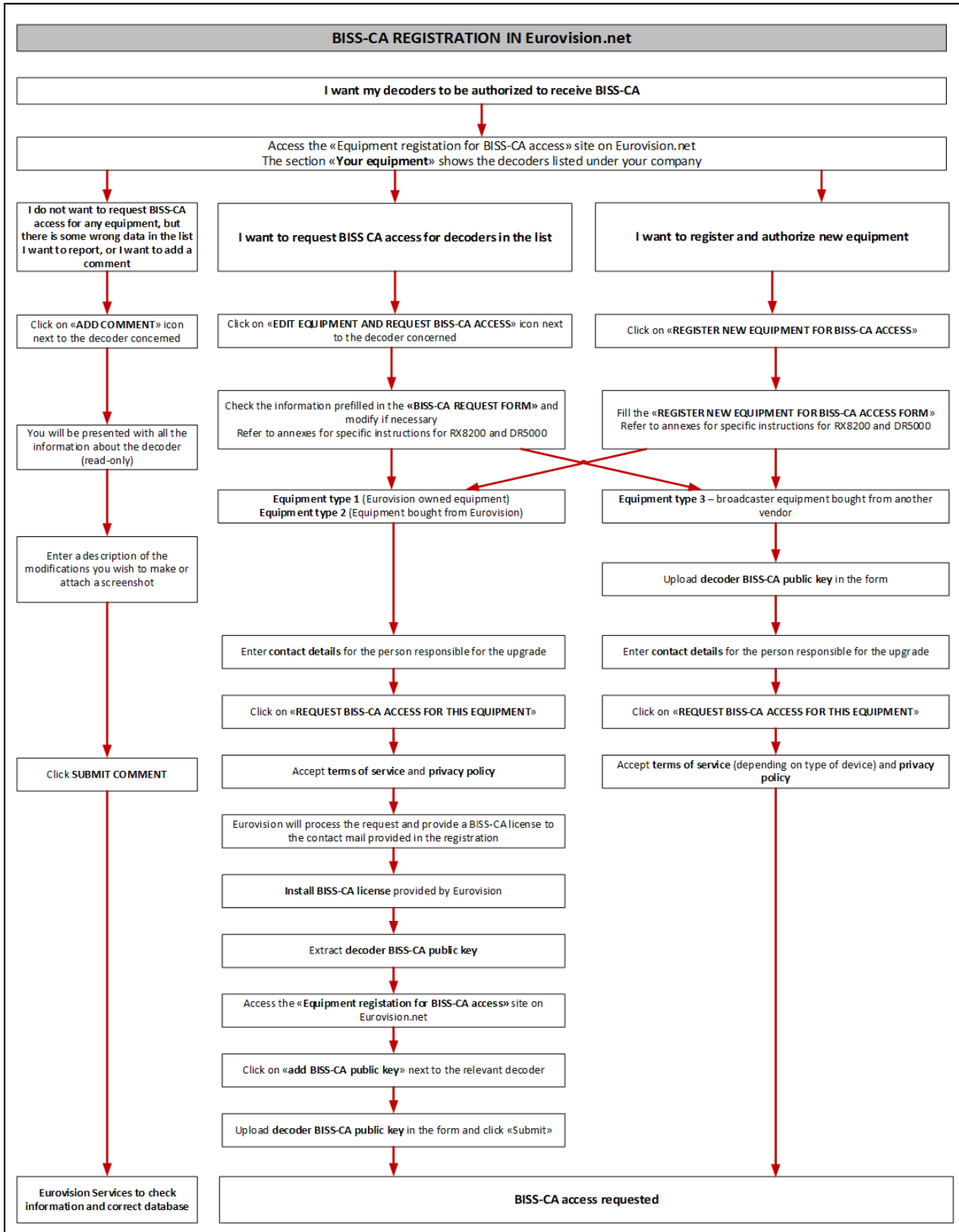


Figure 2 - BISS-CA registration process on Eurovision.net

3.2.1 “My equipment” overview

After logging in, broadcasters will see the decoders that are listed for their organisation in the section “Your equipment”. This list is pre-filled with the devices in ES’s records.

EQUIPMENT REGISTRATION FOR BISS-CA ACCESS

This portal allows you to register compatible decoders to allow reception of BISS-CA encrypted signals on the Eurovision Global Network.

You can find below the list of decoders currently registered for your company. Please ensure the information provided below is correct and request BISS-CA access for the units you wish to authorise. Only units on this list for which authorisation has been requested will be able to receive Eurovision BISS-CA encrypted signals.

If the list includes equipment units you no longer have or you wish to notify us of any changes without requesting BISS-CA access, please add a comment to the relevant equipment record by clicking on the “comment” icon.

CONTACT

If you have any problems using the form, please contact our team at: BISS-CA@eurovision.net

Register new equipment for BISS-CA access

YOUR EQUIPMENT
REGISTER NEW EQUIPMENT + REQUEST BISS-CA ACCESS
COMMENT

Reference	Location	Model	Serial number	Type	Status	Action
BS-9610	GNVA / CH	test	test	Eurovision Services / EBU owned equipment	Waiting for ES action	
BS-9598	Geneva / CH	MediaKind RX8200	FL060061	My own equipment bought from Eurovision Services / EBU	Waiting for ES action	
BS-9600	Geneva / CH	MediaKind RX8200	PU7046	My own equipment bought from Eurovision Services / EBU	To be registered	

EDIT + REQUEST BISS-CA ACCESS

Figure 3 – “My equipment” section

For each decoder, the following parameters are listed:

Parameter	Meaning
Reference	Unique identifier for each decoder. Please mention this identifier in all BISS-CA communications
Location	City and country where the decoder is located

Parameter	Meaning
Model	Equipment model
Serial Number	Equipment serial number
Type	Information about ownership: 1 - Equipment owned by ES/EBU 2 - Equipment owned by the broadcaster purchased from ES/EBU 3 - Equipment owned by the broadcaster purchased from another vendor
Status	Status of the BISS-CA request <ul style="list-style-type: none"> • To be registered: no BISS-CA access has been requested • Waiting for ES action: ES is processing the BISS-CA access request • Waiting for customer: the broadcaster must provide additional information to continue with the BISS-CA access request • BISS-CA licence in process: the BISS-CA request has been received and processed and a licence has been requested from the equipment manufacturer • Waiting for public key: the BISS-CA licence has been sent by mail to the broadcaster and ES is waiting to receive the decoder's public key • To be registered in BISS-CA NMS: all the required information has been received and ES is in the process of adding the decoder to its control system so it can be authorised • BISS-CA access completed: the upgrade process has been completed and the decoder is correctly registered • Impossible: some technical constraint prevents this particular decoder from obtaining BISS-CA access

Table 1 - Description of status under "My equipment"

3.2.2 Request BISS-CA access for equipment listed under “My equipment”

BISS-CA access can be requested by clicking on the “Edit/Request BISS-CA access” button to the right of each decoder listed under “My equipment”.

The following form will be displayed, containing the pre-filled information of each decoder.

Equipment details
Fields marked * are compulsory.

Equipment location - country *

Equipment location - city *

1 - Eurovision Services / EBU owned equipment
 2 - My own equipment bought from Eurovision Services / EBU
 3 - My own equipment bought from another vendor


Model *

Serial number *

Customised serial number (Dallas ID) *


Firmware version *

Serial number picture *




Click or drag & drop to add picture or screenshot of serial number

Customised serial number picture *



Click or drag & drop to add picture or screenshot of customised serial number

Firmware version picture *



Click or drag & drop to add picture or screenshot of firmware version

Comments

Figure 4 - Example of BISS-CA registration form

Broadcasters can correct the information displayed if they see any error, as well as add comments.

The information requested depends on the device model (MediaKind RX8200, Ateme DR5000 or other) **and on the type of equipment** (1 - owned by ES, 2 - sold by ES or 3 - purchased from a third party). The following table shows the information required for each case.

Parameter	RX8200		DR5000		Other	
	Types 1 & 2	Type 3	Types 1 & 2	Type 3	Types 1 & 2	Type 3
Country	✓	✓	✓	✓	✓	✓
City	✓	✓	✓	✓	✓	✓
Model	✓	✓	✓	✓	✓	✓
Serial Number	✓	✓	✓	✓	✓	✓
Customised serial number (Dallas ID)	✓	✗	✗	✗	✗	✗
Firmware version	✓	✓	✓	✓	✗	✗
License file (.lic)	✗	✗	✓	✗	✗	✗
BISS-CA decoder public key (.pub)	✗	✓	✗	✓	✗	✓
Contact	✓	✓	✓	✓	✓	✓

Table 2 - Parameters required for registration in Eurovision.net


As shown in Table 2, if the equipment was purchased by the broadcaster directly from another vendor (type 3), broadcasters must upload a file with extension .pub containing the decoder's BISS-CA public key. This file should not be renamed by the broadcaster after being downloaded from the decoder.

The file can be uploaded directly on the lower part of the form, as shown in Figure 5.

BISS-CA decoder public key
Fields marked * are compulsory.

After completing BISS-CA upgrade, please download the public key of the decoder and upload it below.

Decoder public key file *



Click or drag & drop to add decoder public key file. Please keep the original file name

Figure 5 - Decoder public key upload

Broadcasters must also include the contact details of the person in charge of BISS-CA access in their organisation. This person will be contacted by ES at a later stage.

To complete the process, broadcasters must click on “Request BISS-CA access for this equipment” and accept the terms and conditions and the privacy policy.

Contact details

- I am the contact person for BISS-CA migration and I agree to receive project-related communication. I accept the Eurovision Services [privacy notice](#).
- I am NOT the contact person for BISS-CA migration. I am providing the details of the contact person from my company to include her/him in the project communication mailing list. I am aware that the contact person will be asked to.

Email *

First name *

Last name *

REQUEST BISS-CA ACCESS FOR THIS EQUIPMENT

Close the form and discard all changes

Figure 6 - Contact details

3.2.3 Add new equipment not listed under “My equipment” and request BISS-CA access

If a device is not listed under “My equipment”, it can be added by clicking on the button “Register equipment for BISS-CA access”. The BISS-CA registration form will be displayed,

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which must be completed by the broadcaster, as described in section 3.2.2.

3.2.4 Add comments on decoders under “My equipment”

Broadcasters can add comments for any equipment listed under “My equipment” by clicking on the “comment” button to the right of each decoder listed.



EQUIPMENT DETAILS

My own equipment bought from another vendor

Other - test

sasd as dsadsa f

test / AF

1232132136dd

@eurovision.net

Comment *

Add a comment

Attachment

Click or drag & drop to add picture or screenshot

SUBMIT COMMENT Close

Figure 7 - Comments form

This option can be used if the information in the list is incorrect and broadcasters do not want to request BISS-CA access for these units, or if the broadcaster has already requested BISS-CA access and needs to make corrections or provide additional information.

3.2.5 Upload decoder public key

In order to complete the BISS-CA registration process, broadcasters must upload the BISS-CA decoder public key file to the registration portal.

The public key is a file with .pub extension.

For units purchased from other vendors (type 3), the public key must be uploaded at the same time as the decoder is registered (see section 3.2.2).

For units owned or sold by Eurovision Services, the public key must be uploaded by clicking on the key symbol next to the decoder. This option is only available when the following two conditions have been fulfilled:

- ES has already provided a BISS-CA licence to the broadcaster (status will be then “waiting for public key”).
- The broadcaster has already applied the BISS-CA licence to the decoder. This triggers the generation of the decoder BISS-CA public key.


Reference	Location	Model	Serial number	Type	Status	Action
BS-9730	test / AF	test	1232132136dd	My own equipment bought from Eurovision Services / EBU	waiting for public key	 ADD BISS-CA PUBLIC KEY


Figure 8 - Add BISS-CA public key button

In this case, the broadcaster must extract the BISS-CA public key from the decoder web interface and upload it to www.eurovision.net using the following form:

EQUIPMENT PUBLIC KEY ×

BISS-CA decoder public key

After completing BISS-CA upgrade, please download the public key of the decoder and upload it below.



Click or drag & drop to add decoder public key file. Please keep the original file name

Figure 9 - Equipment public key upload

The technical documentation provided for MediaKind RX8200 and Ateme DR5000 contains a step-by-step guide to apply the BISS-CA licence and extract the BISS-CA public key licence.

4 Other considerations

If a BISS-CA authorised decoder is reset to factory configuration, the device public key may change. Broadcasters must contact ES to verify the affected decoder’s public key.

5 Contacts

In case of questions related to the BISS-CA upgrade, broadcasters can contact the dedicated BISS-CA team (BISS-CA@eurovision.net).