



Technical Guidelines for BISS-CA access

Version 1 (June 2020)

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Document version

Version	Date	Comments / Changes
1.0	June 11, 2020	Initial version

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 require:

- A compatible decoder
- The right firmware and BISS-CA license,
- The decoder to be registered on the www.eurovision.net (ENET) 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 authorize 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.

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 / Ericsson RX8200
- Nevion MI-FA

We expect to add the Ateme DR5000 soon. At that time, ES will provide updated documentation. Currently, we will upgrade only the MediaKind/Ericsson RX8200 which is the only decoder model addressed in this document.

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

This upgrade for decoders owned by ES or sold to broadcasters and partners by ES applies only to

- MediaKind / Ericsson RX8200s.

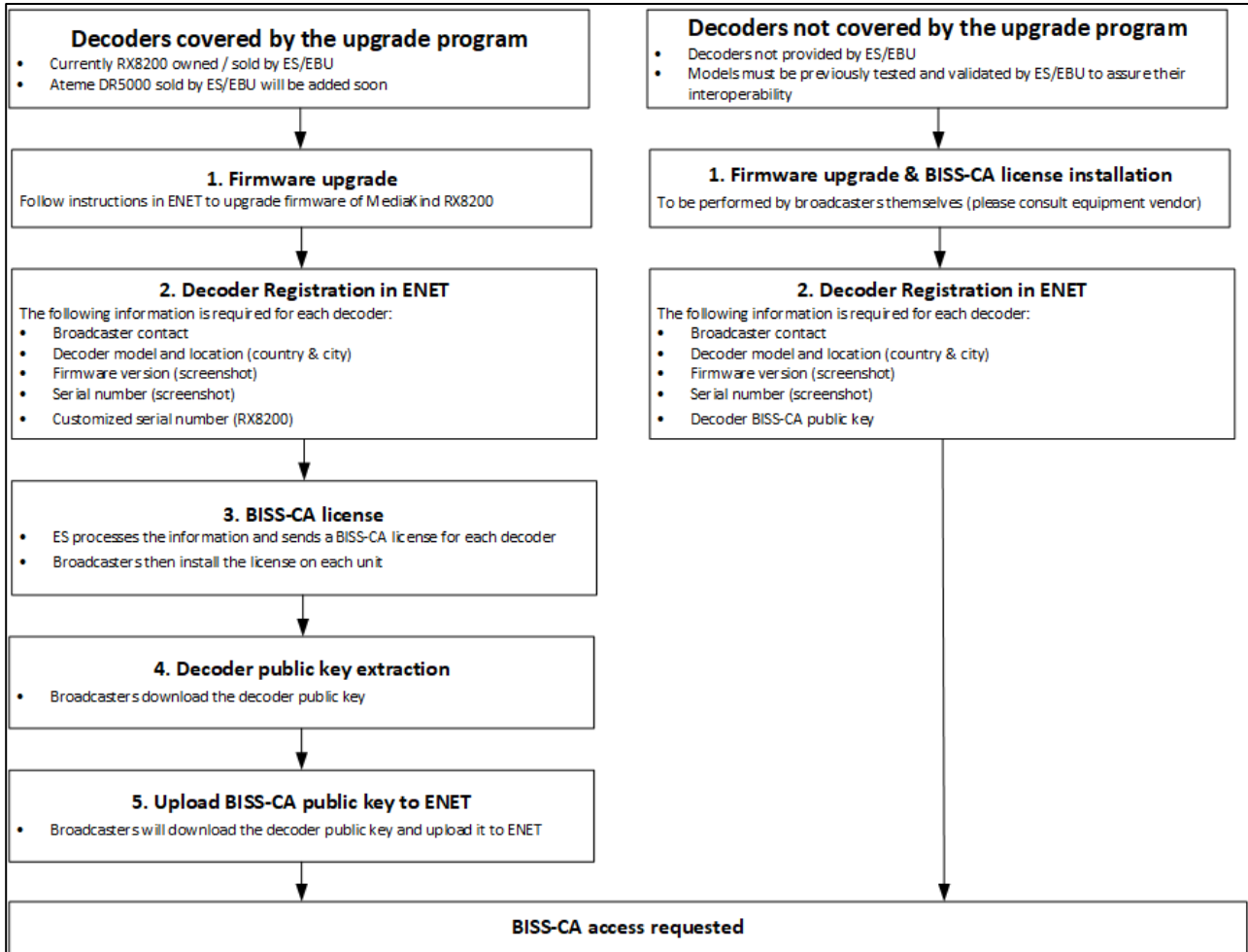
For these units, ES will provide a BISS-CA license and equipment support.

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 / Ericsson RX8200s 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 license, and for decoders that were procured from a third party, as shown in the diagram below.



4 3.1 Firmware upgrade

The technical notice “BISS-CA Ericsson / MediaKind RX8200 – Upgrade Procedure FW 8.25.1” describes the firmware upgrade process for the Ericsson/MediaKind RX8200 model. The documents can be found on the following page:

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

For other models, broadcasters must contact the manufacturers directly.

Please ensure ES decoders have the firmware updated before registering them on www.eurovision.net (see section 3.2).

3.2 Register decoder on www.eurovision.net

ES has created a space for broadcasters to register and request BISS-CA access for their decoders <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 email address as webmail accounts such as Gmail are not accepted.

After logging in, broadcasters will see the decoders that are listed for their organization in the section "Your equipment". This list is pre-filled with the units 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	<p style="margin: 0;">EDIT + REQUEST BISS-CA ACCESS</p>

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
Model	Equipment model
Serial Number	Equipment serial number
Type	<p>Information about ownership:</p> <p>1 - Equipment owned by ES/EBU</p> <p>2 - Equipment owned by the broadcaster purchased from ES/EBU</p> <p>3 - Equipment owned by the broadcaster purchased from another vendor</p>
Status	<p>Status of the BISS-CA request</p> <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 license in process: the BISS-CA request has been received and processed and a license has been requested from the equipment manufacturer • Waiting for public key: the BISS-CA license 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 authorized

Parameter	Meaning
	<ul style="list-style-type: none"> • 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

Broadcasters can then perform the following actions:

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

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

Equipment details

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 *

Firmware version *

Serial number *

Customised serial number *

Comments

Serial number photo *

CLICK TO ADD FILES OR DRAG & DROP FILES

Firmware version photo *

CLICK TO ADD FILES OR DRAG & DROP FILES

BISS-CA decoder public key

After completing BISS-CA upgrade, please copy / download the private key of the decoder and paste / upload it below.

Public key

Public key photo *

CLICK TO ADD FILES OR DRAG & DROP FILES

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

Please note that the details needed depend on the type of equipment (owned by ES, sold by ES or purchased from a third party). If the equipment was purchased by the broadcaster, broadcasters must upload a file containing the decoder BISS-CA public key before requesting the BISS-CA access.

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](#)

Broadcasters must also include the contact details of the person in charge of BISS-CA access in their organization. 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 & conditions and the privacy policy.

- **Add new equipment not listed and request BISS-CA access** by clicking on the button “Register equipment for BISS-CA access”. The following form will be displayed, which must be completed by the broadcaster. This is the same form without pre-filled information.

EQUIPMENT REGISTRATION AND BISS-CA ACCESS REQUEST ✕

This form allows you to register new equipment in our database and request BISS-CA access. Please make sure all equipment information is correct and provide contact details for someone in your organisation.

Note: You can save equipment information only when requesting BISS-CA access. If you add equipment information and don't request BISS-CA access, the data you enter will be lost.

Equipment details

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 *

Other model *

Serial number *

Serial number photo *


CLICK TO ADD FILES OR DRAG & DROP FILES


Comments

BISS-CA decoder public key

After completing BISS-CA upgrade, please copy / download the private key of the decoder and paste / upload it below.

Public key

Public key photo *


CLICK TO ADD FILES OR DRAG & DROP FILES







Please note that the information needed depends on the type of equipment (owned by ES, sold by ES or purchased from a third party). If the equipment was purchased by the broadcaster, broadcasters must upload a file containing the decoder BISS-CA public key.

Details of the contact person must be entered. Depending on the ownership of the decoder, terms & conditions must be accepted as well in order to proceed.

- **Add comments on decoders in the list** (by clicking on the “comment” button to the right of each decoder listed). This option can be used in case the information in the list is incorrect and broadcasters do not want to request BISS-CA access for these units. If broadcasters want to add comments for units for which they want to request BISS-CA access, they must click the “Edit/Request BISS-CA access” button.

In this case, the following form must be filled in. Note that the available information about the decoder is displayed in the left-hand column.

EQUIPMENT DETAILS ✕

-  Eurovision Services / EBU owned equipment
-  Kaboul / AF
-  Ateme DR5000
-  1111-2222-3333
-  1.2
-  [Redacted]@ebu.ch

Comment

Add a comment

SUBMIT COMMENT
Close

- **Upload the decoder public key:** this can be done by clicking on the key symbol next to the decoder. This option is only available when the following three conditions have been fulfilled:
 - The decoder is owned by ES or has been sold by ES. For units purchased by broadcasters from other vendors, the BISS-CA public key must be uploaded directly when filling in the registration form.
 - ES has already provided a BISS-CA license to the broadcaster (status will be then “waiting for public key”).
 - The broadcaster has already applied the BISS-CA license to the decoder. This triggers the generation of the decoder BISS-CA public key.

Reference	Location	Model	Serial number	Type	Status	Action
BS-9625	123244 / AF	34343	43524234432	My own equipment bought from another vendor	waiting for public key	 ADD BISS-CA PUBLIC KEY

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 copy / download the private key of the decoder and paste / upload it below.

Decoder public key *

Decoder public key

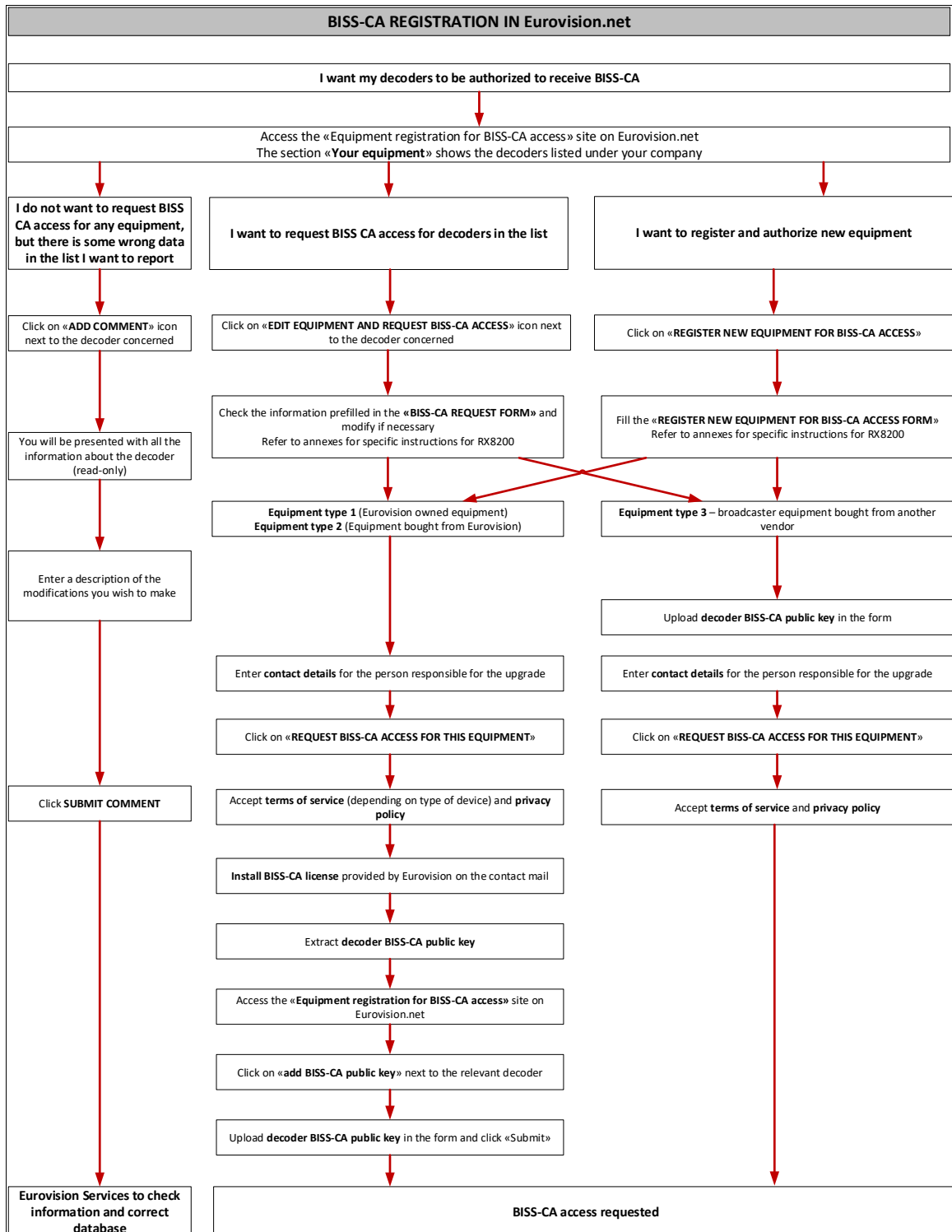
Public key photo *

CLICK TO ADD FILES  OR DRAG & DROP FILES

SUBMIT **Close**

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

The diagram on next page shows a summary of the registration process.



5 Other considerations

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

6 Contacts

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