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Conditional Access Management Server

Operations Manual

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Introduction

Overview

Adtec's Open Secure Transport is a Transport Stream – Level Encryption System that is based on AES 128 for data encryption and 1024 RSA for key distribution. It provides a flexible dynamic keying encryption system and embedded conditional access. The Conditional Access Management Server is partnered with a DTA-3050 multiplexer to deliver an encrypted stream to one or more sites with edje 1123(L) media players.

Configuring CAMS

For added security three types of users have been designated.

Admin: Has full user control and access.
(default username: admin password: admin)

Write: Can make edits and has general access.
(default username: write password: write)

Read: Has Read-Only Access.
(default username: read password: read)

To begin configuration, you must login to the CAM Server. Using a browser window, browse to "http://localhost/cams" and login using the Admin username and password listed above. You will be prompted to changes your Admin password. This initial screen also allows you to test the network connection between the MUX and the CAM Server. You can return to this page by clicking on the Home links located throughout the application.

Administrative Features

To view the administrative features, click on the Admin button located in the bottom navigational bar. Admin users have the ability to "Import Receivers", "Manage Users" and "Force Backup of Database".

Import Receivers:
A CD was shipped with your edje 1123(L) (s) which contains the serial numbers, MAC addresses and encryption keys to address each receiver. The "Import Receivers" function allows you to import that data to the CAM Server so a secure encrypted stream can be sent to each receiver. To do so, simply click on the "Import Receiver" button in the left panel of the Admin Screen and then browser to the CD for the import.

Manage Users:
To manage users, you should click on the "Manage Users" button on the left panel of the Admin screen. The "Manage Users" screen shows a list of all users and their current level of access. Each user account may be edited or deleted. To add a user, simply click on the Add button at the top of the user list and fill out the form using "admin", "write" or "read" for the access Level of each user.

Force Backup of Database:
This function allows you to back up your database to the location of your choice.

Server Configuration

A sort function is available at the head of each list column. Additionally each list is searchable via a basic or advanced search function located at the top of each list.

Creating Companies:

A Company is a parent to multiple sites. To configure a company, click on the "Companies" link in the bottom navigation bar. The initial screen will provide you with a listing of all configured companies. To add a company, click the "Add" button at the top of the screen.
Company settings include the following fields:

Company ID:	Assign a unique number to each company.
SubCompany ID:	Optional number to identify the company
Description:	Description of the company
Address:	Physical Location of the Company
City:	Physical Location of the Company
State:	Physical Location of the Company
Zip:	Physical Location of the Company
Contact:	Contact Person
Phone:	Contact Phone Number
Cell:	Contact Cell Phone Number

Creating Sites:

A site represents one or more deployed receivers within a company. To configure a Site, click on the Site link in the bottom navigation bar. The initial screen will provide you with a listing of all configured sites.

To add a company, click the "Add" button at the top of the screen. Site settings include the following fields.

ID:	Assign a unique number to each site.
Name:	Assign a name to the site.
Company:	Select the company from the drop-down menu
Description:	Description of the site
Address:	Physical Location of the Site
City:	Physical Location of the Site
State:	Physical Location of the Site
Zip:	Physical Location of the Site
Phone Number:	Contact Phone Number
Contact:	Contact Person

Creating an Encryption Package:

To add a package, click on the Package link in the bottom navigation bar. The initial screen will provide you with a list of created packages.

To add a new package, click on the add button at the top of the screen.

Packages require the following fields.

ID:	Assign a unique number to each package
Number:	Need this info
Description:	Description of the Package
Rate:	Defines the key rate in Kb/s. See below calculation
Period:	Defines how long a crypto word will be used in seconds. See below calculation

Calculating the Rate from a given period.
If you require a specific crypto period for the conditional access, then the minimum key rate must be calculated to properly roll the encryption keys.
Rate(Kb/s)= (number of receivers/period in seconds)*1.46875

Calculating the Period from a given rate.
If you want to fix the data rate for the encryption keys, then the minimum crypto period in seconds must be calculated in order to provide enough time for the encryption keys to be updated.
Period in seconds = (number of receivers/rate(Kb/s))*1.46875

Adding a Multiplexer:

To add a Multiplexer, click on the "MUX" tab located in the top navigation bar. The initial screen will provide you with a list of configured multiplexers

To add a Multiplexer, click on the "Add" button at the top of the screen.

MUX settings include the following fields:

ID: Enter a Unique ID to the multiplexer

Secondary MUX: Select a live backup for the primary multiplexer.

Package: Select a previously created package(see "Creating An Encryption Package" section)

Description: Description of the MUX

IP Address: IP address of MUX

Company: Select a previously created company (see "Creating Companies" section)

Viewing and Editing a Receiver:

To view/edit a receiver, click on the Receiver button in the top navigation bar. You will be provided with a listing similar to the one shown here of all of the imported receivers.

The following fields are listed and can be sorted by the column header. These fields are also searchable.

Edit: Admin and Write function that provides an edit screen

ID: The unique identification number of the receiver.

Authorized: Yes or No describing whether or not the receiver is authorized to decrypt the package.

Package: The name of the Encryption Stream

Site: Physical location of the deployed receiver.

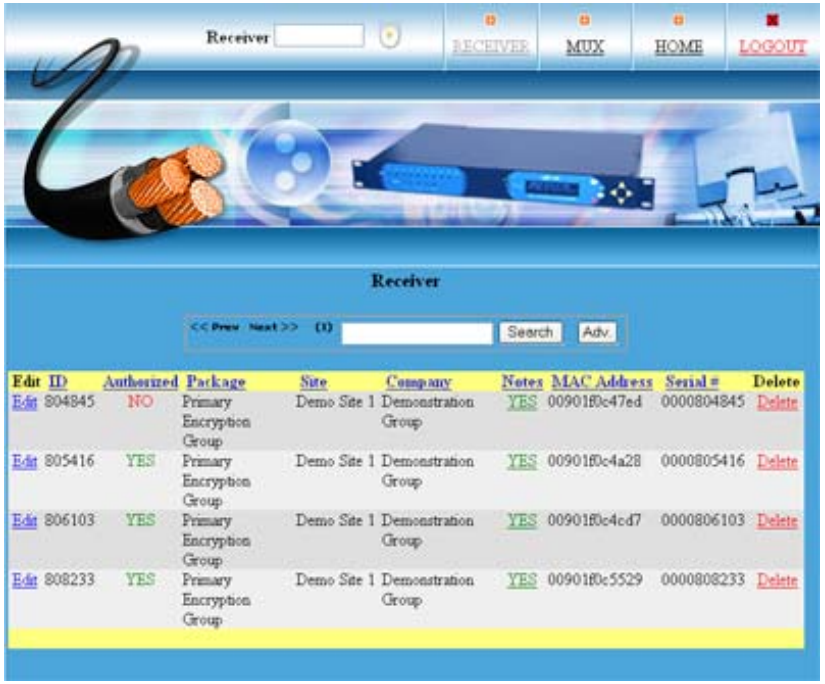
Company: Parent category of the site

Notes: Yes or No value – clicking on a Yes value displays any notes associated with the receiver.

MAC Address: Address of the Network Interface Card (NIC) in receiver.

Serial Number: Serial number of receiver.

Delete: Admin function to delete a receiver.



Viewing and Editing a Multiplexer:

To view/edit a multiplexer, click on the MUX button in the top navigation bar. You will be provided with a listing similar to the one below of configured MUX.

The following fields are listed and can be sorted by the column header. These fields are also searchable.

Edit: Admin and Write function that provides an edit screen

ID: The unique ID of the multiplexer.

2nd MUX ID: ID given to the live back up of the primary multiplexer

Package: Name of the Encryption Stream

Rate: The encryption key rate in Kb/s.

Period: Also know as Crypto Period, it defines how long in seconds a crypto word will be used.

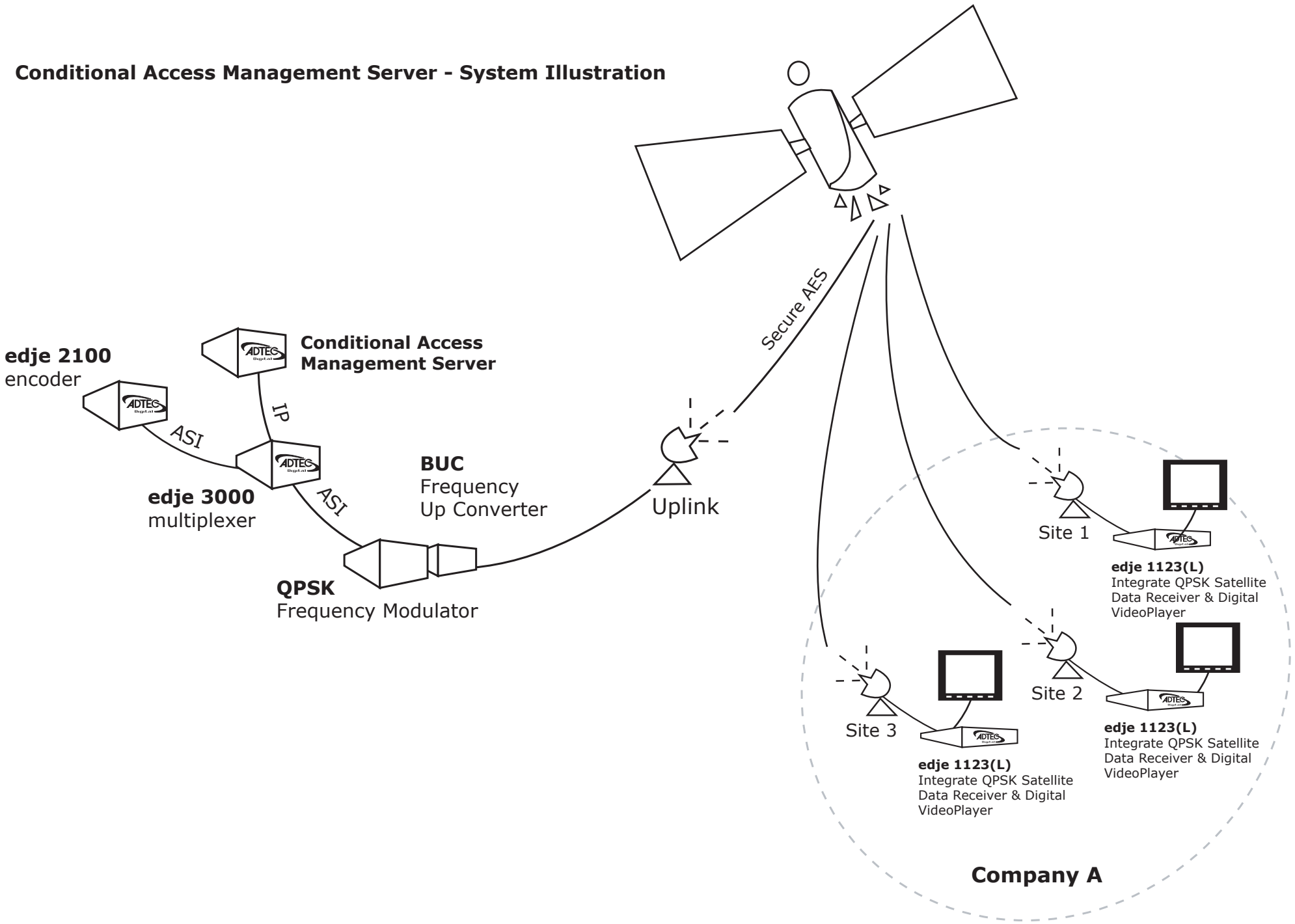
Description: Description of the multiplexer

IP Address: The unique IP address of the multiplexer

Company: Name of the company associated with the multiplexer.

Delete: Admin function to delete a configured multiplexer.

Conditional Access Management Server - System Illustration



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