



CAS Series

Ensurity 1.0 & 2.0

HIGHLIGHTS

High Security

Enhanced Function

Cost Effective



SMS APP in Smartphone

End to End

DEXIN CAS (Ensurity) is an important application in the digital interactive TV. Like EPG, SMS system, it is a basic business, which is regarded as the symbol of digital TV. With the foresight idea, DEXIN Ensurity will continue to protect your business in the future.

Functions Overview

OSD Management

Emergency Broadcasting

Pin Unlock

Area Control

Watching Level Control

Random Fingerprint

Black List

EMM Fingerprint

ECM Fingerprint

Force OSD

Smart Card Active

Working Time Control

Authorization Management

Programs Expiration Reminder

Pre-Authorization

STB & Card Pairing

Conditional Addressing

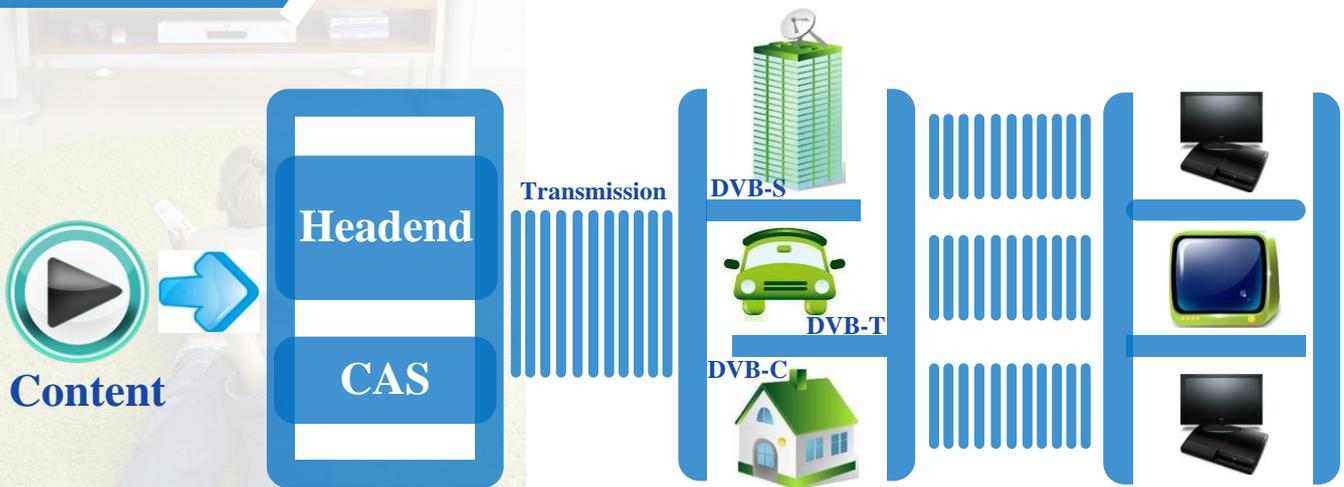
Sub-operators work independently

Card Self-Lock

Unauthorized Programs Watching Time Setting

Operator ID based CA system---Ensurity 2.0

System Structure





Why choose Ensurity

High Security

- ✦ Multi-layer encryption mixed with opening and dexin private algorithm
- ✦ Against the potential attacks of the hardware and software
- ✦ Smart card self-lock in abnormal network
- ✦ Smart Card on line upgrade
- ✦ Black List Setting to avoid potential attacks



Enhanced Function

- ✦ Payment made with mobile phone SMS
- ✦ Multiple operator control
- ✦ More than 20 enhanced function available
- ✦ Advanced conditional addressing function
- ✦ Force OSD
- ✦ One-to-one STB & Card Pairing
- ✦ **Operator ID based CA system**
---Only for Ensurity 2.0



Cost Effective

- ✦ 10 years overseas market capacity to ensure the lower purchasing costs
- ✦ Local technical support team to ensure lower the cost
- ✦ Multi companies can share one head-end, but manage their own customers and keep their own customer info in secret



ensurity
we have a better idea!

**DEXIN
CAS 2.0**

End to End Solution

- ✦ DVB-C/T/S/S2/Wireless Total Solution
- ✦ All the devices are self-developed
- ✦ Save the project installation time
- ✦ One-stop solution, one-stop service



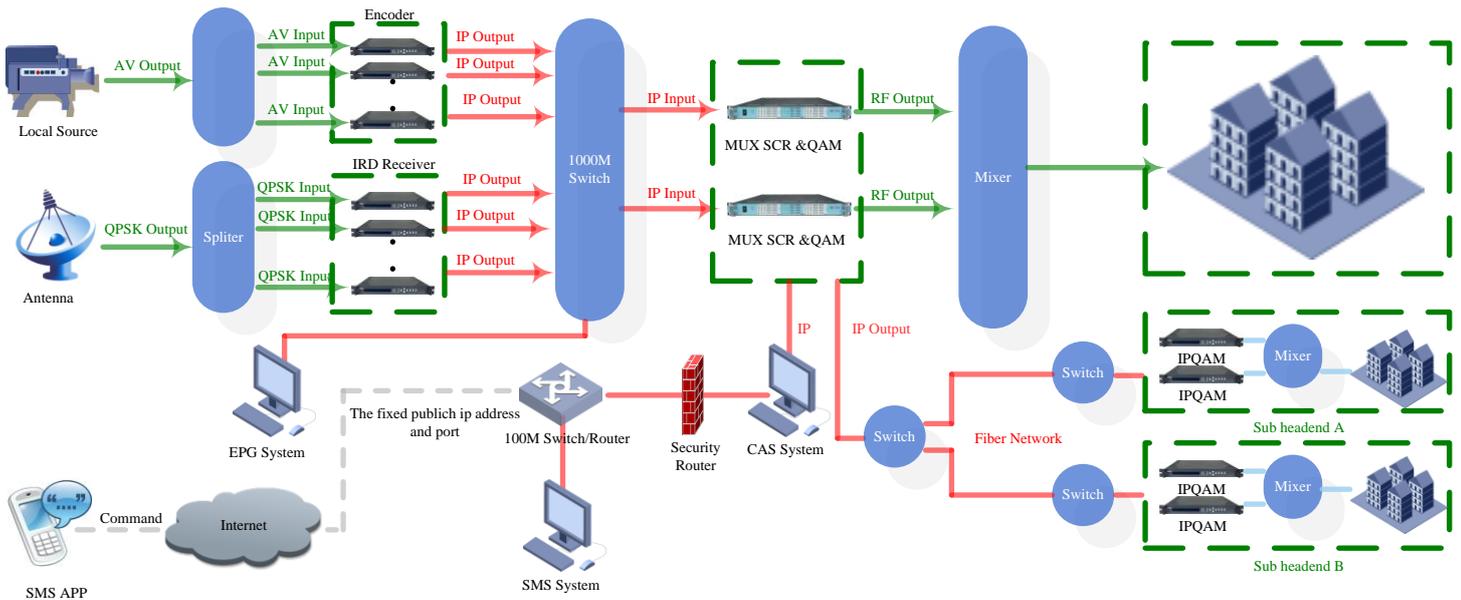
^{*optional} SMS APP in Smartphone

- ✦ Supporting IOS 11.0 or above and Android 5.0 or above
- ✦ Being attached to the unique operator ID/CAS Server
- ✦ **New Account/Ordering product/Charging/Recharging /Authorizing**





Total Solution



IP headend solution enable the cost reduction, more flexibility and easier management

More stable by using Dexin network solution, only two parts (data receive and data process)

All products are self-developed

Many other solutions available : DVB-C/T/S/S2/ISDB-T/Wireless

System Introduction

With the high security and stability, the Dexin Ensurity supports a variety of functions to support the operator's business model.

IPQAM adopt the slot structure and support multiplexing, scrambling and QAM modulation. It supports RF output to the local network and the IP output to remote sub-headend.

Rely on SMS APP in Smartphone, operators can stay at home to order products/recharging etc for the subscribers by smartphone.(Optional)



CA Server Configuration

Number of Users	CPU (Intel® Xeon®)	Memory	Database	Operation system
5000 <	2.0GHZ and above	2G and above	SQL Server 2008 32Bit and above	Windows Server 2008 32Bit and above
5000~10000	2.0GHZ and above	4G and above	SQL Server 2008 64Bit and above	Windows Server 2008 64Bit and above
10000~20000	2.0GHZ and above	8G and above	SQL Server 2008 64Bit and above	Windows Server 2008 64Bit and above
20000~50000	2.5GHZ and above	16G and above	SQL Server 2008 64Bit and above	Windows Server 2008 64Bit and above
50000~100000	3.0GHZ and above	32G and above	SQL Server 2008 64Bit and above	Windows Server 2008 64Bit and above

Specification

Hardware Requirement

Hard disk: the free space is 2GB and above
 Hard disk number: 2 (Raid1)
 Network card: 1GB Network Card x2

Encryption Module
 Encryption hardware: encryption dog *1
 encryption dog *1(in the case of SMS APP, optional)

SMS APP in Smartphone

ios11.0 or above(Searching Ensurity to download the APP in Apple Store)

Android5.0 or above(APK)

Software Requirement

Function Software:
 CAS Software
 Operator ID based CAS Software (Ensurity 2.0)



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Main Function Overview

OSD Management

OSD (On-Screen-Display) is a subtitle shown at a certain position (up, down, both two sides, etc) of the TV. The difference between OSD and TV Email is that the TV Email is stored in the STB. If subscriber does not delete, then the Email will be stored in the STB permanently. Although the OSD has certain duration and showing times, it will disappear after expiration or cancel by CAS in advance.

Emergency Broadcasting

Emergency Broadcasting means that operator could force all the subscribers, or certain subscribers to watch a certain channel within a certain duration. During emergency broadcasting, the STB remote control can not be able to work. They must watch the appointed channel unless the subscriber turn off the TV or the STB. The major function of emergency broadcasting is to broadcast emergent information such as the fire alarm to the whole network or certain subscribers.

Pin Unlock

PIN is the password. Subscribers must input the PIN when operating some functions, like smart card level, working time control etc. The major function of the PIN protection module is to safeguard the operation of this password.

Area Control

If the operation has more than one separate area, by using this function, it can guarantee the current smart card can only be used in a appointed location. The smart card can not be used if moved to another area.

Random Fingerprint

All the fingerprint can be displayed randomly on the screen. The fingerprint content can be the “card number” or “STB Number” .

Black List

In case any subscriber is found out to have illegal or abnormal behavior with the IC card. Operators can drag this card in to the black list and this card will no longer resume.



ECM Fingerprint

It is the fingerprint sent to different programs and users. Its display duration, off duration, foreground color and background color can be configured separately. It can be a “Displayed” or “Hidden” finger.

EMM Fingerprint

It is the fingerprint that must be displayed on all programs with a same display duration, off duration, foreground color and background color . It can be a “Displayed” or “Hidden” finger.

Force OSD

It refers to the OSD which is enforced to send to certain programs. It is a frame staying on the TV screen and covering the picture. Subscribers are not able to cancel it or change channels. The OSD frame size, frame transparency, font color, display duration, stop duration and etc can be set manually.

Programs Expiration Reminder

When the product package expired, the text message can be displayed on the screen to remind subscribers.

Working Time Control

Subscribers could set the working hours of a smart card so that the smart card can work only within a certain duration. Only within the working duration, can the customers use smart card to watch TV. For the rest of the time, even there are entitlements, the smart card is still not able to do the de-encryption and de-scrambling. This is specially designed for family with children.

Unauthorized Programs Watching Time Setting

Subscribers could watch the unauthorized programs within a certain duration, and STB will remind subscribers to buy the programs after the specified time limit.



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One-to-one STB & Card Pairing

Every STB has a unique serial number. Every Card must uniquely match to a pointed STB, and then they can work normally.

Pre-Authorization

Pre-authorization the smart card, operators can quickly issue smart cards and set-top boxes to subscribers to watch the specified program within a certain duration without having to manually authorize them.

Authorization Management

The very important and basic function of CA system is entitlement management. The Dexin Ensurity can support complete entitlement information. It could support the start time and expiration time in one entitlement command. In this way it could support different strategy of entitlement command sent by SMS, such as Pre-Authorization; Sectoring authorization; Entitlement Auto-expiration.

Operator ID based CA system---Ensurity 2.0

Operator ID based CA system, STB can only work with the corresponding operator ID cards.

SMS Integrated

ITP Software India PVT Ltd

Aplomb Tecnology

Reliablesoft Technologies Pvt. Ltd

Paycab Solution Pvt. Ltd

SMS APP in Smartphone---optional

1.FAST New Account; 2.Order Product/Renew; 3.Charge Operation; 4.Authorization; 5.Recharge via APP (Some main funtions in the SMS Web of CAS server)

