



MODE B 668 FT AVISIO B 600 FT DASS 2 FE EG-4/AVC





- Read this manual carefully before start operating the device.
- Removal of device cover without permission may cause harm to human body and the maintenance bond will be invalidated.
- Handle the device with care to avoid crashing and falling, or otherwise it may cause hazards to the internal hardware components.
- Keep all inflammable, metal and liquid materials from dropping into the device casing, or otherwise it may cause damages to the device.
- Avoid dusty places and places with heating resources nearby, direct projection of sunlight or instant mechanical vibrations for installation of the device.
- Connect the grounding connector on the rear panel to protect earth contact properly while in operation.
- Choose proper type of cable connectors for connecting network interfaces of the device.
- Avoid rapid and frequent power on/off, or it may cause damages to the semiconductor chipsets.
- Keep proper direction of the power cord when plug into or out from a power socket.
- Do not touch the power socket with wet hands to avoid electric shocks.
- Take off all jewelry or ornaments, such as ring, necklaces, watches, bracelets, etc., before operating the device, or otherwise the metal contact may possibly cause short circuit and result in components damage.
- Make sure the AC power is unplugged in case of operator services within the device casing or close to power supply are needed.
- Only TELELYNX trained and approved staff is permitted to perform live line operation and maintenance within the device casing.
- Ensure good ventilation when the device is in operation, or otherwise it may cause damages to the device due to overheating.
- It is recommended to unplug the power cord from the socket if the device will not be used for a long period of time.



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§1 Introduction

§ 1.1 Functionality

LAVISION-868FTA is a new generation of RF-to-IP adapter, which can receive and demodulate eight channels of DVB-S/S2, DVB-C and ISDB RF input signals, and then multiplex, scramble and process it with channel coding. It adopts our newly developed functions such as "Module Management", device scrambling, and channel modulation. The flexible customization and high expansibility can satisfy the user's current and future DTV system requirements.

The module management opens the scrambling function and configures the numbers of output modulation channel through software authorization, as shown in the table below:

ltem	Function	Remark
Level 1	PT+MUX	PT+MUX
Level 2	PT+MUX+1*CA scramble	PT+MUX+CA1
Level 3	PT+MUX+2*CA scramble	PT+MUX+CA2
Level 4	PT+MUX+3*CA scramble	PT+MUX+CA3
Level 5	PT+MUX+4*CA scramble	PT+MUX+CA4

The product is mainly applied to the DTV network head end room, edge of DTV backbone network, and DTV branch head end room.

§ 1.2 Key Features

This product has the following key features:

- ♣ Support eight RF inputs
- 14 TS-over-IP output
- Two indenpendant ASI outputs
- ♣ IP output data rate range: 1 ~ 800Mbps
- 4 Support RF signals output after demodulating, multiplexing, and scrambling via two ASI ports
- Payload of UDP: 7 of 188-byte-length TS packets
- Support processing for multiplexing, scrambling, PSI/SI
- Scrambling up to 512 programs
- Multiplexing up to 512 programs
- ♣ Support auto-generation and manual upload for SI/PSI information
- Support auto-generation and manual editing for network information, support upload of local network segment
- Support PID filtering, mapping and pass-through
- Support PCR correction
- Support DVB-CSA scrambling
- Support up to 4 CAS simulcrypt
- Maximum total EMM for 3Mbps, bandwidth cap for 1Mbps
- ↓ 188/204 TS packet length self-adaptive
- ✤ Flexible configurations for data input/output to auto-detect the input TS



- Support protocols of UDP, ARP, ICMP, and IGMP
- Support WEB/SNMP-based management
- Support online remote upgrade
- Language support: Chinese and English
- Power failure memory recovery
- Support device configuration import/export
- Powerful background configuration and network management & monitoring

* Please refer to Annex A for detailed technical specifications.

§ 1.3 Front Panel

As shown in figure 1, there are one LCD display, one6-key keypad and three LED indicators on the front panel of LAVISION-868FTA.

The model type and logo notification information will be displayed on the LCD screen during the device initialization stage. User can check part of the working status of device, and set part of the parameters of LAVISION-868FTAby exploring a menu realized by buttons/LCD screen after system initialization, see section §3.3 for details.

- + The POWER LED will be light if the device powers on successfully.
- **4** The STATUS LED will show some working status of the device, see section§3.3 for details.
- The ALARM LED will indicate warning messages of the device, if exists, see section §3.3 for details.



Fig.1 Front Panel View of LaVision-868FTA

§ 1.4 Rear Panel

As shown in figure 2, the rear panel of LAVISION-868FTAconsists of one power supply connector, one power switch, one management port, eight RF input ports, one eight IP output ports, and a grounding point.

- ♣ Power Input Port: To connect to 100~240V 50/60Hz AC input;
- Power Switch: To turnLAVISION-868FTA on or off;
- Management Port: RJ45 interface, to connect to management server via 100BaseT or Gigabit Ethernet;
- RF Input Port:F10-75J connector, to connect to satellite and microwave signals of LNB/MMDS down converter;
- Data Output Port:RJ45 interface, to connect to data destination equipments of LAVISION-868FTA;
- 4 Grounding Point: To connect the device with conductive earth. Please make sure of proper



grounding of the device before start operating it for the safety of the operators and the device itself!



Fig.2 Rear Panel View of LAVISION-868FTA

§ 1.5 Typical Application Architecture

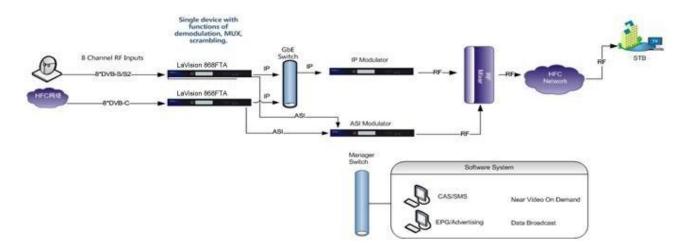


Fig.3 System Application Block Diagram of LAVISION-868FTA

LAVISION-868FTA receives the standard DTV TS, please refer to section §3.3 for the format of TS. The following devices may be able to provide input signal to LAVISION-868FTA

- 1. Satellite receiving antenna and MMDS down converter.
- 2. DVB-S/S2 modulator (often used to test environment)

The following devices may be able to receive the output signal of LAVISION-868FTA(Only TELELYNX[®] products listed):

- 1. IDH2-3000 IP MUX/SCR/QAM series:this devices could make the multiplexer, scrambler, and QAM modulation of UDP packet TS stream received from LAVISION-868FTA.
- 2. TX-6000 series IP Transcoder: provides a most powerful transcoding solution for producing live video streams, supports multi-screen, multi-rate, multi-resolution, and multi-encoding models, helps operators optimize high quality video content, and then transmits to Internet TV, mobile TV and PC users.Besides, it supports real time bit rate switch and multi bit rate controlling output and provides leading video quality.



§ 2 Before Use the Device

§ 2.1 Operation Requirements

In order to ensure proper operation of LAVISION-868FTA, there are some requirements for other digital TV and network devices, which will connect withLAVISION-868FTA. Please see below for details:

§ 2.1.1 Requirements for Digital TV Devices

The RF output signals of the devices, which will provide signal source to or receive signal from LAVISION-868FTA should comply withDVB-S/S2 modulation standard, and the input frequency range is from 950MHz to 2150MHz.. The device which will receive output signal from LAVISION-868FTA, should comply with

the following standards:

Transport Stream (TS): This means that the TS stream with one or more channels of digital TV, digital audio broadcasting or any other digital TV services should comply with DVB standard; it must contain PAT and PMT tables, which can completely describe the services.

The TS stream could be transmitted through ASI/Ethernet interface. For output IP interface, the TS packets must be encapsulated into UDP datagram. Each output TS should have unique destination IP address (unicast or multicast) and port number. The length of the UDP payload must be 7*188Byte (TS packets), and the payload must be synchronized by sync byte 0x47.The TS stream (except the stream with UDP format) also can be output from ASI interface, with standard format of 188 byte.

LAVISION-868FTA may be able to receive multiple transport streams from any devices with the TS format complies with the above-mentioned format.

§ 2.1.2 Requirements for Network Devices

The switch used for the LAVISION-868FTAdata output and its destination devices (the IPQAM modulator shown in figure 3)must be a Layer 3 gigabit switch, indispensability to support IGMP2.0. The backboard exchange speed must be higher than 10Gbps; the maximum data exchange speed of each port must be higher than 1000Mbps.

The switch for the LAVISION-868FTA and the managing workstation should be a 100M or gigabit switch, the maximum data exchange speed of each port must be higher than 40Mbps. Normally, It can be the same switch of data output, the two ports need to be configured to different VLANs.

Any hosts that may worsen the network traffic, such as some workstations or servers installed real-time communication tools, streaming media server or WEB server, must not be located at the LAN switch of the output of LAVISION-868FTA. These additional signals may cause packet loss, network jitter worsening, and hence due to audio/video distortion at the audiences.

§ 2.2 System Requirements

Management workstation must have network connection and support TCP/IP protocol. Microsoft Windows 2000/XP (or higher versions) and Internet Explorer 6.0 (or higher version) are the recommended operating systems of the management workstation, and JavaScript must be supported by the web browser.



§ 3 Operating the Device

§ 3.1 Quick Start

Please follow the procedures below if it is the first time for you to useLAVISION-868FTA for constructingDTV head-end system:

- 1、 Construct your hardware environment, including chassis installation, power supply system deployment, and connecting switches, LAVISION-868FTA, the source device(s)(e.g. satellite modulator or LNB module installed on satellite receiving antenna etc.), the destination device(s), management workstation, and CAS server (refer to Fig. 3)
- 2. Plan for the IP addresses of management port and data output port, the cable connectors of each source/destination devices; as well as number of digital TV transport streams. It is strongly recommended to take note of device addresses, port numbers and other configurations and keep them safely for checking purposes in future
- 3. Boot up each source devices of LAVISION-868FTA and configure the operating parameters, in order to ensure the proper signal receiving/decoding of RF signals. Please refer to the user manuals of source devices provided by their suppliers for detailed configuration.
- 4. Boot up LAVISION-868FTA. If you have known the management port IP address of the LAVISION-868FTA you are currently using, and when it is in the same subnet with the management workstation, you may also start configuring LAVISION-868FTA from the management workstation directly. Otherwise you will need to configure the IP address of management port using front panel control (refer to section §3.2.10.1)
- 5. Login to the web browser from the management workstation, key in the default user name "admin" and password "000000"; add and configure usernames and passwords of users allowed to access the device (refer to section0)
- Configure the port number and IP address of LAVISION-868FTA data output (refer to section §3.2.10.2)
- 7、 Search for input programs tree (refer to section §3.2.5.1), configure the output program settings of LAVISION-868FTA, including: select input program for output stream(refer to section, output mode), output program parameter; configure the PID mapping parameters if needed (refer to section).
- 8. If there are scrambled programs in the system, you need configure the CA operating parameters as well. (refer to section).
- Configure the destination devices of LAVISION-868FTA, to adjust the network settings, multiplex & scramble settings and modulation settingsof IPQAM. Please refer to the user manuals of succeeding devices provided by their suppliers for detailed configuration.
- 10、 Make use of stream analyzer or set-top box to testthe system. If the device works properly and the output signal can be received, then it is ready for transmission in the real network

§ 3.2 Web Management Operation of LAVISION-868FTA

The management and control of LAVISION-868FTA can be done via a web browser. We recommend you to use Internet Explorer 6.0 or higher version, and configure the display resolution to be (or higher than) 1024*768.



§ 3.2.1 Web User Login

After launching the Web browser, key in the IP address of LAVISION-868FTA's management port into the Addressbar of Web browser. Embedded Web server of LAVISION-868FTA will prompt with username and password for authentication, as shown in the figure below:

8	GF.
User name:	🖸 Admin 💌
Password:	Remember my password
	OK Cancel

Fig.4 Web Login

There is a factory default administrator user "**admin**" inLAVISION-868FTA with password of "**000000**". Please use this user and password to login to the system for the first time operation of LAVISION-868FTA. But changing of password for this user is strongly recommended, and the new password should be kept safely. If you choose "remember my proof", you needn't input your user and password when you login in the next time. But to ensure the safety, please do not choose this option in the public server.

By default, the operation language of Web page is English. If you want to operate under the Chinese interface, please select the 'Simple Chinese' form the dropdown list. As shown in the figure below:

Fig.5 Web Guide
简体中文 Simple Chinese 💌
英文 English
简体中文 Simple Chinese

Fig.6 Dropdown List of Web Interface

After successfully logging into the system, browser will display the default page of LAVISION-868FTA, as shown in the figure below:



			Multifunction			英文 English	
	Informa	ation Monitor	PO Configuration	Mux Settings S	cramble Settings	System Setting	p5
	Devio	e Information			Introduction		
Devic	ce Model:			- and	10 7	TRA	1
Seria	al Number:	TC27A22FFF00000A2C		110			
Soft	Version:	02.00	- 6ª	Distance	7/2		all Z
Hard	/Version:	02.00	1	and a state of the	3 5 12		1
Soft F	Release:	2013-01-22		Pert.	and the second		
FPG/	A Release:	2012-12-05		T themas	Contraction of the		
Manu	ufacturer:		Includes Viv				
Offici	(al				License		
	(al		License Status:		License Work Mode :		6
Offici	(al		License Status: Authorization Time:	2013-01-18 16:49:16			8
Offici	(al			The second s	Work Mode : Remaining Trail Tin		5
Offici	(al			The second s	Work Mode : Remaining Trail Tin		8
Offici	(al			The second s	Work Mode : Remaining Trail Tin		8
Offici	(al	- 4 0 0/0	Authorization Time:	The second s	Work Mode : Remaining Trail Tin		6

Fig.7 Default Page

In the default page, there are the information of device(model, serial number, etc), authorization state, and some important specifications will be refreshed in real time. You could enter into the "device monitoring", "Input & Output", "program multiplexing", "program scrambling", "device setting" page by clicking different hyperlinks in the area of main-menu across the top of this page.

Remark: Device will not auto-save your parameters. If the device restarts, the parameters will change to the state which you saved last time. If you have never saved your parameters, all the parameters will change to the default state. So if you

want to save your own parameters, please click **Save** in lower right corner after you finish setting LAVISION-868FTA.



§ 3.2.2 User Management

We recommend you to change the user and password after logging by the default user and password for the safety. You can edit your user information in the user management page.

Click "device setting" in the home page, and then you have the device-setting page, as shown in the figure below:

Select Items	System Basic Settings	
E 🥔 System Settings	IP Settings	
-D Basic Settings -D Advanced Settings	IPv4 Address: 120.120.120.32 Mask: 255.255.255.0 Gate: 120.120.120.1 Subr	nit
	MAC Settings	
	MAC Address: 00:5C:B1:00:0A:2C Subr	mit
	NTP Settings	
	Server Address: 110.110.110.46 Auto Sync Interval (s): 28800 Enable Auto Sync: OFF 💌	mit
	Time / Date (UTC)	
	Get Browser UTC Time	mit
	Ref	fresh

Fig.8 Device setting page



Click "user management"

in the "select option" area on the left side of this page, and

then you have the user management page, as shown in the figure below:

	UserN	lanagement		
Add New User	Index	User Name	Group	
User Name :	1	admin	Administrator	Modify Remove
Login Password :				
Confirm Password :				
Submit				
Modify Password				
User Name :				
New Password :				
Confirm Password :				
Submit				
				Refresh

Fig.9 User Management Page



In this page, you could add new user, edit old users' information or delete an user. Remark: Only "admin" user could enter into the user management page.

§ 3.2.2.1 Add new user

In the area of "adding user", input correctly users' user name and password, and confirm password.

Add New	User
User Name :	Telelynx
Login Password :	•••••
Confirm Password :	

Click "submit" button to complete add a new user. If you add successfully a new user, there will show your user information on the right side, as shown in the figure below:

User Ma	inagement			
Index	User Name	Group		
1	admin	Administrator	Modify	Remove
2	Telelynx	Operator	Modify	Remove

Fig.10 New user information

Remark: All new users are normal users. They are only permitted to set different parameters, but they don't have the right to manage the other user or upgrade the system.

§ 3.2.2.2 Edit users' information

In the user information list in this page, you can edit an user by clicking the 'modify' button in the same row.

ndex	User Name	Group		
1	admin	Administrator	Modify	Remove
2	Telelynx	Operator	Modify	Remove

That makes you edit your password, as shown in the figure below:

1=	
User Name :	Telelynx
New Password :	
Confirm Password :	



Fig.11 Edit users information

In this bar, you can edit your user's password and that will be accomplish by clicking "submit". Remark: You could not delete the "admin" user, but you can change the password of this user. When you use LAVISION-868FTA for the first time, you should change admin's password at first and then save this password.

§ 3.2.2.3 Delete an user

In the user information list in this page, click the "delete" button in the same row to delete this user.

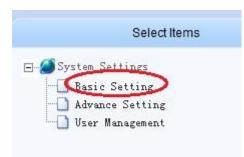
User Ma	inagement		
Index	User Name	Group	
1	admin	Administrator	Modify Remove
2	Telelynx	Operator	Modify Remove

Remark: LAVISION-868FTA will not permit you to delete admin user but the normal user.



§ 3.2.3 Basic parameter setting

In the system setting page, click "basic setting" in the "select option" area



To enter basic parameter setting page, as shown in the figure below:

	System Basic Set	tings	
IP Settings			
IPv4 Address: 120.120.120.210	Mask: 255.255.255.0 Gate:	120.120.120.1	Submit
MAC Settings			
MAC Address: 00:5C:B1:00:04	4:A5		Submit
NTP Settings			
Server Address: 120.120.120.1	Auto Sync Interval (s): 28800	Enable Auto Sync: OFF -	Submit
Time / Date (UTC)			
	Get Browser UTC Time		Submit
			Refresh

Fig.12 Basic parameter setting page

In this page, you could accomplish the setting of IP address, MAC address, set the IP address of time synchronization server, open or close this service, and set the UTC time synchronization,etc.

§ 3.2.3.1 IP Settings

In the page of figure 11, input a right IP address in the "IP settings" bar, then click "submit" to set LAVISION-868FTA' network parameter.

IP Settings						
IPv4 Address:	120.120.120.210	Mask:	255.255.255.0	Gate:	120.120.120.1	Submit

Remark: To ensure the working of device, you should guarantee that the management port IP address and LAVISION-868FTA' management server IP are in the same network segment



§ 3.2.3.2 MAC setting

In the page of figure 11, input a right MAC address in the "MAC setting" bar, then click "submit" to set LAVISION-868FTA' MAC address.

MAC Settings		
MAC Address:	00:5C:B1:00:04:A5	Submit

Remark: TELELYNX's products have the first 3 bytes "00:5C:B1" in the MAC address, that couldn't be modified.

§ 3.2.3.3 Parameter setting about system clock

Set time synchronization server: In the page of figure 11, you can set IP address of network clock server, auto synchronization time lag, auto synchronization switch in the "time synchronization protocol" bar.

NTP Settings						
Server Address:	120.120.120.1	Auto Sync Interval (s):	28800	Enable Auto Sync:	OFF 💌	Submit

Remark: When you set a right network clock server address, LAVISION-868FTA will update his system clock with the period which the user sets if SNTP service and network clock server are enabled.

Set system clock by manual operation: In the page of figure 11, you can set manually the system clock in the "date/time(UTC)" bar. And you can also click "get UTC time", then click "submit" button to finish setting.

Time / Date (UTC)		
2012 - 10 - 12 2 : 20 : 44	Get Browser UTC Time	Submit

Remark:

- 1. If the network clock server address has already configured and enabled, and the SNTP server works properly, the device will get the system clock from the network clock server, at this time, the manually configured clock will be invalid.
- 2. The device will keep the system clock according to its internal circuit after each manually configuration; this clock circuit can work properly over two years without the external power supply.
- 3. Select the synchro-browser UTC clock to be the standard UTC(0zone) clock, and this clock may be different from the clock shown on server, e.g. if the server clock is UTC+8:00, the final clock will be differ about 8 hours.



§ 3.2.4 Advanced Parameter setting

	Select Items
=- 🧭 System	Settings
- Bas	ic Setting
Adv Adv	ance Setting
Use	r Management

In the "system setting" page, click "Advanced setting" in the "select option" area

To enter the parameter setting page, as shown in the figure below:

	System A	dvance Settings		
Parameter Import / Export / Reset				
测	览… Import	Export	Reset	
Parameter Backup/Restore				
Enter Descriptions:	Backup	Current Backup Descrip	tions:	Restore
Software Upgrade/Export				
〔测	览… Upgrade	Backup		
License				
[〕	览… Import	Export		
License Application Code:				
93792BB31A6AED6C406F2ED042E9C222 2F8D1CD06D30DC0C66C50144F442C300 9CDE432060A6D10D5A5A0BED5BF1BB1B	2F8D1CD06D30DC0	C66C50144F442C3002	FF0101783EDF9AB	
Device Control				
Reboot				
0				(
				Refresh

Fig.13 Advanced setting page

In this page, you could import/export/reset the parameters, back-up/recover the parameters, upgrade/back-up the software, import the authorization document, restart the device,etc.

§ 3.2.4.1 Import/export/reset the parameters

Import the parameters: In the page of figure 13, click "browse" button in the "inport/export/reset the parameters" bar to choose the parameters' document, a .bin file, of the device.

Parameter Import / Export / Reset			
	Browse	Export	Reset
Fig.14 Import/ex	xport/reset the parar	neters page	

After choosing the parameters' document, click "Open" button. Then return to last page, click "import" button, system will change the page to uploading management page, as shown in the figure below:



	Uploa	ad Management	
Jpload Information			
Upload Status : 🛃	Upload Size (Bytes):	3131	
ile Information			
File Validation : 🛜	File Description:	868-FTA Parameter Mode5	

Fig.15 Document uploading management page

System will checkout the uploading document, if its format is right, there will appear mark in the "uploading" bar and "document checkout" bar. Click "submit" button, you'll have this dialog box:



Click "YES" button to import the parameters. Remark:

- 1. Please do not turn off the device or pull the power off when the device is importing the parameters.
- 2. The device will restart after importing the parameters.
- 3.

Export the parameters: In the page of figure 13, click "export" button, it allows you to save parameter to a file. Click "save" button to choose the path you wanted to save these parameters.

Reset the parameters: In the page of figure 13, click "reset" button, then you'll have this dialog box:





§ 3.2.4.2 Backup/Restore the parameters

Back-up the parameters: In the page of figure 15, there is a "Parameter Back-up/Restore" bar:



Fig.16 Parameter back-up/recover

Fill in the parameter description information in the "Enter Description" field, (just like 2012-10-26), click "Backup" button, you'll have this dialog box:



Click "YES" button, system will create a new back-up parameter document in the device.

Remark: System could only save a unique back-up document each time, the new back-up document will cover the last one.

Restore the parameters: When the device has a back-up document, click "Restore" button, you'll have this dialog box:



Click "YES" button to import the parameters.

§ 3.2.4.3 Upgrade/Backup the software

As shown in the figur12, you e can choose the upgrade document in the "Software Upgrade/Export" bar, then import it to upgrade the device.

Software Upgrade/Export			
	[浏览][Upg	grade	Backup

Click "Browse" button, you'll have this dialog box:

Select the upgrade document, it is a .bin file from Telelynx, click "Open" button, as shown below:



Software Upgrade/Export		
C:\Documents and Settings\Administra	浏览 Upgrade	Backup

Click "Upgrade" button, system will change the page to uploading management page, as shown below:

	Upload Management
Upload Information	
Upload Status : 🌄	Upload Size (Bytes): 1013967
File Information	
File Validation : <table-cell></table-cell>	File Description:
	Submit Back

Fig.17 Document uploading management page

System will checkout the uploading document, if its format is right, there will appear mark in the "Uploading" bar and "document checkout" bar. Click "Submit" button, you'll have this dialog box:



Click "YES" button to upgrade the device.

After upgrading, you can check the device version information in the "device information" bar.

Device Model:	868-FTA
Serial No.:	TC27A14FFF00000A7C
Soft version :	01.00
Hard version :	01.00

Remark:



- 1. Please do not turn off the device or pull the power off when the device is importing the parameters.
- 2. The device will restart after importing the parametersauthorization.
- 3. The operator must use "administrator" account to operate the upgrade function.

§ 3.2.4.4 License

LAVISION-868FTA has new build-in module management function, multi-configuration could be upgraded in the way of software authorization.

License			
	〔浏览	Import	Export

as shown in the figure 1: LAVISION-868FTA has 4 types of authorization, please verify the authorization type before you buy this device. After buying this device, if you want to get a higher configuration, you can also contact with our salesman to buy the authorization. For managing the authorization, you should give us the authorizations apply code, as shown below:

License Application Code:	
93792BB31A6AED6C406F2ED042E9C22221D45F7DD481F37A83D3CAD6360FB95C8D1CD06D30DC0C66C50144F4420	C300 🔺
2F8D1CD06D30DC0C66C50144F442C3002F8D1CD06D30DC0C66C50144F442C3002FF0101783EDF9AB9AFFD7AE75	E647
9CDE432060A6D10D5A5A0BED5BF1BB1B552EA227CE8D640FFD3C1C2491D13D26C9BB	
	-

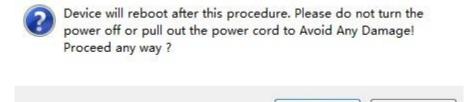
After receiving the authorizations apply code, we'll send youimmediately the authorization document.

§ 3.2.4.5 Device control

As shown in the figure 12, there is a "reboot" option in the "device control" bar.



Click "reboot" button, you'll have this dialog box:



确定

取消

Fig.18 Device restart information

Click "YES" button, to reboot the device.



§ 3.2.5 Input/output setting

Click "Input/Output" hyperlink in the navigation menu of the home page to input/output setting page of LAVISION-868FTA.

The number and the name of input/output channel of the device are listed in the "Select Items" in the left side of this page, as shown below:

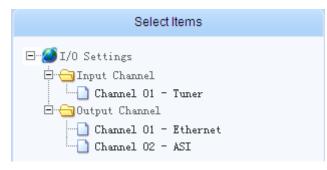


Fig.19 Input/Output Setting

§ 3.2.5.1 TUNER settings

'Input/output' settings interface shows the link of 'Tuner' by default, the 'channel settings' shows the current parameters of Tuner.

§ 3.2.5.1.1 DVB-S/S2 settings

The channel setting of DVB-S/S2 is shown in the figure below:

Input Channel 01 Tuner Tuner Setting: DVB-S/S2 Tuner Setting: DVB-S/S2
and an Telephone Instal Free All Inc. In Sec. (1916) OD (10 Sec.) - Delec Mathe et 2017 Outlink - One state - Die Otsee stat/2017 Die Ouselik (2017)
Index TsIndex Input Freq(MHz) Local Freq(MHz) SR(MBaud/s) Polar Method 22K Switch Spect Inv Sig Strength(%) Sig Quality(%) L
1 0001 4100.000 5150.000 27.500 VER OFF OFF 0 0 2 0002 12580.000 10600.000 41.250 VER OFF OFF 0 0 3 0003 4100.000 5150.000 27.500 VER OFF OFF 0 0 4 0004 4100.000 5150.000 27.500 VER OFF 0 0 5 0005 4100.000 5150.000 27.500 VER OFF 0 0 6 0006 4100.000 5150.000 27.500 VER OFF 0 0 7 0007 12580.000 10600.000 41.250 VER OFF 0 0
8 0008 4100.000 5150.000 27.500 VER V OFF 0 0
Submit



Fig.20 DVB-S/S2 settings

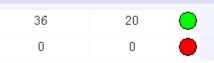
Channel setting: in this page, the frequency parameters such as frequency, local frequency, symbol rate, polar method, 22K switch, and spectrum inversion can be set in this page of the "channel setting".

Index	TsIndex	Input Freq(MHz)	Local Freq(MHz)	SR(MBaud/s)	Polar Method	22K Switch	Spect Inv
1	0001	4100.000	5150.000	27.500	VER 💌	OFF 👻	OFF 💌

The users can judge the operation status through the last three indexes of each channel. In order to lock the signals probably, the suggested signal strength is: 42dBuV ~ 82dBuV.

If the lock light shows green, the signals is locked; if the lock light shows red, the signals is unlocked.

Sig Strength(%)	Sig Quality(%)	Lock
-----------------	----------------	------



Range of the parameter settings:

Input frequency:

Local frequency:

(the difference between input frequency and local frequency): $950.000 \sim 2150.000 \text{MHz}$

Symbol rate: 2.000~35.500MBaud/s

Polar method: None/VER /HOR

22K switch: OFF/ON

Spectrum inversion: AUTO

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

§ 3.2.5.1.2 DVB-C settings

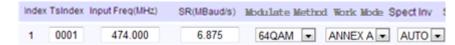
The channel setting of DVB-C is shown in the figure below:

			ing	input setti	Tuner i				
						Tuner	al 01	t Channe	npu
							OVB-C	r Setting:	une
uality(%) Lock	6) Sig Quality(%)	Sig Strength(%)	Spect Inv	d Work Mode	Modulate Method	SR(MBaud/s)	Input Freg(MHz)	Tsindex	ndex
0				ANNEX A	64QAM 💌	6.875	474.000	0001	1
0 🥔	0	• 0	AUTO	ANNEX A 💌	64QAM 👻	6.875	474.000	0002	2
0 🥚	0	• 0	AUTO	ANNEX A	64QAM 💌	6.875	474.000	0003	3
0 🥔	0	• 0	AUTO	ANNEX A	64QAM 💌	6.875	474.000	0004	4
0 🥔	0	• 0	AUTO	ANNEX A 💌	64QAM 💌	6.875	474.000	0005	5
0 🥔	0	• 0	AUTO	ANNEX A 💌	64QAM 💌	6.875	474.000	0006	6
0 🥔	0	• 0	AUTO	ANNEX A 💌	64QAM 👻	6.875	474.000	0007	7
0 🥔	0	• 0	AUTO	ANNEX A 💌	64QAM 💌	6.875	474.000	8000	8
0	0	• 0	AUTO	ANNEX A	64QAM 💌	6.875	474.000	0007	7

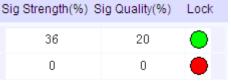


Fig.21 DVB-C settings

Channel setting: in this page, the frequency parameters such as frequency, symbol rate, modulate method, work mode, and spectrum inversion can be set in this page of the "channel setting".



The users can judge the operation status through the last three indexes of each channel. In order to lock the signals probably, the suggested signal strength is: 42dBuV ~ 82dBuV. If the lock light shows green, the signals is locked; if the lock light shows red, the signals is unlocked.



Range of the parameter settings: Frequency: 51.000~860.000MHz Symbol rate: 2.000~7.000MBaud/s Modulate method: 16QAM/32QAM/64QAM/128QAM/256QAM ITU encode: ANNEX A/ANNEX B/ANNEX C Spectrum inversion: AUTO

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

§ 3.2.5.2 Ethernet settings

Click "ETH settings" hyperlink, the Ethernet settings are shown in "channel settings" page, as shown below:



			Channel Settings	
Output Ch	annel 01	Ethe	ernet	
ETH Settin	gs: 120.1	20.120.11 -	255.255.255.0 - 120.120.120.1 - 00:5C:B1:01:0A:2C	
Index	TsIndex	Protocol	DES Address	Status
1	0001	UDP 💌	224.120.120.90 : 1090	ON 💌
2	0002	UDP 💌	224.120.120.90 2090	ON 💌
3	0003	UDP 💌	224.120.120.90 3090	ON 💌
4	0004		224.120.120.90 : 4090	ON 💌
5	0005	UDP 💌	224.120.120.90 5090	ON 💌
6	0006	UDP 💌	227.10.10.6 5000	OFF -
7	0007	UDP 💌	227.10.10.7 : 5000	OFF 💌
8	0008	UDP 💌	227.10.10.8 5000	OFF -
9	0009	UDP 💌	227.10.10.9 5000	OFF 💌
10	0010	UDP 💌	227.10.10.10 5000	OFF 💌
11	0011	UDP 💌	227.10.10.11 5000	OFF 💌
12	0012		227.10.10.12 5000	OFF 💌
13	0013	UDP 💌	227.10.10.13 5000	OFF 💌
14	0014		227 10 10 14 : 5000	OFF 💌

Fig.22 Ethernet settings

Channel parameters: the protocol, DES address, source port, and output switch can be set in this page of the "channel settings".

Range of the parameter settings:

Protocol: UDP/RTP DES address: 001.000.000~126.255.255.255 and 128.000.000~239.255.255.255 Source port: 1000~65535 Status:ON/OFF

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

§ 3.2.5.3 ASI settings

As shown in fig.23, click link of "ASI", the ASI settings are shown in "channel settings" page, as shown below:



			Channel Setti	ngs		
Output Cha	annel 02	ASI				
ASI Setting	S:					
Index	TsIndex				Bitrate (Mbps)	Status
1	0015				50.000	ON _
2	0016				50.000	ON
					Submit	Refresh

Fig.23 ASI settings

Channel parameters: the bit rate can be set in this page of the "channel settings".



§ 3.2.6 Multiplexing setting of Programs

Click "MUX Setting" hyperlink in the navigation menu of the home page to Multiplexing setting page of LAVISION-868FTA, as shown in figure 22.

Select Items		General Settings	
Multiplexer Configuration General Setting	Default Input/Output Charset		
- Manual PID Map	Input Charset : LATIN	Output Charset : LATIN	
	Time Zone :		
💼 🧰 Input Service	Select Time Zone : UTC +00:00 💌		
👜 🧰 Output Service	TDT TOT Settings :		
	Update Cycle (s): 5	TOT Enable : OFF -	
E			
-			Submit Refresh

Fig.24 Multiplexing setting of programs

The multiplex parameter configurations are listed in the "Select Items" in the left side of this page, including the general setting, manual PID map, manual PSI inserter, NIT edit, input programs and output programs.



Fig.25 List of the multiplex parameter configurations

§ 3.2.6.1 General setting

Click "General Setting" hyperlink, the basic information of the system is displayed in the right side of the page, as shown below:



	General Settings		
Default Input/Output Charset			
Input Charset : LATIN 💌	Output Charset : LATIN		
Time Zone :			
Select Time Zone : UTC +00:00			
TDT TOT Settings :			
Update Cycle (s): 5	TOT Enable : OFF 💌		
		Submit	Refresh

Fig.26 Base setting of program multiplexing

The default of input/output character-sets, time zone and TDT/TOT can be set in this page.

§ 3.2.6.1.1 The setting of the default character-sets

The character-sets setting and transform functions built in LAVISION-868FTA to ensure the received program information over transport stream can be displayed correctly, meanwhile ensure this information can be displayed correctly in the next device.

It can be set in the column of default character-sets of input/output.

Default Input/O	utput C	harset			
Input Charset :	LATIN	•	Output Charset :	LATIN	-

There are 3 kinds of character-sets:LATIN、GB2312、UTF-8

LATIN GB2312	
UTF-8	

§ 3.2.6.1.2 Setting of time zone

Setting of time zone affect TOT table, after analyze the TOT table at the receiver side, the receiver can get this time zone.



```
§ 3.2.6.1.3 Setting of TDT、TOT
```



The TDT table update cycle and TOT switch can be set in the column of TDT/TOT setting.

TDT TOT Settings			
Update Cycle (s):	5	TOT Enable :	OFF 💌

TDT update cycle(per second): update the TDT table with cyclical time.

TOT switch: set it on, the device insert TOT table in the sent transport stream.

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

§ 3.2.6.2 PID mapping function

The system will discard the private PID, if it cannot be recognized. The needed private PID can be mapped by the PID mapping function, and mapped private PID can be passed through and transmitted by the device.

§ 3.2.6.2.1 Add new PID mapping function

As shown in figure 27, click "Manual PID Map" hyperlink, the PID mapping setting page will display in the right side. The following figure shows the "PID mapping" page:

			Manual PID Map			
Index	Input Ts Index	Input PID	Output Ts Index	Output PID	Enable	
					2	
			Add	Remove	Submit	Refresh

Fig.27 PID mapping

Click "add" button in the bottom of this page, a new column of PID parameter setting will display, as shown bellow:

			Manual PID Map			
Index	Input Ts Index	Input PID	Output Ts Index	Output PID	Enable	
1	1	8191	1	8191	OFF -	
					OFF	



Input TS index: choose the input TS channel from 1 to 16.
Input PID: select the PID, which is needed to map.
Output TS index: choose the output channel from 1 to 8.
Output PID: set a PID number from the input PID.
Switch: switch on, the selected PID will map to selected channel.

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

Remark:

- 1. When the input TS index is out of the boundary, the operation will failure.
- 2. When the output TS index is out of the boundary, the operation will failure.
- 3. The input/output PIDs are decimal number

§ 3.2.6.2.2 Delete PID mapping

			Manual PID Map		
Index	Input Ts Index	Input PID	Output Ts Index	Output PID	Enable 📃
1	1	1012	1	8191	ON 💌 📃
2	1	4000	1	8191	ON 🖃 🔘

As shown above, select the check box in any column, after that click the "Delete" button in the bottom of this page, then, click "Submit", the selected PID mapping will delete.

			Manual PID Map			
Index	Input Ts Index	Input PID	Output Ts Index	Output PID	Enable	
1	1	1012	1	8191	ON 💌	

As shown above, the second PID mapping has been deleted.

§ 3.2.6.3 PSI information insertion

LAVISION-868FTA support the PSI data update, i.e.: OTA file, BAT, SDT e.g.. The maximum size of the total updated file is 1024 Kbyte and the bandwidth of the updated data is smaller than 4096Kbps.

§ 3.2.6.3.1 Add upload file

As shown in figure 28, click the "Manual PSI Inserter" hyperlink, the PSI information insertion page will display in the right side of the main page.



		Manu	ual PSI Inserter			
Index	Description	Size (Bytes)	Output Ts Index	Bitrate (Kbps)	Enable	
Used/Tota	l Space (KBytes):	0.000/1024.000	Used/Total Bit	rate (Kbps):	0.000/4096.00	0
		Browse Upload		Remov	e Submit	Refresh

Fig.28 PSI information insertion

Click left- bottom "browse" and select the updating file.

TS 文件
10 2.11
•
Cancel
)

After select, click the "upload" bottom Upload.

The system will automatically skip to the upload management page, as shown below:



	Upload Manag	ement		
Upload Information				
Upload Status : 🛜	Upload Size (Bytes): 26	532		
File Information				
File Validation : 🛃	File Description:	18		
			Submit	Back

The system will adjust the uploaded PSI file, if the file is uploaded correctly and the file layout is correct,

the column of "upload status" and "file adjust" will display this characteristic: Click the "Submit" button below, the upload will succeed, as shown below:

	Upload Manag	iement	
Upload Information			
Upload Status : 🛜	Upload Size (Bytes): 26	632	
File Information			
File Validation : 🗭	File Description:	18	
			Submit Back

Fig.29 The PSI file upload successfully



Enat	ble
OFF	
OFF	3
ON	

The "Enable"

,can setting transmission of the PSI file.

$\$ 3.2.6.3.2 Delete the upload file

As shown below, select the check box in any column, after that click the "Delete" button in the bottom of this page, then, click "Submit", the selected PSI information will be deleted.

Index	Description	Size (Bytes)	Output Ts Index	Bitrate (Kbps)	Enable	
1	TS 00016160	2632	1	0.000	OFF -	()

§ 3.2.6.4 NIT edit

The NIT of the transport stream of DTV support the information of the physical layer of the network, LAVISION-868FTA support edit NIT manually.

As shown in figure 28, click "NIT edit" button, the NIT edit page is shown in the right side of the main page:

				Netw	ork Inforar	mtion Editor					
Network ID	:	0	Network Name:	[N	T Version:	0	Enable: OFF	•	Descripto	r Edit
Index 1	'S ID	ON ID	Freq (MHz)	QAM Mode	SR (MB	aud)	FEC Inner	FEC Out	er D	escriptor	
							Add	Remove	Sut	omit	Refresh
Descriptor	Turno:	NIT Make		1			Add	Remove	Sul	bmit	Refresh
Descriptor ⁻ Index	Гуре:	NIT Netw	ork Descriptors	Descriptor Data (H	IEX)		Add				Refresh
Descriptor ⁻ Index	Гуре:	NIT Netw		Descriptor Data (H	IEX)		Add		Sub	omit	Refresh
	Гуре:	NIT Netw		Descriptor Data (H	IEX)		Add				Refresh
	Гуре:	NIT Netw		Descriptor Data (H	IEX)		Add				Refresh
	Гуре:	NIT Netw		Descriptor Data (H	IEX)		Add				Refresh

Fig.30 NIT edit



§ 3.2.6.4.1 Add NIT information

Click "Add" button in the page, then the NIT can be edited, as shown below:

100 1002												C	
Network ID:		0	Network Nan	ne:			NITV	ersion:	0	Enable: ()++ 💌	Descrip	tor Edit
Index T	S ID	ON ID	Freq (MH	z)	QAM Mo	de	SR (MBaud)	FEC Inne	er FEC	Outer	Descriptor	r 🔟
1	1	1	474.0000	00 6	4QAM	•	6.875000	n	io conv.	no FEC]	
									Add	Remov	e	Submit	Refresh
Descriptor T	ype:	NIT Netw	ork Descripto	ſS					Add	Remov	9	Submit	Refresh
Descriptor T Index	уре:	NIT Netw	ork Descripto		scriptor E	Data (HE	EX)		Add	Remov	e Enable		
	уре:	NIT Netw	ork Descripto		scriptor E	Data (HE	EX)		Add	Remov			
	уре:	NIT Netw	ork Descripto		scriptor E	Data (HE	EX)		Add	Remov			
	ype:	NIT Netw	ork Descripto		scriptor E)ata (HE	EX)		Add	Remov			

Fig.31 NIT information editing

The parameter of NIT including: network ID, network name, NIT version, frequency, modulation module, symbol rate, FEC inner-coding, FEC outer-coding.

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

LAVISION-868FTA support the edit of NIT Network Descriptor and NIT TS Descriptor.

[Remark] the range of NIT version: 1-31

NIT Network descriptor edit: click	Descriptor Edit	button at the right-top of the page, the box of the
department type will display helew		

descriptor type will display below.

Descriptor Type:	NIT Network Descriptors					
Index		Descriptor Data (HEX)			Enable	
						Refresh
			Add	Remove	Submit	

Fig.32 NIT Network descriptor edit

Click "Add" button, a new column of NIT network descriptor will display and can be edited, as shown below:

Descriptor Type:	NIT Network Descriptors				
Index]	Descriptor Data (HEX)		Enable	
1 04011	es Fl.			OFF -	
			Add Re	emove Submit	Refresh



"Switch" can control the transmission of the descriptor, and click "Submit" button to save the configuration.

D	es	60	ri	p	tor
			_	_	

Edit button in the bottom of this page, then,

Select the check box in any column, after that click the click "Submit", the selected NIT network descriptor will delete.

NIT TS descriptor edit: as shown in figure 31, click the corresponding "edit" button after the NIT information, the box of descriptor type display: NIT TS descriptor:

Descriptor Type:	NIT TS Descriptors					
Index		Descriptor Data (HEX)			Enable	
			Add	Remove	Submit	Refresh

Fig.33 NIT TS descriptor edit

The edit of NIT TS descriptor is same as the NIT Network Descriptor, the detail please check the specification of the "edit of NIT Network Descriptor"

Remark:

- 1. NIT descriptor utilize hexadecimal number.
- 2. Ensure the Descriptor meet the standard of DVB SI.

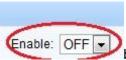
§ 3.2.6.4.2 Delete NIT information

As shown below, select the check box in any column, after that click the "Delete" button in the bottom of this page, then, click "Submit", the selected NIT information will delete.

					Netwo	rk Inforamtion E	ditor				
Network	ID:	0	Network Name:	[NIT Versi	on: 0	Enable: Of	F	Descript	or Edit
Index	TS ID	ON ID	Freq (MHz)	QAM Mo	de	SR (MBaud)	FEC In	ner FEC O	uter	Descriptor	
1	1	1	474.000000	64QAM	•	6.875000	no conv.	▼ no FEC	•	Edit	
											\cup
											$\mathbf{\tilde{\mathbf{v}}}$
							Add	Remove		Submit	Refres

§ 3.2.6.4.3 Enable

As shown in figure 29, there is a



button at the right top of the page. This button can

control the transmission of all the NIT information.



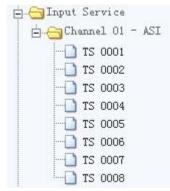
§ 3.2.6.5 Input program

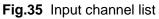
As shown in figure 34, click " 🗄 " button, which at the left side of the "input program" hyperlink, the input program menu spread up, as shown below:



Fig.34 Input program menu

The type of the current input channel is displayed in the input program menu. As shown in figure 33, spread "channel 01" menu, the number of this type of channel can be checked.





As shown in figure 36, click any hyperlink of channel (i.e.: "TS 0002"), the input TS program information can be checked at the right side of the page.

Input TS Informations
Input IS Settings TS 0001 PAT Version CAT Version O SDT Version O CAS (EMM)
Analyse Timeout (ms): 1500 Default Charset: LATIN Keep Services When Failed: OFF Service Analyse Batch Select Services Output Ts:

Fig.36 Input TS program information

§ 3.2.6.5.1 Search Program

As shown in figure 34, click Service Analyse button at the bottom of the page, the system will search



the corresponding channel automatically, and display the information, as shown below:

	PAT Version -	7	CRC32 -	6B6D	8A5A									
-	CAT Version -	0	Descriptor -	0										
- 🗋 s	SDT Version -	0												
	CAS	(EMN	1) - 0	_		_				<u></u>	-			
• 🗋 🤆	CCTV-1			1000	Number	- [1	100	Output TS -	OFF	•			
	CCTV-2			1.777	Number	-	2		Output TS -					
E 🗀 🤇	CCTV-3				Number	-	3		Output TS -					
Ð 📋 🤇					Number	<u>د</u>	4	- C	Output TS -					
Ð-🖸 (1000	Number	7 L	5		Output TS -					
E 📋	CCTV-8				Number	-	6	-	Output TS -					
Ð 📋					Number	-	7		Output TS -					
H - O					Number	-	8		Output TS -					
E 🗀 !				0732	Number	7	9	10000	Output TS -					
T -	SKY SPORTS				Number	-	10		Output TS -					
±-🗀 !					Number	-	11		Output TS -					
E 🗀 !					Number	-	12		Output TS -	-				
• 🛑 🧐					Number	- 1	13		Output TS -					
• 🛑					Number	-	14		Output TS -					
Ð 🗀 !					Number	-	15		Output TS -		-			
••••••••••••••••••••••••••••••••••••••	MNC TV				Number	-	16		Output TS -	OFF	•			
			- 14									115		 -

Fig.37 Input program information

§ 3.2.6.5.2 Program information check

The information of the TS is displayed above the program list, as shown below:

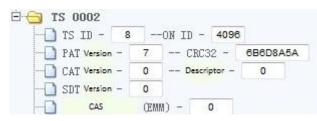


Fig.38 TS information

Click any " 🖻 " button at the right side of the program name, the details spread up below:

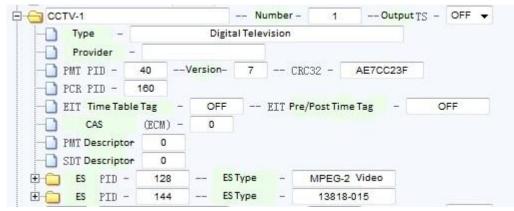


Fig.39 Program TS information

§ 3.2.6.5.3 Single program multiplexing

When user multiplex the single program, the multiplexing output channel of this program can be chose, as shown below:



	ID - 4096	3							
PAT Version - 7	- CRC32 -	686	D8A5A	1					
CAT Version - 0	– Descriptor –	0							
SDT Version - 0									
CAS (EMM)	- 0							-	-
E CCTV-1			Number	-	1		Output TS	OFF)
E CCTV-2]	Number	242	2		Output TS -	OFF	+
E CCTV-3			Number	-22	3	122	Output TS -	OFF	•
E CCTV-4		777	Number	370	4		Output TS -	OFF	•
🗄 🚞 ССТV-5			Number		5		Output TS -	OFF	•
🗄 🗀 ССТУ-В		1,42	Number	-	6		Output TS -	OFF	•
🗄 🚞 ССТV-7			Number	523	7		Output TS -	OFF	-
🗄 🧰 ССТV-8		777	Number	3.57	8		Output TS -	OFF	•
🗄 🧰 нво			Number		9		Output TS -	OFF	•
E 📋 SKY SPORTS] 44	Number	7 4 2	10		Output TS -	OFF	•
ESPN		22	Number	120	11	10202	Output TS -	OFF	•
E DINBC		77	Number	-	12		Output TS -	OFF	-
			Number	-	13		Output TS -	OFF	•
🗄 👝 ввс		41-	Number	-	14		Output TS -	OFF	*
			Number	(<u>19</u>)	15	10202	Output TS -	OFF	-
			Number		16		Output TS -	OFF	-

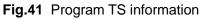
Fig.40 Program TS information

After the configuration, click "Submit" button at right-bottom of the page to save the setting.

§ 3.2.6.5.4 Batch program multiplexing

LAVISION-868FTA supports batch program multiplexing. It means multiplex all the programs of one channel to another selected channel. As shown below:

	CAS	(EMM)	-	0
÷ 🗀	CCTV-1			
÷	CCTV-2			
÷ 🗀	CCTV-3			
Ė 🗀	CCTV-4			
÷ 🗀	CCTV-5			
÷ 🚞	CCTV-8			
÷ 🚞	CCTV-7			
÷ 🗀	CCTV-8			
÷-	нво			
÷.	SKY SPORTS			
÷- 🚞	ESPN			
÷- 🚞	NBC			
÷ 🗀	CNN			
÷.	BBC			
÷ 🚞	NHK			
Ė. 🚞	MNC TV			
on the local division in the local divisione		and the second second	-	



6

Open the drop-down list box of "the output location of the batch select program" and select the channel,



	6B6D8A5A				
CAT Version - 0 Descriptor -	0				
SDT Version - 0				\wedge	
E CCTV-1	Number	1	Output TS -	- 001 -	
	Number	- 2	Output TS -	001 -	
E CCTV-3	Number	- 3	Output TS -	001 🔻	
🕀 🛅 ССТV-4	Number	- 4	Output TS -	001 🗸	
	Number	- 5	Output TS -	001 🗸	
	Number	- 6	Output TS	001 🗸	
E CCTV-7	Number	- 7	Output TS	001 🗸	
E-CTV-8	Number	- 8	Output TS	001 🔻	
🕀 🗀 НВО	Number	- 9	Output TS	001 🔻	
E SKY SPORTS	Number	- 10	Output TS -	001 🔻	
ESPN	Number	- 11	Output TS -	001 🔻	
E ONBC	Number	- 12	Output TS -	001 🗸	
	Number		Output TS -	- 001 -	
E C BBC	Number		Output TS -		
E D NHK	Number		Output TS -		
E MNC TV	Number	- 16	Output TS -	- 001	
and the second se					6.000

click the "Submit" button, the multiplexing sets successfully as shown below:

Fig.42 Batch multiplexing

§ 3.2.6.5.5 Other function

As shown in figure 40, "Keep Services When Failed", "Default Charset" and "Analyze Timeout" are also in this page:

Analyse Timeout (ms)	1500	Default Charset:	LATIN	-	Keep Services When Failed:	OFF -	ſ

Search overtime: when the search time is over the user setting, the search will stop.

Default input character-sets: detail in 3.2.6.1.1

Switch of deletion after failure: when the search failure, switch on will delete all the information of current page.

§ 3.2.6.6 Output service

As shown in figure 41, unfold "Output Service" to open the output program channel menu, shown as below:



Fig.43 Output Channel Menu

Output program channel will list the type of output channel. As shown in figure 41, unfold "channel 01" menu to check the number of channels, shown as below:



🗄 😋 Output Service
🗄 😋 Channel 01 - Modulator
TS 004

Fig.44 Output Channel List

Shown as figure 44, expand the menu of 'channel 01-ASI' to see the numbers of this channel, shown as below:

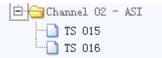


Fig.45 List of Output TS

Shown as figure 45, click a channel link, for example "TS002", to enter the output TS program information page, shown as below:

	Output TS Informations		
) - 100 - ON 💌) - 500 - ON 💌 User DefinedDescriptor - Edit) - 500 - ON 💌		
ServiceRemove MarkSelect All:		Submit Refre	sh
Descriptor Type:			
Index Desc	criptor Data (HEX)	Enable 📃	
	Add	Submit	esh

Fig.46 Output TS information page

§ 3.2.6.6.1 Output TS Information Monitoring and Configuration

Shown as figure 43, the output TS information page will display the TS related information, such as TS ID, PAT version, PMT version, SDT version, CAS, output programs, etc.

Pass-through: users can choose to pass through the input stream by turn on the pass-through switch, shown as below:

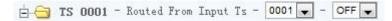




Fig.47 Pass-through Selection

[Remark] In pass-through mode, the TS is unable to be edited.

PSI/SI Information: users can manually configure the PSI/SI information of the output TS. Configurable parameters includes:

TS ID				
	1	ON ID -	0	

• PAT version, PAT sending interval

----- PAT Version - 0 -- Interval (ms) - 100 - ON 💌

CAT version, CAT sending interval, CA descriptor

					and the second s		_			
	CAT U.		T 1	(ON		11-	DefinedDescriptor -	
	LAI Version -	0	Interval	umsi -	500	- UN		User	Defineduescriptor -	Edit
_				A.1 - X		the provide states	1000			

To edit the CA descriptors, click the "Edit", then the "Descriptor Type" box at the bottom of the page will display TS CAT Descriptors, shown as below:

Descriptor Type:	TS CAT Descriptors				
Index		Descriptor Data (HEX)		Enable	
			Add	Remove	nit Refresh

Fig.48 CAT description editing

The way to edit CAT descriptor is the same as the way to edit NIT descriptor, see section 3.2.6.4.1.

• SDT version, SDT sending interval

SDT Version - 0	Interva	l (ms) -	500	-	ON	-
NIT sending interval INIT Interval (ms) -	21.000000000000000000000000000000000000	OFF 💌				
TDT/TOT sending in	0.022200					
- DIDITOT Interval	Contractor and the second	00 -	ON 💌			
CA switch						
🚊 😋 SCS CAS (EMM) -	4					
	0001	CA P	ID - 🗌	48] - [ON

CA System ID	0001	CA PID -	48	-	ON	-
CA System ID	0002	CA PID -	49	-	ON	-
	0003	CA PID -	50	1-1	ON	•
	0004	CA PID -	51	-	ON	

[Remark] PAT, CAT, SDT version range : 0 - 31.

§ 3.2.6.6.2 Edit Program Information

LAVISION-868FTA allows users to edit each individual program information. Click 🖭 button at the front



of the program name to open the program information, shown as below:

CCTV-1		N	umber – 1	Output]	IS - OFF -
Type -		Digital Tele	vision		
Provider	-				
	40Ve	rsion- 7	CRC32 -	AE7CC23F	li
-D PCR PID -	160				
- 🗋 EIT Time Tab	le Tag 🛛 –	OFF	EIT Pre/Post Ti	me Tag 🛛 🚽	OFF
CAS	(ECM) -	0			
PMT Descripto	r 0				
	r 0				
🗄 🧰 ES PID -	128 -	- ES Type	- MPEG	-2 Video	
÷ 🗂 ES PID -	144 -	- ES Type	- 1381	8-015	

Fig.49 Program Information

Editable information include program name, program number, PMT information, PCR PID, EIT information, CA related information, ES information, etc.

TS information

CCTV-1		Number -	1	Output TS -	OFF	•
Provider	-					

Users can type the program name, program number, and provider in the corresponding boxes, and click "Submit" button to validate the setting.

• PMT information



Users can type the value of PMT PID, PMT version, sending interval in the corresponding boxes, and click "Submit" button to validate the setting.

PCR PID

```
----] PCR PID - 160
```

😥 🧰 SCS CAS (2000) - 🛛 4

Users can type the value of PCR PID in the corresponding box, and click "Submit" button to validate the setting.

EIT information

```
EIT Time Table Tag - OFF -- EIT Pre/Post Time Tag - OFF
```

Users can turn ON/OFF the EIT time table tag, EIT previous/succeeding information tag, and click "Submit" button to validate the setting.

CA information

Click : Click CAS to open the CA information list.

🚊 😋 SCS CAS (EMM) -	4					
🔄 🗋 CA System ID -	0001	CA PID -	48]-	ON	
CA System ID	0002	CA PID -	49	-	ON	-
	0003	CA PID -	50	-	ON	-
	0004	CA PID -	51	-	ON	

Users can type the value of CA PID in the corresponding box and turn ON/OFF the CA channel, then click "Submit" button to validate the setting.

• PMT descriptor



PMT Descriptor 0

To edit the PMT descriptors, click the "Edit", then the "Descriptor Type" box at the bottom of the page will display Service PMT Descriptors, shown as below:

Descriptor Type: Service	PMT Descriptors		
Index	Descriptor Data (HEX)	Enable	e 📃

The way to edit PMT descriptor is the same as the way to edit NIT descriptor, see section 3.2.6.4.1.

• SDT descriptor

To edit the SDT descriptors, click the "Edit", then the "Descriptor Type" box at the bottom of the page will display Service SDT Descriptors, shown as below:

Descriptor Type:	Service SDT Descrip	ptors				
Index		Descriptor Data ((HEX)	Er	nable	

• ES information

Click 🗄 🖶 🗀	ES	PID -	128	 ES Type	-	MPEG-2 Video	button in front of the TS to open

the TS information list.

Users can type the value of ES PID in the corresponding box and turn ON/OFF the sending switch. To edit ES descriptor, click "Edit" button, then the "Descriptor Type" box at the bottom of the page will display Service ES Descriptors, shown as below:

Descriptor Type:	ES PMT Descriptors				
Index	Descriptor Data (HEX)			Enable	
		Add	Remove	Submit	Refresh

The way to edit ES PMT is the same as the way to edit NIT descriptor, see section 3.2.6.4.1.

§ 3.2.6.6.3 Delete Program

To delete a program, check its corresponding service remove box, shown as below:

E CCTV-1	N	Number	- [1		Remove Mark -	100
🗄 🛅 ССТV-5	N	Number	- [5		Remove Mark -	177
E C SKY SPORTS	N	Number	- [10]	Remove Mark -	
🗄 🛅 ВВС	N	lumber	- [14		Remove Mark -	1
	N	Number	- [15		Remove Mark ~	

Fig.50 Delete Single Program



Click "Submit" button to delete the program. To delete all programs, check the "Service Remove Mark Select All" box at the lower left corner, shown as below:

CCTV-1	Nun	nber -	1	Remove Mark -
🚞 ССТV-5	Num	nber -	5	Remove Mark -
SKY SPORTS	Nun	nber _	10	Remove Mark
🔁 ввс	Num	iber -	14	Remove Mark -
C NHK	Num	nber -	15	Remove Mark

ServiceRemove MarkSelect All: 🗹

Fig.51 Delete All Programs

All programs' service remove mark will be automatically checked, then click "Submit" button to delete all programs.



§ 3.2.7 Scrambling Setting

Click "Scrambling Setting" link in the navigation bar to enter the program scrambling setting page, shown as below:

General Scramble Settings	
Default Crypto Period	
CP Duration (ms): 10000	
Fixed CW	
CW (HEX): 1111113311111133 OFF	
5	
	Submit Refresh

Fig.52 Scrambling Setting page

In "Select Items" column, there are scrambling configuration options including General Setting, CAS Configuration, and Services Scramble Setting.



rig.55 Select ite

§ 3.2.7.1 General Setting

Click "General Setting" link, it will show General Scrambling Setting page, shown as below:



General Scramble Settings	
Default Crypto Period	
CP Duration (ms): 10000	
Fixed CW	
CW (HEX): 1111113311111133 OFF 💌	
Submit Refres	h]

Fig.54 General Setting

In this page, users can configure the default crypto period and fixed control word (CW).

Default Crypto Period: the time period of changing the control word, range between 10000 – 60000 milliseconds. Click "Submit" button to validate the setting.

Fixed CW: when it is ON, CW will be a user-defined fixed value despite the default crypto period. Click "Submit" button to validate the setting.

§ 3.2.7.2 CAS Configuration

§ 3.2.7.2.1 CA Parameter Settings

LAVISION-868FTA support up to 4 CAS simul-crypt, with each CA channel can be configured independently. Shown as figure 52, unfold "CAS Configuration" menu to select the CA channel 1-4:

		CAS Cont	figuration			
CAS Name:			CAS Enable:	OFF 💌		
Super CAS ID	(HEX): 00010000		EMMG Port:	5000		
ECMG IP:	120.120.120.1		ECMG Port:	3000		
Index	NAME		Content (HEX)		E]
			Add	Remove	Submit	Refresh



Fig.55 CAS Configuration

Following items can be configured in the CAS configurations page: CAS Name, CAS Enable switch, Super CAS ID, EMMG Port, ECMP IP, ECMG Port. After the configuration, click "Submit" button to validate the settings.

[Remark] CAS will work properly as well as the configurations of corresponding EMM PID and ECM

PID only when the CAS is ON, see section 3.2.6.6.2.

ECMG IP: the IP address of the ECM generator;

ECMG Port (DEC): the port number of the ECM generator;

[Remark] To ensure LAVISION-868FTA can correctly receive the ECM data from the CAS, the value of

ECMG IP and ECMG port on the LAVISION-868FTA must be the same as their counterparts on the CAS server.

Super CAS ID (HEX): valid range between 0 – 0xFFFFFFF.

[Remark]

- 1. The superCASID for different CAS should not be the same;
- 2. SuperCASID for each CAS company must be the legal value which is authorized by the DVB-CAS organization.

EMMG Port: the port number of the EMM generator;

[Remark] To ensure LAVISION-868FTA can correctly receive the EMM data from the CAS, the value

of EMMG port on the LAVISION-868FTA must be the same as its counterpart on the CAS server. After the configuration, users can check the communication status between LAVISION-868FTA and CAS on the bottom of the page, shown as below:

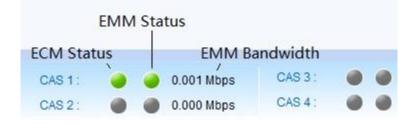


Fig.56 Communication Status

As shown in figure 55, when the communication between LAVISION-868FTA and CAS is valid, the

status lights for ECM and EMM display 🥮; otherwise, the light will be 🤎.

§ 3.2.7.2.2 Edit AC Information

Access Criteria (AC) information is defined by CAS company. It is included in certain programs or programs' ECM. The data in AC includes information such as programs package properties, area lock information, etc.

Each AC information consists of AC index, name, and content.

As shown in figure 54, click "Add" button to add AC information:



Index	NAME	Content (HEX)	
1			

Fig.57 AC Editing Box

As shown in figure 56, users can type AC information's name and content. After the editing, click "Submit" button to validate the settings. To delete the AC, check the square box at the end of the AC information, click "Remove" button and then click "Submit" button to validate the setting,

[Remark]

- 1. AC information to be added should be provided by the CAS company.
- 2. When editing the AC content, it is suggested that users open the AC data in binary form provided by CAS company and copy/paste it into the editing box instead of manually typing.
- 3. When the AC information which being used is modified, the corresponding scrambled programs will temporarily de-scrambled; but the status of scrambling will be restored immediately once the modification is submitted.
- 4. The AC information being used cannot be deleted.

§3.2.7.3 Services Scrambling Setting

As shown in figure 49, unfold "Services Scrambling Setting" menu to configure the scrambling options for each programs:

		Service Scr	amble Configuration	
00	01			
Idex	Service ID	Service Name	AC Selection	Enable
1	1	CCTV-1	• • • •	OFF -
2	5	CCTV-5	• • • •	OFF -
3	10	SKY SPORTS	• • • •	OFF -
4	14	BBC	• • • •	OFF -
5	15	NHK	▼ ▼ ▼	OFF 🔻
		Batch Setting : 0 0	AC Set OFF	Scramble Se
			5	Submit Refre

Fig.58 Service Scrambling Setting

To scramble the program, first choose AC information for it, shown as below:



Index	Service ID Service Name AC S		AC Selection	Selection			
1	1	CCTV-1		+ [~	*	OFF
2	5	CCTV-5	(001)	w [*	*	OFF
3	10	SKY SPORTS		Ŧ	*]	+	OFF
4	14	BBC	•	w	w		OFF
5	15	NHK	•	*		*	OFF

Fig.59 Select AC

AC Selection will display 4 AC information for each CAS. After the selection, switch the "Enable" to be "ON", then click "Submit" to validate the setting.

[Remark]

- To scramble the encrypted programs (which already have CA descriptors in PMT), their CA original CA descriptors will be replaced by new CA descriptor which are generated by LAVISION-868FTA. For pass-through mode, those original CA descriptors will be persisted.
- 2. LAVISION-868FTA supports up to 4 CAS simul-crypt. The CAS's AC information is available for use only when the CAS is ON.
- 3. For different CAS, AC information may have different meanings.
- 4. To correctly scramble programs, the EMM PID of the transport stream and the ECM PID of the programs should be correctly configured, as well as other CA parameters (see section 3.2.7.2.2).

When the status of scrambling is normal, the status light will display , the ECM update time will show the latest time for updating, as shown below:



Fig.60 Select AC information



§ 3.2.8 Monitoring

Click "Monitor" button in the navigation bar to enter the monitoring page, shown as below:

Select Items	Alarms	1
Bonitor Items Galarns Display Settings Gitrate Monitor Gitrate Monitor	Index Description Status Counter Reset 1 TS Process Module 0 Reset 2 TS Input 0 Reset 3 TS Output 0 Reset	
⊕ ⊕ Channel Ol - Tuner ⊖ Ostput Channel ⊕ ⊕ Channel Ol - Ethernet ⊕ ⊕ Channel Ol - ASI	4 NTP Senice Timeout 0 Reset 5 EMM Error 0 Reset 6 ECM Error 0 Reset	
	Update Data Reset All Counter Refre	sh

Fig.61 Monitoring Page

§ 3.2.8.1 Alarms

Unfold "Alarms" menu to open the alarming information page, shown as below:



§ 3.2.8.1.1 Alarms Display

Click "Display" button, the alarm display page will be shown as below:



Ala	rms				1:
Index	Description	Status	Counter	Reset	
1	TS Process Module		0	Reset	
2	TS Input		0	Reset	
3	TS Output		0	Reset	
4	NTP Service Timeout		0	Reset	
5	EMM Error		0	Reset	
6	ECM Error		0	Reset	
	Upda	te Data	Reset All	Counter R	efresh

Fig.63 Alarm Information

Shown as figure 63, left column displays the device temperature and the right column display alarm

information. When there is no alarm, the status light will be 🥏; when there is an alarm, the status light

will turn to , and the counter will start to count the number of errors occurred, shown as below:

The counter will automatically restore to zero even the error is cleared. Users need to click the "Reset" button to reset the counter to zero.

[Remark] the status light will stay red as long as the counter is not zero (though there may not be any real-time errors).

§ 3.2.8.1.2 Alarm Setting

Click the "Setting" link to enter the alarm setting page, shown as below:



		Ala	urm setting			
General switch	ON 🗸	Index	Description	Trap	Panel	Log level
		1 [Data process fail	~		Err 💌
		2 [Data input error			Err 💌
		3 [Data output error			Err 🗸
		4 [NTP service timeout	✓	\checkmark	Err 💌
		5 [EMM error	✓		Err 🗸
		6 [ECM error	✓		Err 🗸
						Submit Refresh

Fig.64 Alarm Setting page

As shown in figure 64, the left column is for the temperature alarm setting and the right column is for other alarm information settings.

General Switch: choose between ON/OFF to enable/disenable the temperature alarms. Click "Submit" to validate the setting.

Shown as figure 64, for the alarm information setting on the right column, users can configure the Trap switch, Panel switch, and the log level.

Trap: when it is ON, LAVISION-868FTA will send the trap information to server through SNMP.
Panel: when it is ON, the alarm light on the front panel of LAVISION-868FTA will display the alarm.
Log Level: set level of severity for the alarm, from lowest to highest level: disable, info, warning, critical. SNMP will judge the severity of the alarm depending its log level.
When finish the settings, click "Submit" button to validate them.

[Remark] The realization of Trap and log level is relate to the SNMP, for specific instructions, see the

SNMP user manual.

§ 3.2.8.2 Bitrate Monitor

Unfold the "Bitrate Monitor" menu to select to monitor the input/output bit rate, shown as below:



Fig.65 Bitrate Monitor Menu

§ 3.2.8.2.1 Input Channel Bit Rate



Unfold the "Input Channel" menu to enter the input channel bit rate monitoring page, shown as below:

🗄 😋 Bitrate Monitor
🗄 📋 Input Channel
🗄 🚞 Output Channel

Fig.66 Input Channel Sub-menu

Click the link of "channel01-Tuner" to check the bit rate of each input channel and to set the alarm information, as shown in the figure below:

	Bitrate Monitor / Bitrate Alarm Settings								04
Ind	ex Sub Index	Bitrate (Mbps)		Index	Sub Index	Low (Mbps)	High (Mbps)	Enable	
1	01	0.000		1	01	0.000	0.000	OFF 💌	
2	02	0.000		2	02	0.000	0.000	OFF -	
3	03	0.000		3	03	0.000	0.000	OFF 💌	
4	04	0.000		4	04	0.000	0.000	OFF 💌	
5	05	0.000		5	05	0.000	0.000	OFF 💌	
6	06	0.000		6	06	0.000	0.000	OFF 💌	
7	07	0.000		7	07	0.000	0.000	OFF 💌	
8	08	0.000		8	08	0.000	0.000	OFF 💌	
			_ _						
		Update Data					Submit	Refre	sh

Fig.67 Input Channel Bit Rate Monitoring

Shown as figure 67, the left column displays the real-time bit rate of each channel; the right column enable users to set the bit rate alarm setting, including lower limit, upper limit, and the enable switch.

Lower Limit: when the real-time bit rate is lower than this lower limit value, it will trigger an alarm.

Upper Limit: when the real-time bit rate is higher than this upper limit value, it will trigger an alarm. **Enable Switch:** turn ON/OFF the alarm.

When finish the settings, click "Submit" button to validate them.

As shown in fig. 66, unfold the menu of "channel01-Tuner", as shown in the figure below;

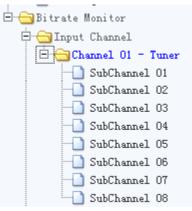




Fig.68 Sub-menu of Channel

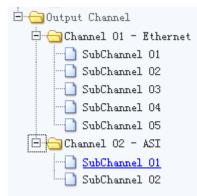
Click the "SubChannel 01" to see the PID and bit rate, as shown in the figure below:

			PID Bitrate Monitor 03
Index	PID	PID	Current Bitrate (Mbps)
1	0	0x0000	0.015
2	1	0x0001	0.015
3	17	0x0011	0.000
4	193	0x00C1	0.009
5	257	0x0101	0.015
6	258	0x0102	0.015
7	512	0x0200	17.889
8	513	0x0201	17.886
9	650	0x028A	0.457
10	660	0x0294	0.460
11	1521	0x05F1	0.012
12	1641	0x0669	0.012
13	8191	0x1FFF	4.434
14	总码率		41.228
			Clean List Update Data Refresh

Fig.69 Sub-menu of Channel

§ 3.2.8.2.2 Output Channel Bit Rate

Unfold the "Output Channel" menu to enter the output channel bit rate monitoring page, shown as below:



Click the link of 'channel 01- Ethernet" to see the bit rate and to set the alarm information, as shown in the figure below:



		Bitrate Monitor / Bitrate Ala	n Settings	0
Index	Sub Index	Bitrate (Mbps)	Index Sub Index Low (Mbps) High (Mbps) Enable	
1	01	0.009	1 01 0.000 0.000 OFF 💌	
2	02	0.021	2 02 0.000 0.000 OFF 🗸	
3	03	0.021	3 03 0.000 0.000 OFF 🗸	
4	04	0.021	4 04 0.000 0.000 OFF 🗸	
5	05	0.021	5 05 0.000 0.000 OFF 💌	
		Update Data	Submit	fresh



Shown as figure 64, the left column displays the real-time bit rate of each channel; the right column enable users to set the bit rate alarm setting, including lower limit, upper limit, and the enable switch

Lower Limit: when the real-time bit rate is lower than this lower limit value, it will trigger an alarm. **Upper Limit:** when the real-time bit rate is higher than this upper limit value, it will trigger an alarm. **Enable Switch:** turn ON/OFF the alarm.

When finish the settings, click "Submit" button to validate them.

Click the "sub channel 01" to see the PID and bit rate, as shown in the figure below:

				PID Bitrate Monitor 03
	Index	PID	PID	Current Bitrate (Mbps)
	1	0	0x0000	0.015
	2	1	0x0001	0.015
	3	17	0x0011	0.000
	4	193	0x00C1	0.009
	5	257	0x0101	0.015
	6	258	0x0102	0.015
	7	512	0x0200	17.889
	8	513	0x0201	17.886
	9	650	0x028A	0.457
	10	660	0x0294	0.460
	11	1521	0x05F1	0.012
	12	1641	0x0669	0.012
	13	8191	0x1FFF	4.434
	14	总码率		41.228
_				(Y)
				Clean List Update Data Refresh



Fig.71 PID and Bit Rate Monitoring of Output Channel

Click the link of 'channel 01- ASI" to see the bit rate and to set the alarm information, as shown in the figure below:

	Bitrate Monitor / Bitrate Ala	m Settings	0:
Index Sub Index	Bitrate (Mbps)	Index Sub Index Low (Mbps) High (Mbps) Enable	
1 01	50.026	1 01 0.000 0.000 OFF 🗸	
2 02	50.026	2 02 0.000 0.000 OFF	
	Update Data	Submit	fresh

Fig.72 Bit Rate Monitoring of Output Channel

Shown as figure 73, the left column displays the real-time bit rate of each channel; the right column enable users to set the bit rate alarm setting, including lower limit, upper limit, and the enable switch

Lower Limit: when the real-time bit rate is lower than this lower limit value, it will trigger an alarm. **Upper Limit:** when the real-time bit rate is higher than this upper limit value, it will trigger an alarm. **Enable Switch:** turn ON/OFF the alarm.

When finish the settings, click "Submit" button to validate them.

Click the "sub channel 01" to see the PID and bit rate, as shown in the figure below:



			PID Bitrate Monitor 01
Index	PID	PID	Current Bitrate (Mbps)
1	1	0x0001	0.000
2	8191	0x1FFF	0.000
3	Total		0.000
			Clean List Update Data Refresh

Fig.73 PID and Bit Rate Monitoring of Output Channel

\S 3.2.8.2.3 System Bit Rate

Shown as figure 74, the lower right corner displays the system input, output, and insert bit rate, shown as below:

INPUT:	666.883 Mbps
OUTPUT :	16.727 Mbps
INSERTER :	0.001 Mbps



§ 3.3 Front Panel Operation of LAVISION-868FTA

Front panel LCD display of LAVISION-868FTA will show some initializing messages of the device at boot up stage, such as but not limited to company logo, model number, etc. If there is an error during boot up, then it will display the error message.

The front panel display will be locked if there is no key pressed within 60 seconds after device booting. System configuration and menu browsing cannot be performed through the front panel keypad while it is in LOCK status, and the LCD display will show current working status and alert messages (if available) alternately.

- 1. Timeout length set to 30's when the front panel backlight/locked: backlight shut-off without operation for any key next 30 seconds.
- 2. When it has new alarm, the LED is flickering for 10 seconds, later if it has no alarm, the LED kept red before been cleared.
- 3. After alarms been cleared, the alarm LED and status LED turn green if no new alarm occur.
- 4. Maximum occupancy of alarm categories up to 40 (variable).

User may unlock the LCD display by pressing "UP" and "DOWN" key continuously while it is locked, in order to activate the front panel menu. After activating the menu, the LCD display will show the first sub-menu of the main menu (VIEW ALARMS), as shown in the figure below:



Fig.75 Front Panel Menu

When entering operating menu, user may switch between different sub-menus by pressing "LEFT" and "RIGHT" keys.

The front panel sub-menu items of LAVISION-868FTA are shown in the below table:

Menu ID	Function	Operating Description	Remarks
1.0	Alarms	Display the system alarm information if available.	
1.0	Alalitis	Use " \uparrow " and " \downarrow " keys to switch between	
		alarms if there are more than one alarms.	
2.0	Serial No.	Display serial number of the device	Read-only
2.1	Software Version	Display software version information.	
2.2	Hardware Version	Display hardware Version information.	
2.3	Software Release	Display software release date.	
2.3	Date	Display soliware release date.	



2.4	FPGA Release Date	Display FPGA version information.	
3.0	Local IP	Set the management port IP address of LAVISION-868FTA. Press "ENTER" key to remove cursor. Use "←" and "→" keys to switching between different digits of the IP address. Press "ENTER" key to apply changes.	The IP address should be within the same subnet with the management workstation.
3.1	Subnet Mask	Set the management port subnet mask of LAVISION-868FTA. Press "ENTER" key to remove cursor. Use "←" and "→" keys to switching between different digits of the subnet mask. Press "ENTER" key to apply changes.	Default is 255.255.255.0
3.2	Default Gateway	Set the management port gateway of LAVISION-868FTA. Press "ENTER" key to remove cursor. Use "←" and "→" keys to switching between different digits of the default gateway. Press "ENTER" key to apply changes.	
3.3	MAC Address	Display the MAC address.	Read-only
4.0	Factory reset	Execute a factory reset. Press "ENTER" key to enter the selection mode. Use "←" and "→" keys to select.	Select "Yes" to reboot the device.
4.1	Factory Defaults	Restore to factory defaults. Press "ENTER" key to enter the selection mode. Use "←" and "→" keys to select. Press "ENTER" key to apply changes.	Select "Yes" to reboot the device.
5.0	Language	Set the menu language on front panel. Press "ENTER" key to enter the selection mode. Use "←" and "→" keys to select. Press "ENTER" key to apply changes.	Support Chinese/English menu.

After complete menu operation, user may lock the front panel LCD display and keypad by Pressing "MENU" and "ENTER" key continuously.



Annex A: Technical Specifications of LAVISION-868FTA

Characteristic	Properties	Specifications
	AC Input Voltage	85~260VAC
Power Supply &	AC Input Frequency	50/60Hz
Consumption	Power Consumption	100W
	No. of Power Supply Modules	1
	Operating Temperature	5°C ~40°C (41°F ~104°F)
Operating/Storage	Storage Temperature	-25°C ~70°C (-13°F~158°F)
Environment	Air Pressure	86~106KPa
	Humidity	10%~90%

A.1 Common Technical Specifications

Δ 2	Interfaces
A.Z	intenaces

Characteristic	Properties	Specification
	ASI interface number	8
Data Input Interface	Physical interface type	F10-75J
Interface	Resistance	75Ω
	Standard	IEEE 802.3 100/1000BASET self-adaptor
Web	Physical interface type	RJ45
Management	Physical bandwidth	100Mbps
Interface	Max signal transmission distance	100M
	Cable Requirement	Cat5e cable or 6e cable
	Standard	IEEE 802.3 1000BASE-T
	Physical interface type	RJ45
Data output	Interface number	1
interface	Physical bandwidth	800Mbps
	Max signal transmission distance	100M
	Cable Requirement	Cat5e cable or 6e cable

A.3 Multiplexing Specifications

Characteristic	Properties	Specification
	Input TS number	0~8
TS input	Total services number(total)	0~512
	Service number per input TS	0~64
	Output TS number	0~14 IP outputs, 2 ASI outputs
TS output	Total services number(total)	0~512
	Service number per output TS	0~64
PSI for output TS	Standard(syntax and send period)	ISO/IEC 13818-1
		DVB SI(ESI EN300468)
		PAT/PMT: Generated automatically
	Table type	SDT: Generated automatically or use uploaded files
		NIT/BAT: Use uploaded files



	TDT/TOT: Optional
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A.4 Scrambling & CAS interfaces

Characteristic	Properties	Specification
	Scrambling algorithm	DVB-CSA
Scrambling	Embedded scramblers number	4
	Table update	CAT/PMT
	Simul-Crypt CAS number	0~4
CAS Interface	SCS interface	ETSI TS 103 197
	ECMG interface	TCP
	EMMG interface	TCP/UDP
	EMM bandwidth	0~3Mbps/TS

A.5 DVB-S/S2 demodulation performance

Characteristic	Properties	Specification
RF Input	Input frequency	950 \sim 2150MHz
	EPL	-65~-25dBm
	Symbol rate	$2.0 \sim 45 \text{Msym/s}$ (QPSK)
		10.0 \sim 31Msym/s (8PSK)
DVB-S/S2	Demodulation mode	DVB-S: QPSK DVB-S2: QPSK /8PSK
Demodulation	Standard	DVB-S: EN300 421 DVB-S2: EN302 307
	LNB supply	0V/+DC13V/18V Imax =400mA LNB short
		circuit protection

A.6 DVB-C demodulation performance

Characteristic	Properties	Specification
RF Input	Input frequency	51 \sim 858MHz
		VLF: 51 \sim 147MHz
		VHF: 155 \sim 427MHz
		UHF: 435 \sim 858MHz
	EPL	-69~-29dBm (64QAM)
DVB-S/S2 Demodulation	Symbol rate	$2{\sim}7$ Msym/s
	Demodulation mode	16/32/64/128/256QAM
	Standard	EN300 429



Annex B: Frequently Asked Questions

Symptoms	Possible Causes	Recommended Solutions
No display at boot up	The power supply cable is not plugged in	Plug in the power supply cable
The error message " cannot find	Network connect error	Check if the manage computer and the manage port of LAVISION-868FTA has been connected to a same network
server" appears on the screen when access equipment by a web	IP address mismatch	Input correct IP address in URL bar
browser	Subnet mismatch, i.e., manage port of LAVISION-868FTA and computer locate in different subnet	Modify the manage port IP of LAVISION-868FTA by front panel operations.
	Improper connection of BNC cable at data input.	Check if the cable is properly connected.
Fail to scan any input programs	BNC cable problem.	Check if the cable is properly worked, or change the cable.
Fail to scan programs in specific input	Source device is not working properly	Check malfunction in the source device
Succeeding device fails to receive any program	Improper connection of RF output cable	Connect the RF output cable properly.
Succeeding device fails to receive data in specific output.	The succeeding device is not working properly.	Check malfunction in the succeeding device (e.g. DVB-C receiver)
Serious mis-decoding occurs in all programs.	Program data overflow.	Reduce number of programs or streams in order to maintain the total output bit rate under the total modulated output bit rate.
Serious mis-decoding occurs in specific program.	Preceding device of this program is not working properly.	Check the configuration errors and malfunction in the preceding device.