

IP to RF Universal Modulator

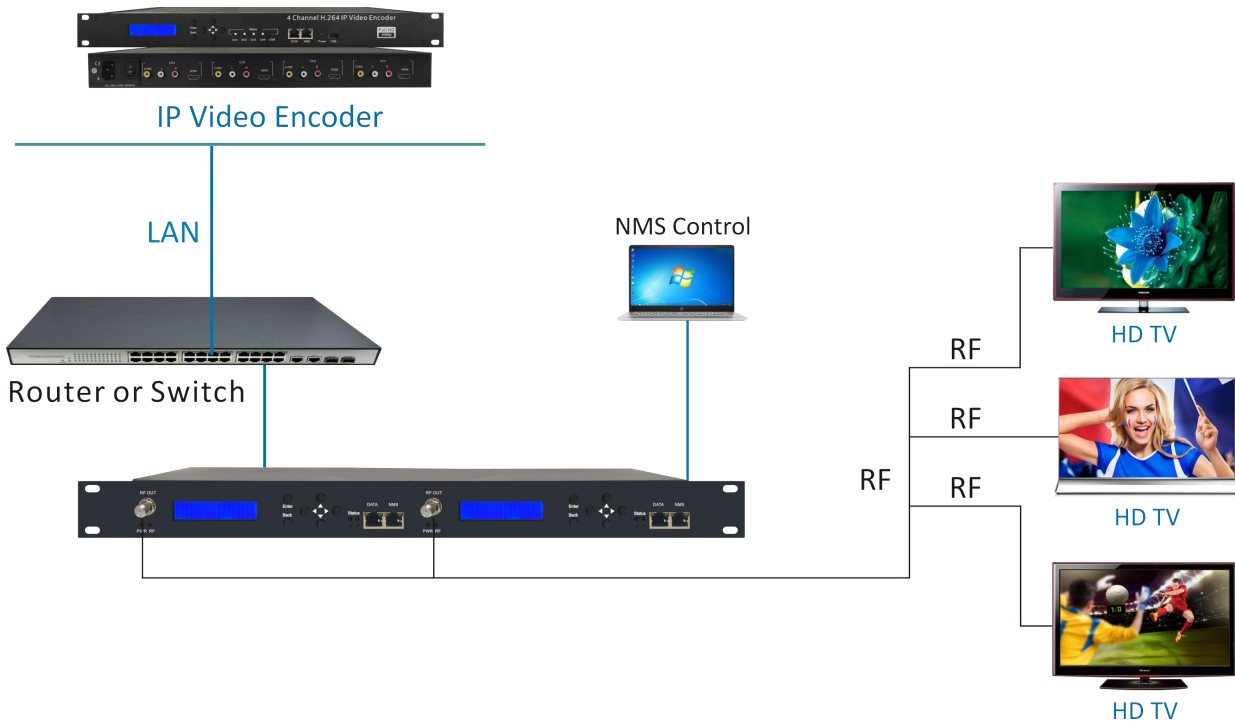
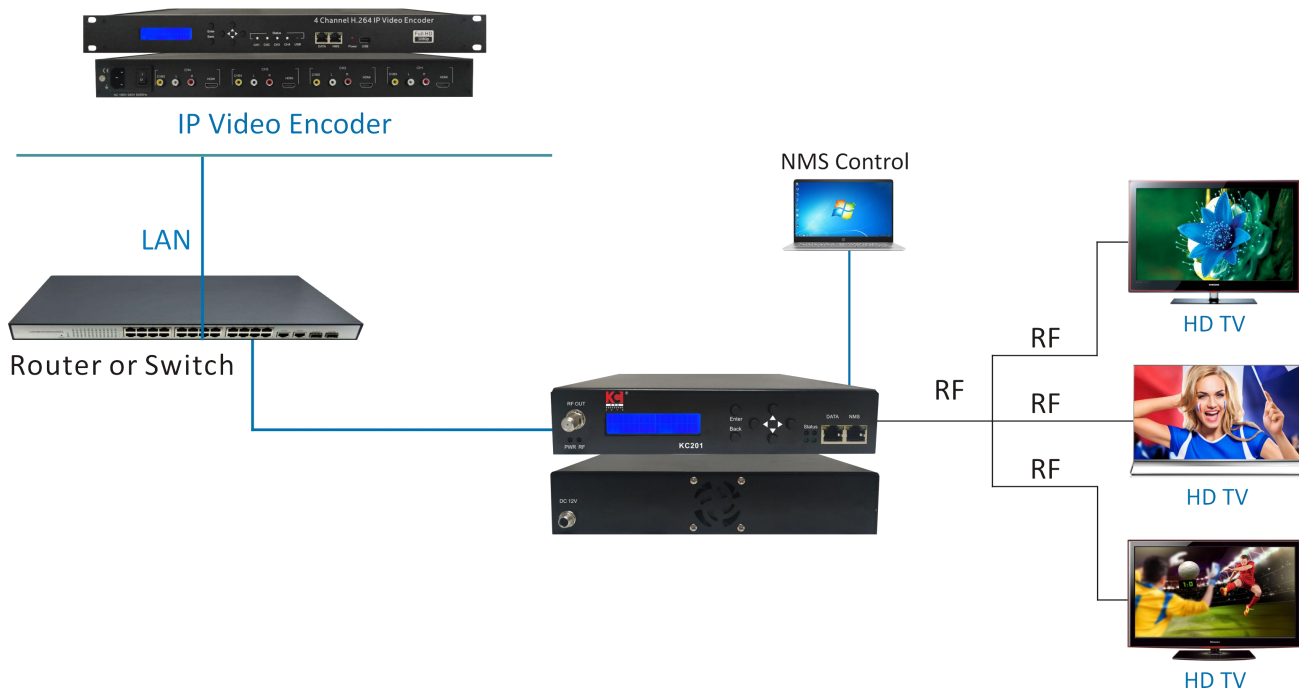


KC201

TECHNICAL SPECIFICATIONS

Input			
Interface	GE ports		
Streaming	UDP / RTP, ip input over 8xSPTS or 1xMPTS		
Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3		
Packet Length	188 Bytes		
Network Interface			
Management	1x1000Base-T Ethernet(RJ 45)		
Data	1x1000Base-T Ethernet(RJ 45)		
Protocol	IEEE 802.3 Ethernet,RTP,ARP,IPv4,TCP/UDP,HTTP,IGMP v2/v3		
Modulation			
MER	Typ. 35dB		
RF range	50~950MHz, 1KHz step		
RF output level	95dB μ V		
Standard	DVB-T	DVB-C	
Bandwidth	6,7,8M	Constellation	16QAM,32QAM, 64QAM, 128QAM, 256QAM
Constellation	QPSK, 16QAM, 64QAM		
Code Rate	1/2,3/5, 2/3, 3/4, 5/6, 7/8		
Guard interval	1/4, 1/8, 1/16, 1/32	Symbol rate	5.000-8.000Msp ADJ
FFT	2K, 8K		
System			
Management	LCD + Control buttons/Ethernet		
Language	English		
Upgrade	Ethernet		
General			
Power Supply	DC 12V 2A		
Dimension	220 x 206 x 44mm		
Weight	1000g		
Environmental For Operating	Temperature: 5°C- 40°C Relative Humidity: 80% @ 30°C		

Application Example - IP to RF Modulator



The solution used the following our products

- 1.HCI421 - 4 x HDMI/CVBS to IP Video Encoder
- 2.KC201 - IP to RF Modulator

WEB OPERATION INSTRUCTION

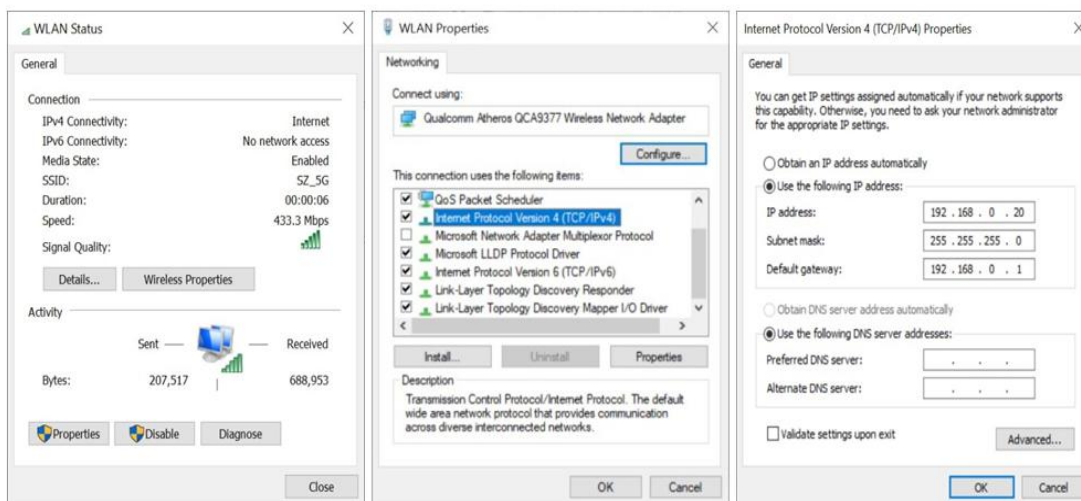
The device is configured using NMS. Access to the NMS is via the network connection

1. IP Address of Computer Setting

We must choose the static IP address according to the default gateway address. The first three numbers must be the same (192.168.0.x in the example).

System Control> Network Connections> LAN Connection> Properties> Internet Protocol Version 4 TCP/IPv4 > Properties> Use the following IP address:

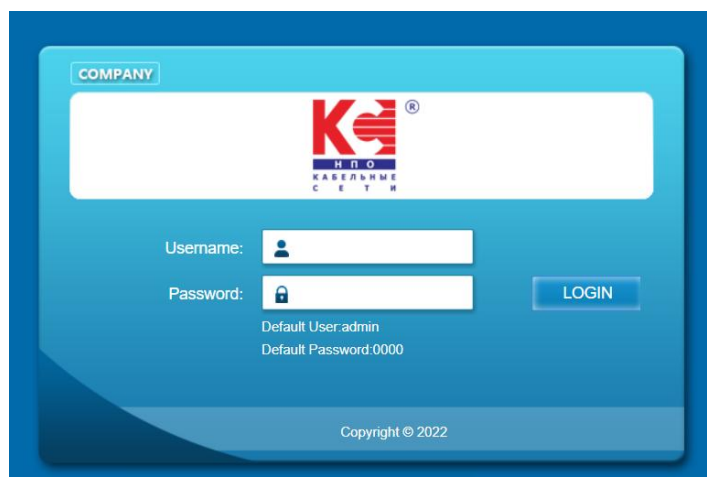
IP address Computer: 192.168.0.20 and Subnet mask: 255.255.255.0.



2. IP Address of Computer Setting

2.1 Each machine can have different username and password settings.

2.2 Please log in before operation. **Default IP is 192.168.0.168; Password: 0000**



3. NMS Home Page & Status

Contents of the home page includes: Device Information/Streaming Setup/Modulator Setup/Network/ Password/Upgrade/Configuration.

And device's Device Information details are also show on this page. Here you can know the Model Name, Serial Number, Firmware version, Boot Version, Modulator Version, Modulator Mode, MAC Address.

Streaming server

Web Management Logout 03:00

Summary

- ▶ Device Information

Parameters

- ▶ Streaming Setup
- ▶ Modulator Setup

System

- ▶ Network Setup
- ▶ Password
- ▶ Upgrade
- ▶ Configuration

Device Information

Model Name	<input type="text" value="IF201"/>	Serial Number	<input type="text" value="212206031"/>
Firmware Version	<input type="text" value="220609R1041"/>	BOOT Version	<input type="text" value="220609R1041"/>
Modulator Version	<input type="text" value="R0923"/>	Modulator Mode	<input type="text" value="DVB-T"/>
MAC Address	<input type="text" value="00:1E:97:6F:18:7C"/>		

4. Streaming Setup

Use the Streaming Setup Page to setup your required streaming method. You can choose up to 8xSPTS or 1xMPTS. You can choose UDP/RTP (unicast and multicast), UDP/RTP is automatic analysis.

Streaming server

Web Management Logout 02:59

Summary

- ▶ Device Information

Parameters

- ▶ Streaming Setup
- ▶ Modulator Setup

System

- ▶ Network Setup
- ▶ Password
- ▶ Upgrade
- ▶ Configuration

Streaming

	Protocol	IP	Port	Bit Rate
<input checked="" type="checkbox"/> SPTS1	Multicast UDP/RTP	238.1.1.1	3990	2.51 Mbps
<input checked="" type="checkbox"/> SPTS2	Multicast UDP/RTP	238.1.1.2	3991	3.25 Mbps
<input checked="" type="checkbox"/> SPTS3	Multicast UDP/RTP	238.1.1.3	3992	2.42 Mbps
<input checked="" type="checkbox"/> SPTS4	Multicast UDP/RTP	238.1.1.4	3993	2.18 Mbps
<input checked="" type="checkbox"/> SPTS5	Multicast UDP/RTP	238.1.1.5	3994	3.15 Mbps
<input checked="" type="checkbox"/> SPTS6	Multicast UDP/RTP	238.1.1.6	3995	2.78 Mbps
<input checked="" type="checkbox"/> SPTS7	Multicast UDP/RTP	238.1.1.7	3996	3.14 Mbps
<input checked="" type="checkbox"/> SPTS8	Multicast UDP/RTP	238.1.1.8	3997	2.32 Mbps
<input type="checkbox"/> MPTS	Multicast UDP/RTP	224.2.2.2	2242	0.00 Mbps
Total				21.75 Mbps


5. Modulator Setup

Use the Modulator Setup Page to setup your required modulator information. If the input is SPTS, the PID and other parameters of the Transport Stream can be pass thought or remapping. If the input is MPTS, the PID and other parameters of the Transport Stream only pass thought.

5.1.Modulator-DVB-C

Streaming server

Web Management
Logout
03:00



Summary

- ▶ Device Information

Parameters

- ▶ Streaming Setup
- ▶ Modulator Setup

System

- ▶ Network Setup
- ▶ Password
- ▶ Upgrade
- ▶ Configuration

Modulator

Standard	<input type="text" value="DVB-C(J.83A)"/>	RF Frequency	<input type="text" value="474000"/> KHz
Modulation	<input type="text" value="256QAM"/>	SYMBOL RATE	<input type="text" value="6875"/> KHz
TS ID	<input type="text" value="1"/>	ON ID	<input type="text" value="1"/>
Network ID	<input type="text" value="1"/>	Network Name	<input type="text" value="Network"/>
PDS	<input type="text" value="00000029"/>	Allow Bit Rate	<input type="text" value="50.69"/> Mbps
Actual Bit Rate	<input type="text" value="24.77"/> Mbps		

Channel Parameter

	SPTS 1	SPTS 2	SPTS 3	SPTS 4
	Remapping ▼	Passthroug ▼	Remapping ▼	Passthroug ▼
LCN	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>
Service ID	<input type="text" value="474"/>	<input type="text" value="2"/>	<input type="text" value="476"/>	<input type="text" value="4"/>
PMT PID	<input type="text" value="32"/>	<input type="text" value="200"/>	<input type="text" value="34"/>	<input type="text" value="400"/>
PCR PID	<input type="text" value="50"/>	<input type="text" value="201"/>	<input type="text" value="56"/>	<input type="text" value="401"/>
VIDEO PID	<input type="text" value="48"/>	<input type="text" value="202"/>	<input type="text" value="54"/>	<input type="text" value="402"/>
AUDIO PID	<input type="text" value="49"/>	<input type="text" value="203"/>	<input type="text" value="55"/>	<input type="text" value="403"/>
Service Provider	<input type="text" value="KSETI"/>	<input type="text" value="TVProvider-2"/>	<input type="text" value="KSETI"/>	<input type="text" value="TVProvider-4"/>
Service Name	<input type="text" value="KSETI-HD1"/>	<input type="text" value="HDTV-2"/>	<input type="text" value="KSETI-HD3"/>	<input type="text" value="HDTV-4"/>
	SPTS 5	SPTS 6	SPTS 7	SPTS 8
	Remapping ▼	Remapping ▼	Remapping ▼	Remapping ▼
LCN	<input type="text" value="5"/>	<input type="text" value="6"/>	<input type="text" value="7"/>	<input type="text" value="8"/>
Service ID	<input type="text" value="478"/>	<input type="text" value="479"/>	<input type="text" value="480"/>	<input type="text" value="481"/>
PMT PID	<input type="text" value="36"/>	<input type="text" value="37"/>	<input type="text" value="38"/>	<input type="text" value="39"/>
PCR PID	<input type="text" value="62"/>	<input type="text" value="65"/>	<input type="text" value="68"/>	<input type="text" value="71"/>
VIDEO PID	<input type="text" value="60"/>	<input type="text" value="63"/>	<input type="text" value="66"/>	<input type="text" value="69"/>
AUDIO PID	<input type="text" value="61"/>	<input type="text" value="64"/>	<input type="text" value="67"/>	<input type="text" value="70"/>
Service Provider	<input type="text" value="KSETI"/>	<input type="text" value="KSETI"/>	<input type="text" value="KSETI"/>	<input type="text" value="KSETI"/>
Service Name	<input type="text" value="KSETI-HD5"/>	<input type="text" value="KSETI-HD6"/>	<input type="text" value="KSETI-HD7"/>	<input type="text" value="KSETI-HD8"/>

Cancel
Apply

5.2.Modulator-DVB-T

Streaming server
Web Management Logout 03:00



Summary

- ▶ Device Information

Parameters

- ▶ Streaming Setup
- ▶ Modulator Setup

System

- ▶ Network Setup
- ▶ Password
- ▶ Upgrade
- ▶ Configuration

Modulator

Standard	DVB-T ▼	RF Frequency	474000 KHz
FFT	8K ▼	Code Rate	5/6 ▼
Constellation	64QAM ▼	Bandwidth(MHz)	8 ▼
Guard Interval	1/16 ▼	TS ID	1
ON ID	1	Network ID	1
Network Name	Network	PDS	00000029
Allow Bit Rate	29.27 Mbps	Actual Bit Rate	0.00 Mbps

Channel Parameter

	SPTS 1	SPTS 2	SPTS 3	SPTS 4
	Remapping ▼	Remapping ▼	Remapping ▼	Remapping ▼
LCN	1	2	3	4
Service ID	474	475	476	477
PMT PID	32	33	34	35
PCR PID	50	53	56	59
VIDEO PID	48	51	54	57
AUDIO PID	49	52	55	58
Service Provider	KSETI	KSETI	KSETI	KSETI
Service Name	KSETI-HD1	KSETI-HD2	KSETI-HD3	KSETI-HD4
	SPTS 5	SPTS 6	SPTS 7	SPTS 8
	Remapping ▼	Remapping ▼	Remapping ▼	Remapping ▼
LCN	5	6	7	8
Service ID	478	479	480	481
PMT PID	36	37	38	39
PCR PID	62	65	68	71
VIDEO PID	60	63	66	69
AUDIO PID	61	64	67	70
Service Provider	KSETI	KSETI	KSETI	KSETI
Service Name	KSETI-HD5	KSETI-HD6	KSETI-HD7	KSETI-HD8


Cancel
Apply

6. Network Setup

The IP Out default setting is DHCP on. The Web Management default setting 192.168.0.168.

Streaming server

Web Management Logout 03:00



Summary

- ▶ Device Information

Parameters

- ▶ Streaming Setup
- ▶ Modulator Setup

System

- ▶ **Network Setup**
- ▶ Password
- ▶ Upgrade
- ▶ Configuration

Network

NMS IP

IP Address

Subnet mask

Default Gateway

Data IP

DHCP

IP Address

Subnet mask


Default Gateway

7. Password

You can modify the user name and password. In the New password field, enter the new password you want to change, also the same password as the new password to confirm.

Streaming server

Web Management Logout 03:00



Summary

- ▶ Device Information

Parameters

- ▶ Streaming Setup
- ▶ Modulator Setup

System

- ▶ Network Setup
- ▶ **Password**
- ▶ Upgrade
- ▶ Configuration

Password

New Username

New Password

Confirm Password

8. Upgrade

Use the Upgrade page to update system firmware.

The screenshot displays the 'Streaming server' Web Management interface. The top navigation bar includes 'Web Management' and a 'Logout' button with the time '03:00'. The left sidebar contains a menu with sections: 'Summary' (Device Information), 'Parameters' (Streaming Setup, Modulator Setup), and 'System' (Network Setup, Password, Upgrade, Configuration). The 'Upgrade' page is active, showing three sections: 'Firmware File', 'Modulator File', and 'BOOT File'. Each section has a 'Choose' button, an 'Upgrade' button, and a corresponding file input field.

9. Configuration

Use the "Factory Reset" to reset configuration to factory default.

Use the "Download Config" to saved device setting configuration setting to PC.

Use the "Upload Config" to upload the file with pre-saved configuration settings to device.

The screenshot displays the 'Streaming server' Web Management interface. The top navigation bar includes 'Web Management' and a 'Logout' button with the time '03:00'. The left sidebar contains a menu with sections: 'Summary' (Device Information), 'Parameters' (Streaming Setup, Modulator Setup), and 'System' (Network Setup, Password, Upgrade, Configuration). The 'Configuration' page is active, showing three options: 'Factory Reset' with an 'Apply' button, 'Download Config' with a 'Save' button, and 'Upload Config' with a 'Load' button.

10. LED light indication

1. Power light indication.
2. When RF output works, the LED of RF output will be bright.

If over the RF setting standard, the LED will be blink.



3. Status LED indication

When SPTS1 or SPTS5 receive IP streaming, the Status 1 blue LED will be bright.
When SPTS2 or SPTS6 receive IP streaming, the Status 2 green LED will be bright.
When SPTS3 or SPTS7 receive IP streaming, the Status 3 blue LED will be bright.
When SPTS4 or SPTS8 receive IP streaming, the Status 4 green LED will be bright.
When MPTS receive IP streaming, the Status 1~4 LED will be all bright.