

IP to RF Universal Modulator



KC201

TECHNICAL SPECIFICATIONS

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

Application Example - IP to RF Modulator





HD TV

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.

# WLAN Status	X WLAN Properties	X Internet Protocol Version 4 (TCP/IPv4) Properties
Seneral	Networking	General
Connection	Connect using:	You can get IP settings assigned automatically if your network supports
IPv4 Connectivity: Inter	et 🥥 Qualcomm Atheros QCA9377 Wireless Network Adapter	this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
IPv6 Connectivity: No network acc Media State: Enat	d Configure	Obtain an IP address automatically
SSID: SZ	G This connection uses the following items:	Use the following IP address;
Duration: 00:00	6 S GoS Packet Scheduler	D address 100 100 0 00
Speed: 433.3 M	s Internet Protocol Version 4 (TCP/IPv4)	19 address: 192 . 168 . 0 . 20
Signal Quality:	Microsoft Network Adapter Multiplexor Protocol	Subnet mask: 255 . 255 . 255 . 0
Details Wireless Properties	Microsoft LLDP Protocol Driver Link-Layer Topology Discovery Responder	Default gateway: 192 . 168 . 0 . 1
Activity	🗹 🚊 Link-Layer Topology Discovery Mapper I/O Driver 🗸 🗸	Obtain DNS server address automatically
1	٢ >	Use the following DNS server addresses:
Sent — 🚬 — Recei	d Instal Uniostal Properties	Professed DNS sequers
Dutor: 207 517 6991	2 Description	
bytes. 207,517 000,	Transmission Control Protocol/Internet Protocol. The default	Alternate DNS server:
Properties Diagnose Diagnose	wide area network protocol that provides communication across diverse interconnected networks.	Validate settings upon exit Advanced
(ise OK Cancel	OK Cance

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	0
 Summary Device Information Parameters Streaming Setup Modulator Setup System Network Setup Password Upgrade Configuration 	Device Information Model Name Firmware Version Modulator Version MAC Address	IF201 220609R1041 R0923 00:1E:97:6F:18:7C	Serial Number BOOT Version Modulator Mode	212206031 220609R1041 DVB-T	

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 02:5
K @®	Streaming					
		Protocol		IP	Port	Bit Rate
	SPTS1	Multicast UDP/RTP	~	238.1.1.1	3990	2.51 Mbps
Summary	SPTS2	Multicast UDP/RTP	~	238.1.1.2	3991	3.25 Mbps
Device Information	SPTS3	Multicast UDP/RTP	~	238.1.1.3	3992	2.42 Mbps
P Donoo mormanon	SPTS4	Multicast UDP/RTP	~	238.1.1.4	3993	2.18 Mbps
Parameters	SPTS5	Multicast UDP/RTP	~	238.1.1.5	3994	3.15 Mbps
Streaming Setup	SPTS6	Multicast UDP/RTP	~	238.1.1.6	3995	2.78 Mbps
P Streaming Setup	SPTS7	Multicast UDP/RTP	~	238.1.1.7	3996	3.14 Mbps
Modulator Setup	SPTS8	Multicast UDP/RTP	~	238.1.1.8	3997	2.32 Mbps
System		Multicast UDP/RTP	~	224.2.2.2	2242	0.00 Mbps
Network Setup					Total	21.75 Mbps
Protection Comp						
Passworu						
 Upgrade 						
 Configuration 	Cancel	Apply				

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

Web Management	102				Log	out
Ka°	Modulator					
H D 0	Standard	DVB-C(J.83A)	▼ RF	Frequency	474000	KHz
	Modulation	2580AM	✓ SY	MBOL RATE	6875	
mmary	TSID	200001	· ·	UD		
Device Information	Network ID	1			1	_
rameters	Network ID	1	Ne	work Name	Network	
	PDS	00000029	Alk	w Bit Rate	50.69	Mbps
streaming Setup	Actual Bit Rate	24.77	Mbps			
Modulator Setup	and the second second					
stem	Channel Parameter					
Network Setup		SPTS 1	SPTS 2	SPTS 3	SPTS 4	
assword	1.0	Remapping 🗸	Passthroug 🗸	Remapping 🗸	Passthroug 🗸	
Jpgrade	LCN	1	2	3	4	
Configuration	Service ID	474	2	476	4	
	PMT PID	32	200	34	400	
	PCR PID	50	201	56	401	
	VIDEO PID	48	202	54	402	
	AUDIO PID	49	203	55	403	
	Service Provider	KSETI	TVProvider-2	KSETI	TVProvider-4	
	Service Name	KSETI-HD1	HDTV-2	KSETI-HD3	HDTV-4	
		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	82	65	68	71	
	VIDEO PID	80	63	66	69	
	AUDIO PID	61	64	67	70	
	Service Provider	KSETI	KSETI	KSETI	KSETI	
	Service Name	KSETI-HD5	KSETI-HD8	KSETI-HD7	KSETI-HD8	

5.2.Modulator-DVB-T

o Management	An DOM - AND				Logo	ut
	Modulator					
	Standard	DVB-T	✓ R	F Frequency	474000	KHz
nary	FFT	8K	✓ 0	ode Rate	5/6 🗸	•
ice Information	Constellation	64QAM	♥ В	andwidth(MHz)	8 🗸	•
neters	Guard Interval	1/16	✓ T1	SID	1	_
aming Setup	ONID	1	N	etwork ID	1	_
ulator Setup	Network Name	Network		DS	00000029	
	Allow Bit Rate	29.27	Mbps A	ctual Bit Rate	0.00	Mbps
m	Channel Parameter					
vork Setup	24	- 20-	y.	29	15	
sword		SPTS 1	SPTS 2	SPTS 3	SPTS 4	
rade		Remapping 🗸	Remapping 🗸	Remapping 🗸	Remapping 🗸	
figuration	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	
	5	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	38	37	38	39	
	PCR PID	82	65	68	71	
	VIDEO PID	60	63	66	69	
	AUDIO PID	81	64	87	70	
		WOET	KSETI	KSETI	KSETI	
	Service Provider	KONE III	a contract of the	NOL II	FOUL II	
	Service Provider	KSETI UDA	VEETLUDA	VSETI UD7	KCETI UDA	

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
K€	Network				
н по калельные с е т н	NMS IP				
Summary	IP Address	192.168.0.168			
Device Information	Subnet mask	255.255.255.0			
Parameters	Default Gateway	192.168.0.1			
 Streaming Setup 	Data IP				
Modulator Setup	DHCP	Enable	~		
System	IP Address	192.168.51.189			
Network Setup	Subnet mask	255.255.255.0			
Password	Default Gateway	192.168.51.1			
Upgrade					
Configuration	Cancel App	ly			

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 admin New Password	

8. Upgrade

Use the Upgrade page to update system firmware.

Streaming server	
Web Management	Logout 03:00
Kè ®	Upgrade
	Firmware File :
Summary	Choose Upgrade
Device Information	
Parameters	Modulator File :
Streaming Setup	Choose Upgrade
Modulator Setup	
System	BOOT File :
Network Setup	Choose Upgrade
Password	
▶ Upgrade	
 Configuration 	

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.

Streaming server			
Web Management			Logout 03:00
K€	Configuration		
н по казельные с в т и	Factory Reset	Apply	
Summary	Download Config	Save	
 Device Information 			
Parameters	Upload Config	Load	
 Streaming Setup 			
Modulator Setup			
System			
Network Setup			
Password			
▶ Upgrade			
Configuration			

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.