

# 1U chassis CMTS

JH-HE3016/14/12



## Model:

JH-HE3012	2 upstream channels
JH-HE3014	4 upstream channels
JH-HE3016	6 upstream channels

According to different upstream channels numbers, there are three models for choice: JH-HE3016/3014/3012. They could meet different application requirements from the operators. On the basis of DOCSIS2.0 standard, one single upstream channel data rate can reach up to 30Mbps. You may configure whether you need DOCSIS or Euro-DOCSIS by the management software. The integrated hardware platform design has avoided poor contact of the plug-in card connection. For the upstream channel receiving circuit, it adopts all digital design and unique noise controlling technology as well as upstream channel frequency spectrum analysis management which has greatly improved the anti-interfere ability. The dual core CPU based on MIPS handles the data transmission and MAC protocols separately to ensure the highly efficiency of the running system. The adjustable up-converter and DHCP/TFTP server have been built in, you will need seldom peripheral device. It supports various protocols such as PPPoE, DHCP relay agent and multicasting, etc. It is convenience to remote logged in and controlled in many ways such as SNMP, Web and CLI.

These CMTS can be deployed on both the HFC head end and the hub head end machine room as well as the housing district simply constructed machine room to bear value added services such as broadband access, VOIP, interactive TV and VOD, it is the best choice for network convergence of CATV, internet and telecommunication network.

## Features:

- Compliant with DOCSIS2.0/Euro-DOCSIS2.0 ( ATDMA ) standard , DOCSIS/Euro-DOCSIS1.1/1.0 downward compatibility
- Support both DOCSIS2.0 & DOCSIS1.0/1.1 Cable Modems working on the same CMTS
- Support PaketCable 1.0 standard, compatible with terminal units like EMTA,ESTB, support VOIP and interactive DTV

- All digital upstream receiving channels, their adaptive equalization and noise suppression technology could reduce those affects caused by interference and reflection.
  - Built-in frequency analysis module could realize real time analysis and manage each upstream channel frequency spectrum.
  - Support upstream channel frequency automatic jumping to avoid disturbing frequency point.
  - The CMTS will estimate that whether the current working frequency is disturbed by the upstream data's error code status, one there is, the CMTS will jump to spare frequency automatically to avoid disturbing frequency. You can set 5 spare frequencies in total at one time.
  - Support the dynamic changes of upstream channel modulation mode and baud rate to ensure the best balance between the upstream channel transmission efficiency and anti-jamming capability.
  - Support DHCP relay agent, PPPoE dial.
  - 2-6 upstream channels,1 downstream channel. There is another optional ODB for choice.
  - Bandwidth limits for both US and DS.
  - Bandwidth limit function for single CM could avoid over abundant resources caused by BT download, it can offer different services to various of customers .The operators could adopt flexible business strategies according to different requirements from the customers.
  - Two Gigabit ports
  - Both the CM and CPE could choose working mode from the layer2 transmit mode, layer3 router mode and the mixed mode of lay2 and layer3.
  - User isolation function could avoid the network storm while its firewall function could prevent the ARP virus and IP address fraud.
  - Can be operated by CLI,WEB and SNMP
  - Logging in CMTS by telnet, operator can configure and manage by CLI, it can be managed well even without any engineer in the machine room, it is very convenient for the engineer to do software upgrading via remote login.
  - Built-in DHCP/TFTP server.
  - When the CMTS is deployed in the small scaled area like housing district and hotels, the built-in DHCP/TFTP server could realize the most simplified broadband access independently.
- Built-in all channel digital frequency agility converter, LCD digital display and adjustable knob on the panel , the frequency/power level are very clear to master. You may also setup by the network management software.
- 1U chassis, compact size, it is very convenient to stack and expand capacity.

## Specifications :

		Downstream		Upstream							
		Euro-DOCSIS2.0 (ATDMA)	DOCSIS2.0 (ATDMA)								
Modulation mode		64QAM/256QAM		Demodulation mode		64QAM/32QAM/16QAM/8QAM/QPSK					
Frequency range (MHz)		112~858	91~857	Frequency range		5~65					
Bandwidth (MHz)		8	6	Bandwidth (MHz)		6.4	3.2	1.6	0.8	0.4	0.2
Data rate (Mbps)	64QAM	41M	27 M	Data rate (Mbps)	64QAM	30.72	15.36	7.68	3.84	1.92	0.96
	256QAM	55 M	38 M		32QAM	25.6	12.80	6.4	3.2	1.6	0.8
DS RF Output power (dBmV) 45~58 adjustable 1dB step					16QAM	20.48	10.24	5.12	2.56	1.28	0.64
					8QAM	15.36	7.68	3.84	1.92	0.96	0.48
					QPSK	10.24	5.12	2.56	1.28	0.64	0.32
				Receiving level (dBmV)		-1~+29	-4~+26	-7~+23	-10~+20	-13~+17	-16~+14
Symbol rate (Msyms)	64QAM	6.952	5.056941	Symbol rate (Msyms)	5.12	2.56	1.28	0.64	0.32	0.16	
	256QAM	6.952	5.360537								
Channel number		1		Channel number		2、4、6 optional					
Reflection loss		> 14dB		Reflection loss		> 14dB					
Output impedance		75Ω		Input impedance		75Ω					
Supported protocols		Euro-DOCSIS/DOCSIS2.0/1.1/1.0,TCP/IP,ARP,RIPv2,ICMP,VLAN,multicast,OSPF,DHCP,TFTP,SNMP,PPPoE,DHCP relay agent,Telnet etc.									
Physical parameters											
RF interface		1 downstream channel 2~6 up-stream channels metric F type mount		Input voltage		AC100~240V Customizable DC-48V input					
Network interface		2 full duplex 1000/100/10BaseT interface		Consumed power		< 70W					
Status display		LED、LCD display		Net weight		6.0Kg					
Other interface		COM		Working conditions		0~40℃					
Dimension		W430mm H44mm D360mm		Relative humidity		<90%					