

CMTS

JH-HE2086



Jinghong

Chongqing Jinghong High-Technology Co., Ltd.

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Overview



JH-HE2086 is a highly integrated DOCSIS compatible CMTS designed for cost sensitive operators with excellent performance. Compatible with both DOCSIS1.1 & Euro-DOCSIS1.1, adapting the core technology from Broadcom, it has perfect data processing capability and stability. It can be used as broadband IP access device in two way HFC plant and compose data transmission platform of integrated info which offer various kind of service such as internet access, VOD, SOHO, remote education and IP phone, etc.

JH-HE2086 integrated RF digital agile up-converter, applying miniaturization 1U platform, saved installation space and easy to be extended. As to operation, JH-NMS network software could manage it in a convenient and rapid way to set up CMTS, CM and CPE as well as monitoring, authorization and warning. The software is simple to be mastered. Based on Windows operating system, common PC can be used as network management server. Excellent remote control function enabled operator log into CMTS and manage all parameter directly which shorten maintenance period and cut the cost of software upgrading.

JH-HE2086, with excellent performance & stabilization, reliability & security as well as its effective cost and professional after sale service, would be your best choice for broadband construction in two way HFC plant.

Feature

- **Compatible with both EURO DOCSIS1.1 & US DOCSIS1.1, it also compatible with DOCSIS2.0 cable modem.**
- **Support QoS.**
- **Available in both 1X1(1DS,1US) ,1 X 2(1DS,2US),&1X4(1DS,4US).**
- **Available for VOIP service.**
- **Customized design for cost sensitive operators**
- **Support up stream frequency automatic jumping to avoid disturbing frequency point.**
According to detecting upstream data error-code status, CMTS could estimate whether the current working frequency points were disturbed or not .Once disturbed, the CMTS will jump frequency to spare frequency point to avoid frequency disturbing. You can set five frequency points each time.
- **Support upstream modulate mode and baud rate automatic change to insure perfect balance of upstream transmit efficiency and the ability to resist disturbance.**
- **Support DHCP relay agent and PPPoE dial-up.**
- **Bandwidth limit of both upstream and downstream.**
Bandwidth limit of upstream and downstream to single CM could avoid impropriating from BT downloading. Different kind of service as requested of various users offer convenient management to CATV operators.
- **Both CM and CPE could choose layer-2,layer-3 even mixed layer-2 & layer-3 working mode.**
- **It can be configured and operated by CLI、COM、SNMP.**
Log into CMTS by Telnet, configure and operate CMTS by command lines ,it is convenient for network administrator to manage and maintain both network and users as well as remote log in to upgrade all software.
- **Optional internal high integrated DHCP/TFTP services mode.**
While this CMTS is used for household and hotel, such kind of small network scope, it can realize most simple way broadband access by its highly integrated internal DHCP/TFTP server to reduce installation and operating cost.
- **Integrated RF digital up-converter. It is easy to set RF frequency and power level by the VFD and function key on the panel.**
- **Adopt high performance CPU to improve data processing capability.**
- **Web management interface for convenient and cost effective operating.**
- **Minimized 1U platform design, cost effective, easy to be piled and expanded.**

Specifications

		Downstream		Upstream		
		Euro-DOCSIS1.1	DOCSIS1.1			
Modulation Type		64QAM and 256QAM		QPSK and 16QAM		
Frequency Range		88~860MHz adjustable		5~65 MHz		
Bandwidth		8MHz	6 MHz	200, 400, 800, 1600, 3200 KHz		
Data Rate	64QAM	41Mbps	27 Mbps	QPSK	320, 640, 1280, 2560, 5120 Kbps	
	256QAM	55 Mbps	38 Mbps	16QAM	640, 1280, 2560, 5120, 10240 Kbps	
RF Output Level		45~58dBmV adjustable 1dBmV Step		Receive Level	160 Ksymps	-16~+14 dBmV
					320 Ksymps	-13~+17 dBmV
					640 Ksymps	-10~+20 dBmV
					1280 Ksymps	-7~+23 dBmV
					2560 Ksymps	-4~+26 dBmV
Symbol Rate	64QAM	6.95200 Msymps	5.056941 Msymps	160, 320, 640, 1280, 2560Ksymps		
	256QAM	6.95200 Msymps	5.360537 Msymps			
Return Loss		>14Db		>14dB		
Output Impedance		75 Ω		75 Ω		
Support Protocol		Chinese DOCSIS、Euro-DOCSIS1.1、DOCSIS1.1、TCP/IP、ARP、RIPv2、ICMP、DHCP、TFTP、SNMP、PPPoE、DHCP Relay Agent、Telnet etc.				
Physical Parameter						
RF Port	1 DS, 1~4 US metric 'F' type connectors		Input Voltage	170~250VAC		
LAN Port	2 100/10BaseT RJ45 connectors		Consumed Power	<60W		
Status Display	LED、VFD		Weight	6.0Kg		
Other Interface	COM、Mouse、Keyboard、VGA		Operating Temperature	0~40℃		
Dimensions	W43cm H41cm D36cm		Operating Humidity	10~90%		

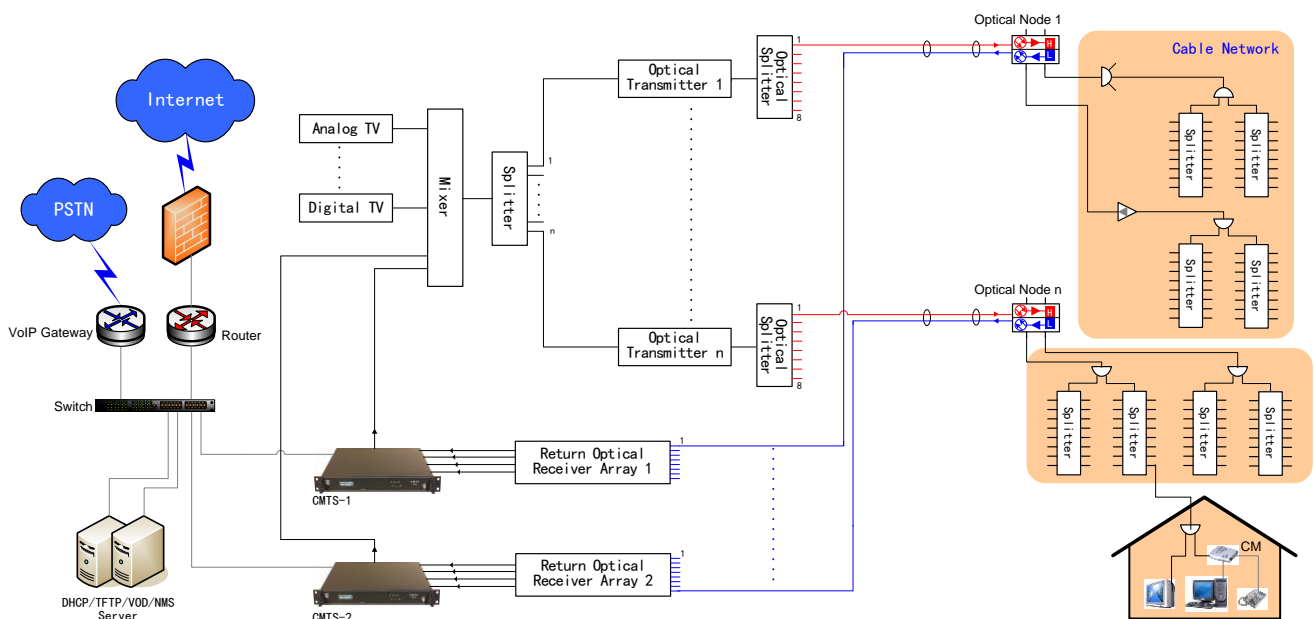
Application in HFC

DOCSIS technology is a grown up technology which could set up high speed broadband data transmission platform based on CATV two way HFC plant. It has been widely adopted all over the world. Up to now, it is still one of the main broadband access technologies. Comparing with Ethernet, EPON and other technologies, the biggest advantage of DOCSIS technology is that you can cover the whole HFC plant by quite low cost and occupy broadband market rapidly. What's more, the procedure of construction project is very simple .It make full use of current network resource and avoid repeated construction and wiring. Disposition of the core device CMTS is quite flexible, it can be placed at general front end or distributing front end even optical nodes. As the number of users and broadband requirements increased, you can add more CMTS to enlarge its capacity then cut the invest risk to a bare minimum. You can also push CMTS award to Optics nodes in order to improve average household broadband width and reduce feedback transmission noise disturbance.

Chongqing Jinghong High-tech Co.,Ltd., as the largest professional CMTS manufacturer, always specialize in product's internationalization and cut its cost further in order to construct broadcasting broadband network in a cheaper way. We believe that our CMTS will give a great push forward to DOCSIS technologies widely use all over the world.

In the Early Stage of IP Service

1. Network Topology

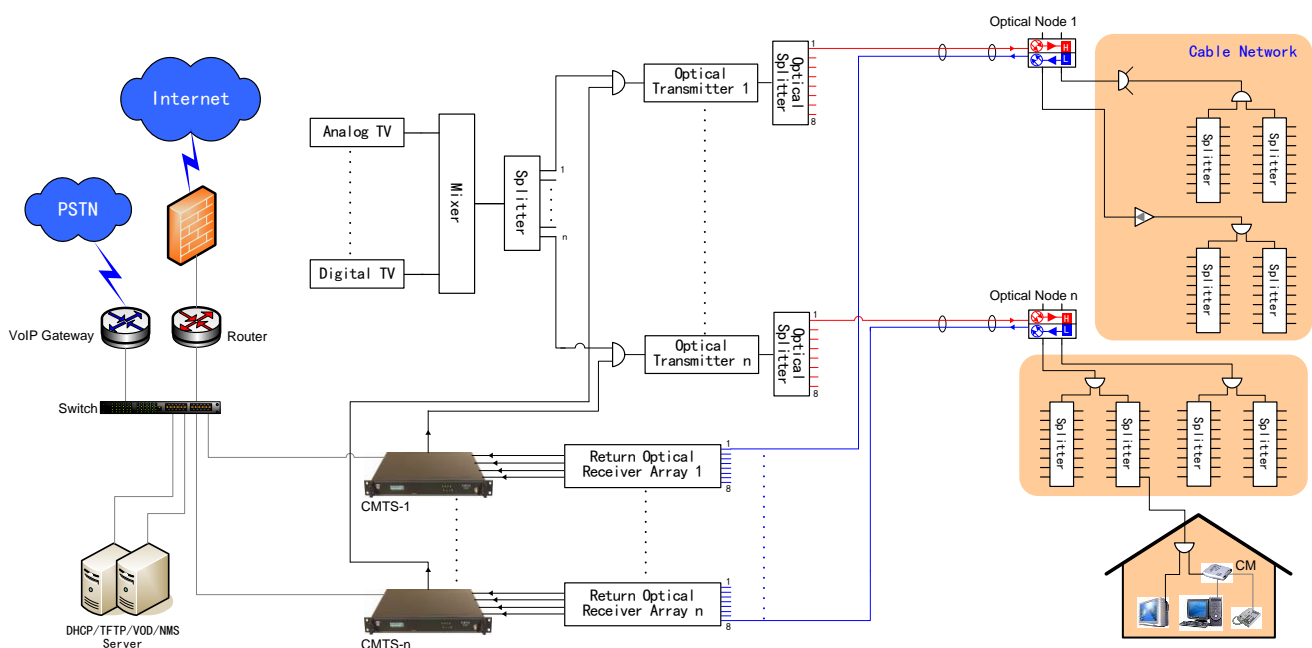


2. Feature

- Low cost to cover all TV users, occupy market rapidly, average household cost is very low.
- Deploy CMTS at general front end. As the number of users and broadband requirements increased, you can add more CMTS to enlarge its capacity and broadband.
- Realize authorization operation to users by CMTS network management software (it can be accurate to date), no necessary to buy other expensive verification charging system.
- At the very beginning, you can develop Internet access and a few VOD operations.
- It is designed for cable network of both large and medium-sized enterprises, hotels and small county seat and also medium sized network's early data business development
- Feedback transmission noise will accumulated more and more, you should enhance noise detection and circuitry maintenance.

Large and Medium-sized HFC Plant

1. Network Topology



2、 Feature

- Meet requirements of those networks where there broadband rate is about 10-20%, it could meet the broadband requirements of current business and clients.
- Cover all users by low cost.
- Either circular-shaped backbone network or star-shaped network, you can place CMTS either at the general front end or branch front end.
- Economize downstream channel resource and CM will be online faster.(The CM receive only signals of its downstream to avoid endless waiting of upstream and downstream scanning)
- As the number of users and broadband requirements increased, you can add more CMTS to enlarge its capacity and broadband.
- Convenient for increase local VOD operation in order to reduce broadband stress to backbone network.
- Easy and convenient to maintain with and impossible for large area network break off.
- All real time monitor operations about CMTS and CM can be operated by the easy-to-use network management software.