

SJL2000 CATV Network Management System

With the expansion of the cable TV network and the rapid development of the technology, the scale of the network and the quantity of the facility have been on the rise with each passing day. The industrialization need for the cable TV and the development



of various businesses have demanded a lot over the reliability of the network, the quality of the transmission and the service, which brings about a great challenge to the management of the network.

It is more important to manage a HFC well than to construct it well. With the expansion of the network scale and equipment, the reliability of the system has been reduced. That will bring about the disastrous effect to the operator running the data by Dual HFC.

How to manage a network well, to find out the hidden trouble and get rid of it, and to improve the reliability to ensure the smooth operation of the net are the most cared concerns of the equipment suppliers and the operator. Therefore, in order to prevent the unnecessary trouble, at the same time the cost could be saved, an efficient HFC network is a must.

Main structure

The whole SJL2000 HFC NM System mainly includes three parts:

- Administration computer is a system which based on the standard C/S or B/S. It commonly consists of NM server, data-base server and several client server, they are connected by the IP data network which can be the local area network, town area network or internet. The NM server is the centre of attempering and managing the data in the NM system, and the data-base server keep all the data and information of the NM system, both of them are normally installed in the general headend, and also they could be installed in one hardware platform. The client server offers the user's graphic interface to finish the operation and controlling, it could be installed in the general headend, subsidiary headend or any place in the IP network.
- Headend controller: headend controller locate in the general headend and every subsidiary headend, it is the gateway that connect the IP network and HFC network. The data between the headend controller and the administration computer is transmitted by the IP data network.
- Responder: the responder is installed inside or outside the facility end, downwards to collect and control the data of the facilities which were monitored and controlled, upwards to communicate with the headend controller. The responders should match the facilities, including the hardware and software.

Physics layer channels RF and modulate criterion

Item	Headend controller	Responder
Transmission power	100~111dB μ V	85~105dB μ V
Transmission power span	2dB	2dB
Transmission frequency	108MHz~119MHz, 8MHz bandwidth	5.0MHz~65MHz,3.2MHz bandwidth
Transmitter tune range	adjust in the given working channel	adjust in the given working channel
Transmitter frequency span	100kHz	100kHz
Transmitter working state with outside breadth	Whole forward frequency chart-65dBc	Whole frequency chart-55dBc
Standard transmission impedance	75 Ω	75 Ω
Transmission return loss	Whole forward frequency chart 8dB or better	12dB or better
Receiving dynamic range	40~80dB μ V	40~80dB μ V
Receiving frequency span	100kHz	100kHz
Receiving C/N (BER better than 10 ⁻⁶)	20dB	20dB
Receiving return loss	Better than 12dB in whole reverse frequency	Better than 12d B
Modulate method	FSK, $\Delta f=67\text{kHz}\pm 10\text{kHz}$	FSK, $\Delta f=67\text{kHz}\pm 10\text{kHz}$
Bit ratio	38.4kbps	38.4kbps
Transmission working mode		Semiduplex
Working temperature range		-40 $^{\circ}$ C~85 $^{\circ}$ C

RF of Forward and reverse RF channel and the modulate criterion are in accordance with SCTE Standard and Chinese Standard.