

Ethernet Over Coax Access System

CD2000 Ethernet over Coax (EoC) system is designed to offer both RF TV and Ethernet signals over one coaxial cable within the last 100 meters to subscribers. With CD2000 excellent high-speed Ethernet distribution capability, CATV operators can have more value-added services besides cable modem.

Features:

- Home Plug (Home Plug Powering Alliance) standard
- Use HFC frequency 2~30MHz for Ethernet access
- Orthogonal Frequency Division Multiplexing (OFDM) technique, high noise tolerance capability
- Up & Downstream TDMA for high performance, and CSMA for plug & play deployment
- Use existing coaxial cable, no new network need
- Terminal device Plug and Play, no need to do field configuration
- Up to 85dB link dynamic range from Master to slave device
- Ethernet uplink port compatible with Media Converter or ONU

Application

CD2000 EoC network mainly includes one CD2101 Master equipment and a few CD1101 Slave terminals. Typically, CD2101 Master equipment is located together with Optical Node and CD1101 Slave terminals is installed in the subscriber's room. One CD2101 Master equipment can access up to 64pcs CD1101 Slave terminals. The typical EoC network architecture is:

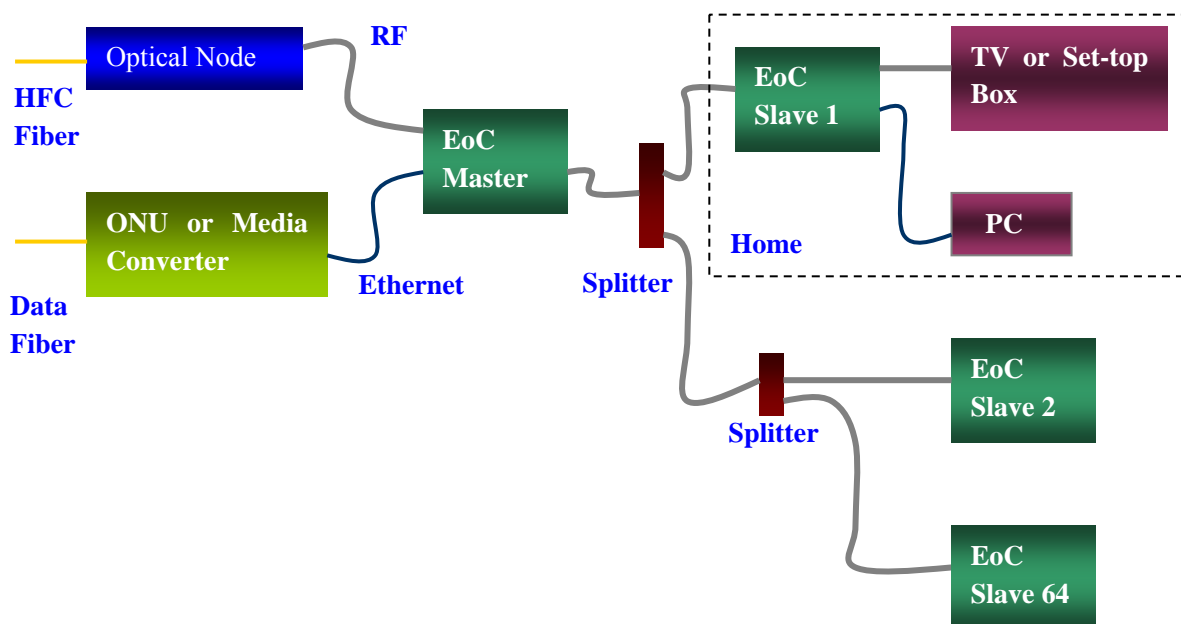


Figure 1 EoC Network

EoC Master Equipment – CD2101

CD2101 EoC Master equipment has one cable television input port, one Ethernet data uplink port (RJ45) and one coaxial cable output port with both TV and Ethernet data signals.



Figure 2 CD2101 Master

- Waterproof Aluminum Die-casting housing
- Remote Network Management capabilities (SNMP, Telnet, FTP, TFTP...)
- Service Management based on ToS, CoS or VLAN ID for VoD, VoIP, Internet
- Up & Downstream bandwidth limitation and Dynamic Bandwidth Allocation
- Broadcast Storm limitation and Mac Address Number limitation
- Slave devices whitelist authentication
- Support Slave terminal auto configuration
- On-line upgrade

Specifications

Parameters	Specifications
Model	CD2101-220V (220V AC), CD2101-60V (60V AC)
Protocol of Network	IEEE802.3, IEEE802.3u, IEEE HomePlug BPL, VLAN(IEEE802.1Q), QoS (802.1p)
PHY Speed	224Mbps
Frequency Range	2-30MHz
Carries	7 independent sub-bands, 128 carries in 1 sub-band, total 896 Sub-carriers
Modulation Technology	OFDM
Multiplex Technology	TDMA+CSMA/CA
RF Output Level	58dBmV
IP Throughput (Max)	68Mbps
Link Attenuation	<70dB (50Mbps@0-60dB, 30Mbps @70dB)
Media and impedance	Coaxial Cable 75Ω
Modulation Mode	None/BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM
Management	Telnet/SNMP
User Interface	RF Input Port: American F-Type, 75Ω Data Port: RJ45 RF and Data Hybrid Output: American F-Type, 75Ω
Security	Slave authentication, User MAC Amount limitation, Slave Isolation
QoS	802.1p Priority to provide multimedia applications and bandwidth management
Operating Temperature	-30~80°C
Operating Humidity	10%~90% Non-condensing
Power Consumption	<6W

EoC Slave Terminal – CD1101

CD1101 EoC Slave terminal is installed in the subscriber’s room. It has one cable TV and Ethernet data hybrid input port, one cable television RF output port and one RJ45 Ethernet data access port.



Figure 3 CD1101 Slave Terminal

Application

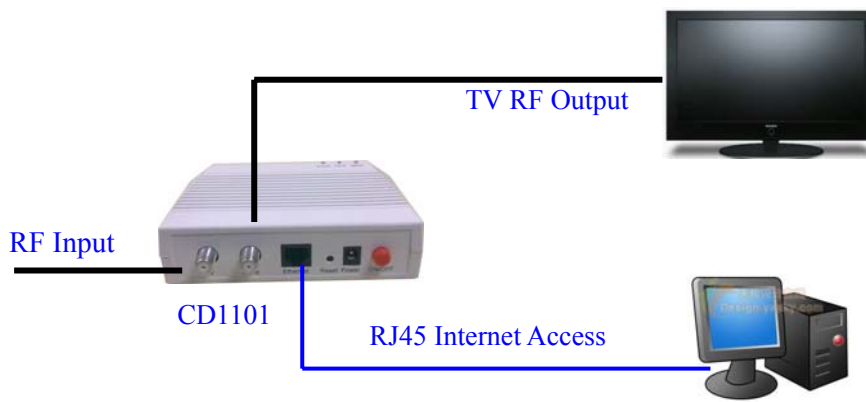


Figure 4 CD1101 Internet Access Service

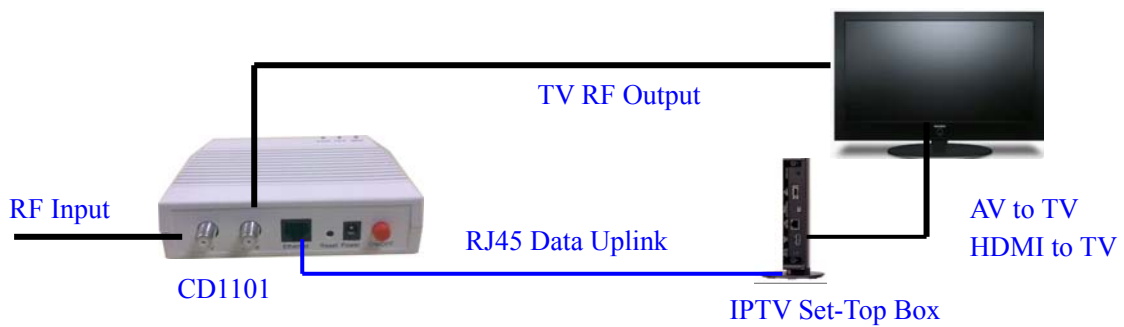


Figure 5 CD1101 VOD Service

 **Features**

- Remote Management by CD2101 Master equipment
- QoS support
- VLAN support
- Up & Downstream bandwidth limitation
- Dynamic Bandwidth Allocation
- Broadcast Storm limitation
- Mac Address Number limitation
- Auto configuration through Master device
- Auto upgrade through Master device
- Easy deployment

 **Specifications**

Parameters	Specifications
Model	CD1101
Protocol of Network	IEEE802.3, IEEE802.3u, IEEE HomePlug BPL, VLAN(IEEE802.1Q), QoS (802.1p)
PHY Speed	224Mbps
Frequency Range	2-30MHz
Carriers	7 independent sub-bands, 128 carries in 1 sub-band, total 896 carriers
Modulation Technology	OFDM
Multiplex Technology	TDMA+CSMA/CA
RF Level to TV	-3.5dB to the input RF level
IP Throughput (Max)	68Mbps
Link Attenuation	<70dB (50Mbps@0-60dB, 30Mbps @70dB)
Media and impedance	Coaxial TV Cable 75Ω
Modulation Mode	None/BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM
Management	Remote Management by Master Device
User Interface	RF Output Port: American F-Type 75Ω Data Port: RJ45 RF and Data Mix Input: American F-Type 75Ω
Security	Data service encryption
QoS	802.1p Priority to provide multimedia applications and bandwidth management
Operating Temperature	0~45°C
Operating Humidity	10%~90% Non-condensing
Power Consumption	<4W