

## EOCAI-In-One (ONU+OR+2\*EOC) -CD792x



### Product Overview

CD792x is an all-in-one EOC Master with EOC master module, ONU module and OR module.

We can use one CD792x to instead of three type products, HFC optical node, EPON ONU and EOC mater. It can reduce the number of active node in the system, decreasing failure rate and saving a space. It is the best choice of CATV, Internet and VOD for the operator.

The EOC Master Module in the CD792x is based on the Qualcomm AR7410 chipset solution, with high anti-jamming capability OFDM technology. The 7.5-65MHz low frequency band is used for EOC signals. Built in high isolation filter as CATV RF and EOC signal mixer, the EOC signal and CATV signal in 87~862MHz can run on one cable without interference. The EOC Master can provide high speed data service. The PHY Layer speed is 600Mbps, the MAC Layer throughput is up to 320Mbps.

The OR module in the CD792x can provide an HFC optical input and one RF output. The CATV signal will convert from optical to RF signal here. The OR module is a high quality optical receiver product. It received the optical signal from the TX of HFC network, and the signal processed by the PIN, Amplifier, EQ and AGC to a stable RF output. The output level will be up to 108dBu.

The ONU module in the CD792x designed with one EPON port, one standard 10/100/1000 Base-TX Ethernet ports. It provides the key functionality of 802.3ah EPON ONU. By using the EPON technology, the ONU module provides a high-speed data channel through a single optical fiber with a rate of 1.25 Gbit/s on bi-direction. In addition, it offers the QOS, flexible bandwidth allocated to provide quality high-speed data service, voice service, and video service.

## **Function Features**

- High integration with one EOC Master modules, one ONU module and one OR module
- Aluminum alloy die casting shaping, good heat dissipation
- Outdoor waterproof designed, 60V/220V power supply optional
- 7.5-65Mhz frequency for EOC signals., no influence on CATV Service
- Support data encryption
- Support broadcast storm limitation
- Support data packet statistics
- Support auto-update and auto-configuration
- Support the optical power monitor
- Flexible bandwidth allocation function
- Support various QOS service level
- EMS network management based on SNMP
- Provide a rich fault alarm function, easy to fault diagnosis
- Support software online upgrade
- OR support AGC
- CATV RF output up to 108dBuv
- ONU module compliant with IEEE802.3ah and CTC2.1standards.
- ONU module provides one auto-negotiation GE ports
- ONUmodule support interconnection with the third-party OLT
- Support the EMS network based on SNMP

 **Specification**

Item	Parameters	Specification
<b>Specification of EOC Module</b>		
<b>Interface and LED Indicator</b>	RF Port	1*EOC low-frequency signal output port, support F-Female or SMB connector
	Ethernet Port	Two 10/100/1000M auto-negotiation, RJ45
	LED Indicator	1 for Power Supply Status 1 CABLE Link Status indicator 2 for Ethernet Ports Status
<b>Performance Parameters</b>	RF Parameters	Frequency Band :7.5-65MHz RF Output Level:110±5dBuV@ output of module Receive sensitivity: 45dBuV Return Loss:>16dB Output Resistance:75Ω
	Transmission	PHY Layer:600Mbps Throughput on MAC Layer:320Mbps
	Modulation Mode	OFDM~ 2690~carriers 4096,1024,256,64,16,8~QAM, QPSK, BPSK, ROBO
	Working Mode	TDMA/CSMA
	Encryption Mode	AES-128
<b>Standard</b>	EOC Standard	IEEE P1901(Draft) HomePlug AV
	Ethernet Standard	IEEE 802.3, IEEE 802.3x, IEEE 802.3u IEEE802.1P, IEEE802.1Q
<b>Software</b>	Network Management	WEB, CLI, SNMP
	Software Features	VLAN, QOS, Bandwidth Control, Broadcast storm limitation
<b>Specification of OR</b>		
<b>Optical Specifications</b>	Wavelength	1100~1600 nm
	Optical Power Input Range	-8~+2 dBm
	Recommend optical Power Input Range	-6~0 dBm
	Optical Input Return Loss	≥45 dB

<b>RF Specifications</b>	Bandwidth	45~870 MHz
	Flatness	≤±0.75 dB
	Stability of RF output under Operating Temperature	≤5 dB
	Nominal RF Output Level	108 dBuV
	Impedance	75 Ohm
	Return Loss	≥14 dB
	CNR	≥51 dB
	CSO	≥60 dBc
	CTB	≥65 dBc
	Power consumption	<7.5 W
<b>Optical and temperature AGC</b>	Stability of RF output under optical AGC	≤±1 dB
	AGC Scope	-6~0dBm
<b>LED Indicator</b>	<b>Indicator Description</b>	RUN: module operating RF: RF signal PWR: Power is coming up OPTH: Optical power is higher OPTM: Optical power is nominal OPTL: Optical power is lower
<b>Specification of ONU Module</b>		
<b>Interface</b>	<b>PON Port</b>	One EPON port Meet 1000BASE-PX20+ standard Up to 1.25Gbps Upstream and Down-stream SC Connector Single-mode fiber, single-strand Maximum split ratio 1:64 Up to 20Km distance
	<b>Ethernet Port(LAN)</b>	One 10/100/1000M auto-negotiation Full/Half-Duplex RJ45 type connector , Auto MDI/MDI-X Up to 100m distance
	<b>Power Supply Port</b>	2Pin Power Connector
<b>Management</b>	<b>Network Management</b>	Support IEEE802.3 QAM, ONU can be remotely managed by OLT Support Remote management through SNMP and Telnet Local management
	<b>Management Function</b>	Status monitor, Configuration management, Alarm management, Log management

<b>Performance Parameters</b>	PON Optical Parameters	Wavelength: Upsteam1310nm, Downstream 1490nm Transmitter Optical Power: 0~4dBm Optical Receive Sensitivity: -27dBm Saturation Optical Power: -3dBm
	Data Transfer Parameters	Data Transfer Rate: Upstream 900Mbps ; Downstream 950Mbps LAN Interface: 1000Mbps Packet Loss: <1*10E-12 latency: <1.5ms
	Business Capability	Layer 2 wire speed switching Support VLAN TAG/UNTAG, VLANconversion Support Port-based speed limitation Support Priority classification Support storm control of broadcast
<b>Physical Features</b>		
<b>Physical Features</b>	Power supply & Consumption	Power Supply: 220V/60V optional Consumption: <24.5W
	Size & Net weight	Dimension: 290×220×120mm Weight: 3.7kg
	Environment Attribute	Working Temperature: -10~65℃ Storage Temperature: -40~85℃ Working humidity: 10%~90%non-condensing Storage humidity: 10%~90% non-condensing

## Typical Application

- ◇ CATV
- ◇ Internet Access
- ◇ VOD
- ◇ IPTV
- ◇ Camera monitor system

## Application Illustration

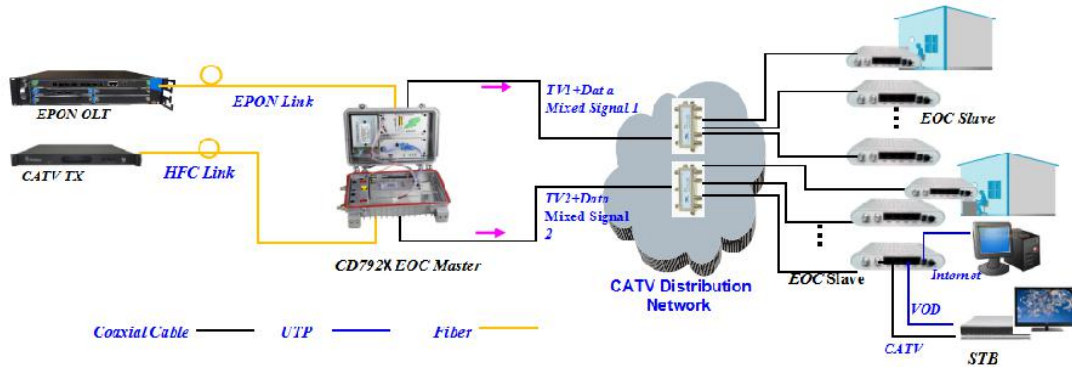


Figure 1 CD792x Application Illustration

## Order Information

Product	Item	Description
EOC All-In-One (ONU+OR+EOC)	CD7924-111 220VAC	Built-in one GE port ONU Module, one OR module and one 74 series chipset EOC Modules ; One EPON uplink port, one CATV optical input, four TV+data mixed output port. Outdoor waterproof designed. 220VAC power supply.
EOC All-In-One (ONU+OR+EOC)	CD7924-111 60VAC	Built-in one GE port ONU Module, one OR module and one 74 series chipset EOC Modules ; One EPON uplink port, one CATV optical input, four TV+data mixed output port. Outdoor waterproof designed. 60VAC power supply.
EOC All-In-One (ONU+OR+EOC)	CD7922-111 220VAC	Built-in one GE port ONU Module, one OR module and one 74 series chipset EOC Modules ; One EPON uplink port, one CATV optical input, two TV+data mixed output port. Outdoor waterproof designed. 220VAC power supply.
EOC All-In-One (ONU+OR+EOC)	CD7922-111 60VAC	Built-in one GE port ONU Module, one OR module and one 74 series chipset EOC Modules ; One EPON uplink port, one CATV optical input, two TV+data mixed output port. Outdoor waterproof designed. 60VAC power supply.