

HD200 CableLAN Wall Mount Adapter

CXC-HD200-W2e



Manual

Declaration of Conformity



Model: **Corinex HD200 CableLAN Wall Mount Adapter**

Manufacturer: **Corinex Communications Corp.
1200-570 Granville St.
Vancouver, BC, V6C 3P1
Canada**

Directives which Conformity is Declared:

**EMC: 2004/108/EC
LVD: 2006/95/EC
R&TTE: 1999/5/EEC
RoHS: 2002/95/EC
WEEE: 2002/96/EC**

Standards which Conformity is Declared:

**EN 55022: 2006 (Class B)
EN 55024: 1998 + AD1: 2001 + AD2: 2003
EN 61000-3-2: 2006
EN 61000-3-3: 1995 + AD1: 2001
EN 50412-2-1: 2005
IEC 60950-1:2001**

The undersigned hereby declares the above specified equipment conforms to the above directives and standards.

Printed name / Title: **Peter Sobotka / CEO**

Place / Date: **Vancouver / May 11 2010**

Signature: 

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1 Introduction

1.1 Overview

The *Corinex HD200 CableLAN Wall Mount* is a network interface adapter which uses the existing coaxial cable lines already installed in your home or office as a medium for communication. After successful installation, the HD200 CableLAN network behaves like a traditional LAN for computers. The *Corinex HD200 CableLAN Wall Mount* is capable of up to 200 Mbps network speed (on the physical layer).

Easy to install, this low cost product requires no additional wiring and is easy to maintain. It is highly integrated, and requires no external electronic components.

The *Corinex HD200 CableLAN Wall Mount*:

- Enables users to connect individual PCs or other devices with Ethernet communications links into a local area network through existing coaxial cable lines
- Enables PC file and application sharing
- Enables peripheral and printer sharing through the coaxial network
- Enables shared broadband Internet access
- Enables sharing of bandwidth for multimedia payloads, including voice, data, audio and video
- Eliminates the need for long network cables throughout your home or office
- A real, cost-effective, and reliable solution for high-speed communications in any home or small office

1.2 About this Manual

This User Guide includes everything you need to know to help you successfully install the *Corinex HD200 CableLAN Wall Mount* and meet your networking needs. With the information in this manual, you should be able to:

- Analyze your network efficiency
- Plan the configuration of your *Corinex HD200 CableLAN Wall Mount*
- Install and configure your *Corinex HD200 CableLAN Wall Mount* according to your plan
- Verify and optimize the performance of your *Corinex HD200 CableLAN Wall Mount*

2 Installation Guide

2.1 Package Contents

When you receive your *Corinex HD200 CableLAN Wall Mount*, ensure that your package contains:

- *Corinex HD200 CableLAN Wall Mount* (2 per dual pack)
- Multiplug adapter EU and US version (2 of each per dual pack)
- Coaxial cable (2 per dual pack)
- Coaxial diplexer (2 per dual pack)
- Standard Ethernet cable (2 per dual pack)
- CD with documentation

We are constantly innovating our products. For the latest hardware/software changes, downloads, and additional information on your device, please visit www.corinex.com.

2.2 System Requirements

In order to follow the procedures described in this document, it is recommended to have a PC equipped with a fast ethernet network card and running MS Windows 2000 or later version. The computer must have one static IP address assigned to its network interface.

2.3 Recommended Software

Certain tools are required to configure and access the HD200 CableLAN Wall Mount (also referred to as a modem). All these tools are available for Windows. In order to reduce the learning curve for these tools, the configuration process will be described here primarily for Windows-based tools.

Note: Corinex also provides a complete network management software suite called PowerNet. This innovative product allows for installation, configuration and monitoring of your BPL network. For more information please visit: www.corinex.com/nms-software.html

PowerNet™
Network Deployment Management System

The following tools can be downloaded and used free of charge:

- *Win Pcap* is a packet capture library required by Wireshark to sniff the packets arriving at the Ethernet port. It can be downloaded from:
<http://www.winpcap.org/>
- *Wireshark* is a graphical packet capture tool used to inspect the traffic generated by the modem. It can be downloaded from:
<http://www.wireshark.org/download.html>

- *Hane Win DHCP / TFTP server*. This is an easy to use DHCP & TFTP server. It is very useful for configuring the modem at start-up. It can be downloaded from: <http://home.foni.net/~hanewin>
- *Iperf* is a network performance test tool. It is useful for testing the speed of a network link. It can be downloaded from: <http://sourceforge.net/projects/iperf/>

Note: If you want to analyze the performance of your units, make sure that there is no firewall or anti-virus software running on your system. If Service Pack 2 is installed on XP, disable the DHCP server service and the firewall service. All the tools and examples described in this document have been tested on Windows XP SP2.

Similar tools are available for most Linux/Mac distributions.

2.4 Device Description

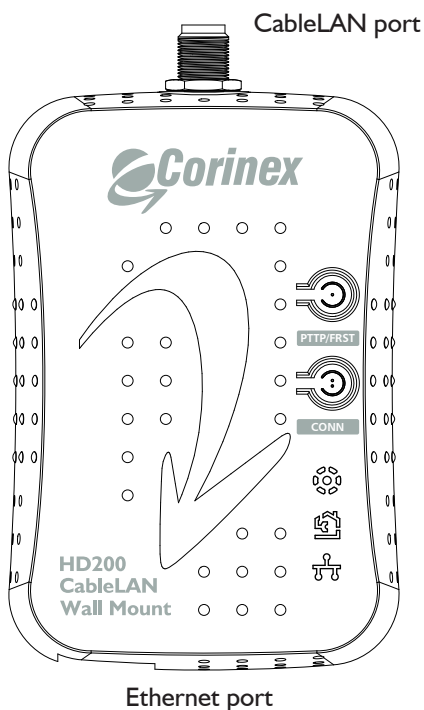
The adapter has 2 buttons and 3 LEDs to indicate different states. The table on the next page describes the functionality in detail. The Ethernet port is located on the bottom of the device, the F-type connector for CableLAN communication on top of the device.

Button Description:

Control button (PTTP/FRST)

The button is used to configure the PTTP mode and to perform factory reset of the device.

- in order to change the PTTP mode, press and hold the button for 3 seconds. The status of PTTP will be changed and the AP LED will display the status.
- in order to perform a *factory reset*, press and hold the PTTP/FRST button for more than 10 seconds. The device will then restart and boot up with factory default settings.



Note: PTTP (Parametric Translation Table Protocol) is a proprietary protocol enabling communication with management VLAN. It is described in detail in the AV200 ALMA autoconfiguration manual located on the Documentation CD (chapter PTTP protocol).

Reconnection (CONN)

After this button is pressed, the device will disconnect from it’s master (if applicable) and start best master selection process.

LED Description:



AP LED

This LED indicates the state of the adapter: Factors to consider in the state of a device are:

- 1. Status of the device (whether it’s powered ON or OFF)
- 2. Status of PTPP mode (enabled or disabled)
- 3. Status of connection handled by Port Solver
- 4. Status of CableLAN connection
- 5. Status of auto-configuration process.

If the AP LED is turned off, the device is powered off. If the LED is on, the device is powered on. The color and behavior of the LED varies in order to show the different states mentioned above. Following table summarizes the behavior:

LED status	Meaning			
	PTTP mode	Port solver handles the connection	CableLAN connection established	Auto-configuration status
Green flashes every 2 seconds	disabled	in progress	N/A	N/A
Red/Green alternating	disabled	finished	in progress	N/A
Green flashes every 0.5 seconds	disabled	finished	finished	in progress
Green	disabled	finished	finished	finished
Amber flashes every 2 seconds	enabled	in progress	N/A	N/A
Red/Amber alternating	enabled	finished	in progress	N/A
Amber flashes every 0.5 seconds	enabled	finished	finished	in progress
Amber	enabled	finished	finished	finished



VPI LED

This LED indicates if there is link and traffic activity on the CableLAN interface as well as the physical throughput level.

LED Status	Adapter status	Meaning
Off	Off	No link on the CableLAN interface
Red	On	Estimated Physical Throughput < Low Threshold
Amber	On	Low Threshold ≤ Estimated Physical Throughput < High Threshold
Green	On	Estimated Physical Throughput ≥ High Threshold
Blinking (in Red, Amber or Green)	On	Traffic on the CableLAN interface

Currently, the thresholds are set to 6 Mbps (Low) and 12 Mbps (High).

ETH LED

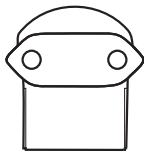
This LED indicates link and activity on the Ethernet interface.



LED status	Meaning
Off	The adapter has no link on the Ethernet interface.
Green	The adapter has negotiated a 100 Mbps link on the Ethernet interface.
Amber	The adapter has negotiated a 100 Mbps link on the Ethernet interface.
Blinking (green or amber)	There is a activity on the Ethernet interface.

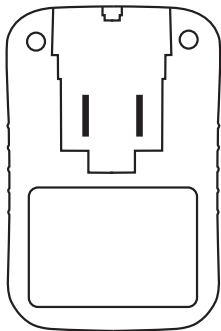
2.5 Multiplug Adapter Assembly

- I. Remove multiplug adapter and Wall Mount housing from packaging.



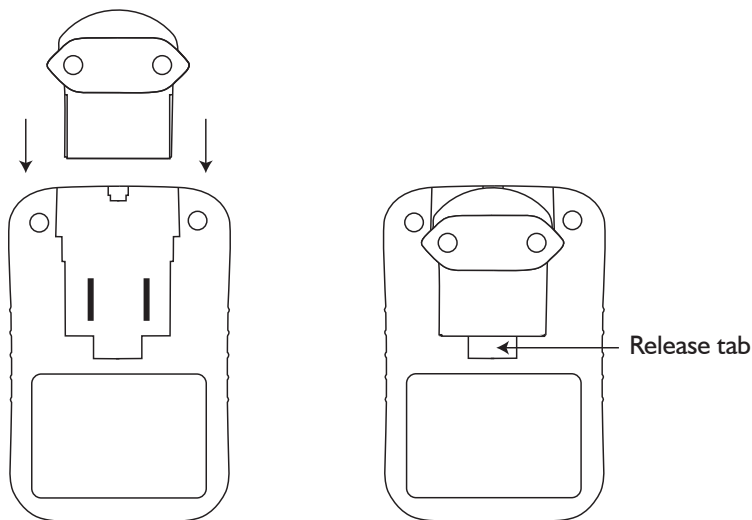
a) Multiplug adapter *

* “Multiplug adapter may differ from region to region.”



b) Wall-Mount Housing

2. Orientate adapter in line with the slot on the back of the housing.



3. Slide adapter into housing until unit clicks into place – it is now ready to go!
4. To replace the multiplug adapter (with another version), press down on the “release” tab and slide the adapter out of the Wall Mount housing.

2.6 Technical Specifications

Standards Compliance	IEEE 802.3u
Speed	Up to 200 Mbps on the physical layer
AC Plug Type	US, EU
LED Status Lights	AP, VPI, ETH
Interface	10/100 BaseT Fast Ethernet, CableLAN
Frequency Range used	2 – 32 MHz
Power Input	100 to 240 V AC, 50/60 Hz
Dimensions	120 mm L x 72 mm W x 79 mm H
Transmitted Power spectral density	-56 dBm/Hz
Power Consumption	4 W
Safety & EMI	UL/EN 60950, FCC Part 15, EN 55022 EMC limits
Fuse	FSI, T500 mA, 250 V AC*

* The fuse has to be replaced by authorised personnel only.

2.7 Factory Default Modem Configuration

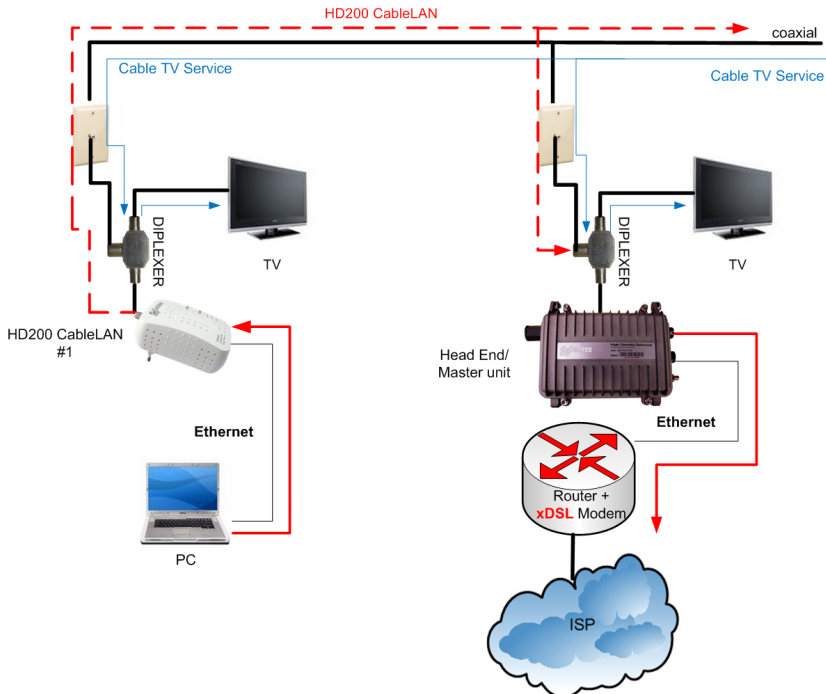
All Enterprise modems are set to run the auto-configuration process by default. This process uses DHCP and TFTP to obtain the network settings and modem configuration. It also uses a proprietary protocol called PTTP to communicate with the management VLAN.

2.8 Installing the Corinex HD200 CableLAN Wall Mount

If your network uses a xDSL modem to connect to the Internet please proceed to section 2.8.1. If your network uses a Cable modem to connect to the Internet please proceed to section 2.8.2.

2.8.1 Installing the Corinex HD200 CableLAN Wall Mount: xDSL environment

The Corinex HD200 CableLAN Wall Mount will need to be installed in a network topology similar to the diagram shown below. Please note some steps may vary depending on your network topology, IP address settings etc.



Connecting the adapter

1. Plug the supplied coaxial cable to the CableLAN port of your device and connect it to the TV socket on the wall. If there was a TV connected to the socket on the wall, please use the supplied TV diplexer in order to connect both, the CableLAN adapter and the TV set to the coaxial outlet.
2. Plug the supplied Ethernet cable to the LAN port of your device and connect the other end to the Ethernet port of the Ethernet enabled device you want to use it with.
3. Plug the adapter into an AC socket.

In order to make your network work, at least 2 adapters (a Head End and a slave unit) are needed on a network. The current version of the CableLAN Wall Mount adapter can work only as a slave unit and another device from Corinex's portfolio (e.g. Corinex Low Voltage Access Gateway, High Density Access Gateway, HD Building Controller etc.) has to be used as a Head End or master unit. More detailed information on how to connect and set up the master unit can be found in the corresponding adapter's documentation.

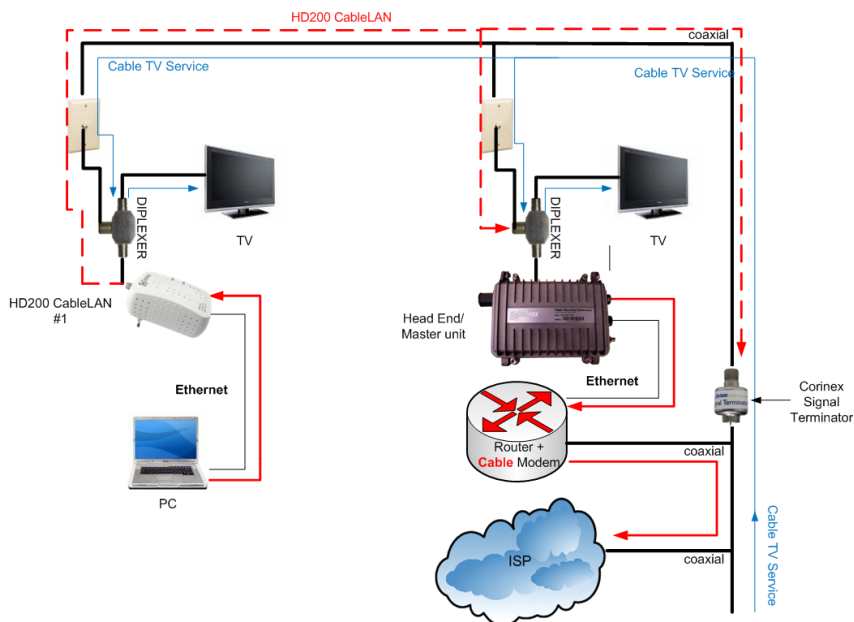
2.4.1 Installing the Corinex HD200 CableLAN Wall Mount: Cable Modem environment

The Corinex HD200 CableLAN Wall Mounts will need to be installed in a network topology similar to the diagram shown on next page. Please note some steps may vary depending on your network topology, IP address settings etc.

Note: Connect the Corinex Signal Terminator (sold separately) before a Docsis based Cable Modem. This step is very important as it will stop the HD200 CableLAN signal from interfering with the Cable Modem's communication with the ISP.

Connecting the adapter

1. Plug the supplied coaxial cable to the CableLAN port of your device and connect it to the TV socket on the wall. If there was a TV connected to the socket on the wall, please use the supplied TV diplexer in order to connect both, the CableLAN adapter and the TV set to the coaxial outlet.
2. Plug the supplied Ethernet cable to the LAN port of your device and connect the other end to the Ethernet port of the Ethernet enabled device you want to use it with.
3. Plug the adapter into an AC socket.



In order to make your network work, at least 2 adapters (a Head End and a slave unit) are needed on a network. The current version of the CableLAN Wall Mount adapter can work only as a slave unit and another device from Corinex's portfolio (e.g. Corinex Low Voltage Access Gateway, High Density Access Gateway, HD Building Controller etc.) has to be used as a Head End or master unit. More detailed information on how to connect and set up the master unit can be found in the corresponding adapter's documentation.

Warning:

Note to CATV System Installer in the U.S.A.: Please read Section 820-93 of the National Electric Code which provides guidelines for proper grounding. In particular, this document specifies that the Coaxial cable shield must be connected to the grounding system of the building and as close to the point of cable entry as possible.

3 Starting Up the Modem

It is recommended to run Wireshark during the start-up and configuration of the modem in order to ascertain the correct execution of this process and diagnose potential configuration problems.

Once the modem boots, it will start transmitting Spanning Tree Protocol (STP) packets. After a few STP packets, the modem will issue a DHCP discovery packet, as shown in Figure 1.

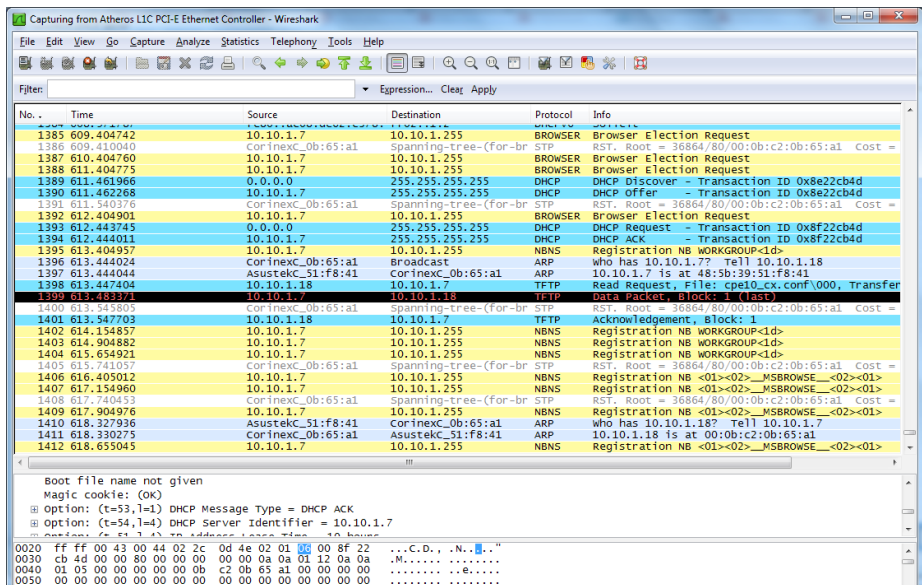


Figure 1: Packet trace of the startup of the modem

If you cannot see the DHCP packets coming from the modem, a couple of possible causes are:

- The firewall is filtering out these packets
- You are not running Wireshark on the correct Ethernet interface
- The adapter does not have the factory-default configuration
- The adapter is booting in NVRAM mode and is using static IP settings.

Note: In order to see the DHCP discovery, a factory reset is suggested.

4 Configuring the DHCP / TFTP Server

The HaneWin DHCP / TFTP server works based on profiles. For every lease, there is a profile assigned. For a basic network, only two profiles are needed: a Master profile and a Slave profile. The parameters defined in a profile are as follows:

- Netmask
- Gateway
- TFTP server IP
- Auto-configuration file name
- DHCP extensions

Note: The HD200 CableLAN Wall Mount can only be used as a slave (CPE, Customer Premises Equipment). Therefore another adapter from Corinex's portfolio needs to be installed in the network to act as a master (i.e. LV Gateway).

Upon receipt of the DHCP reply, the modem will download the specified auto-configuration file from the given IP address.

The first thing you need is a basic set of auto-configuration files. Please see Section 6 for examples. Then, create a new directory and add the two files to this directory. For the next step, go to **Options > Preferences** where we will configure the DHCP/TFTP server for our needs.

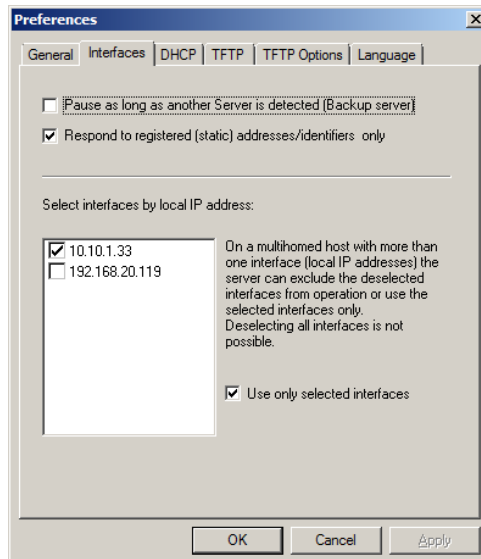


Figure 2: Interfaces tab settings

On the “**Interfaces**” tab (see Figure 2), check the option “**Respond to registered (static) addresses/identifiers only**”. Please pay attention to the selection of interfaces.

Afterwards go to the “**TFTP**” tab and set “**TFTP Root Directory**” to the directory where the configuration files are, as shown in figure 3.

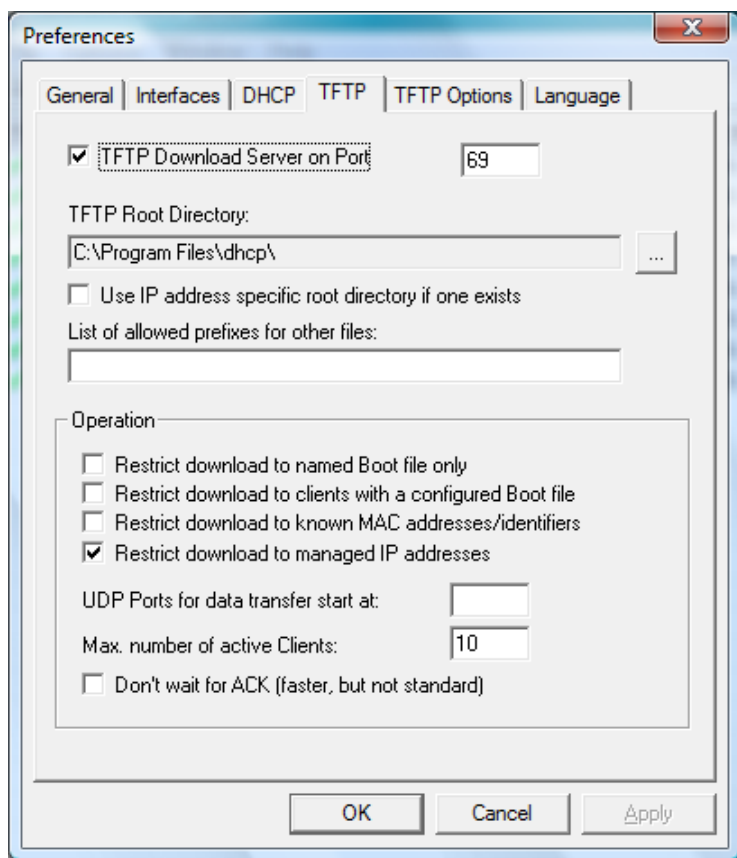


Figure 3: Setting the auto-configuration files directory

The next step is to create a profile. To create the *Master profile*:

1. Go to **Options > Manage Profiles**
2. Type the name of the profile (e.g. “Master”) in the lower window and click “**Add**”. A new window will pop up (see figure on next page).
3. In the tab, “**Basic Profile**”, set a subnet mask that is compatible with your computer settings. Under gateway, enter the static IP of your computer or leave it blank.

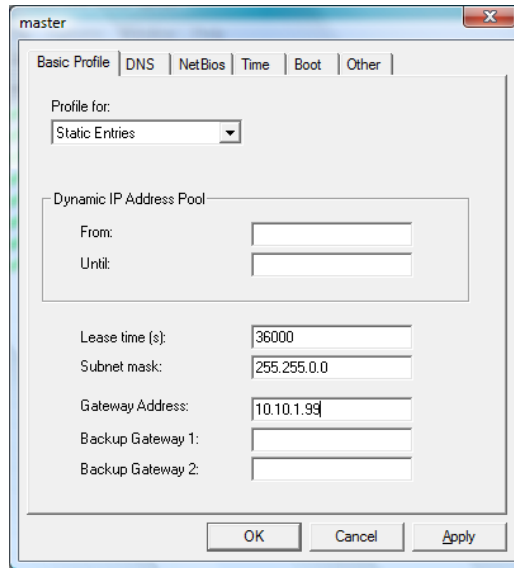


Figure 4: Basic profile

4. In the tab, “**Boot**”, type the IP address of your computer under “**Next Server IP Address**” and “**Name**”. Then check the option, “**Always use option 66/67 for Name and File**”.

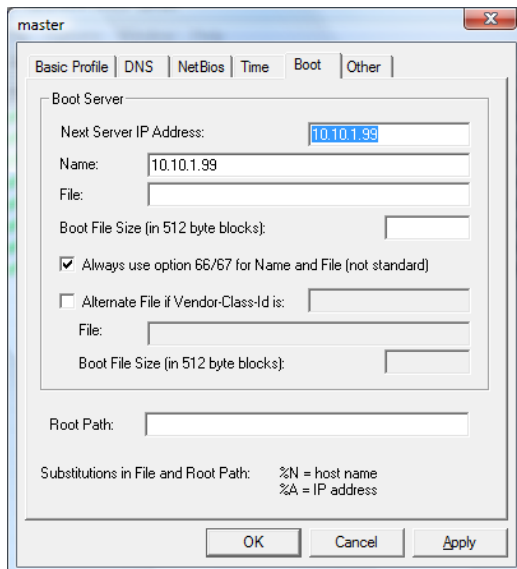


Figure 5: Boot tab

5. In the tab, “**Other**”, select option **18** and type in the name of the Master configuration file (e.g. “Master.conf”). Change this value to String and then click “Add”.
6. In the same tab, add option **120** with binary value “**0 0 0 0**”.

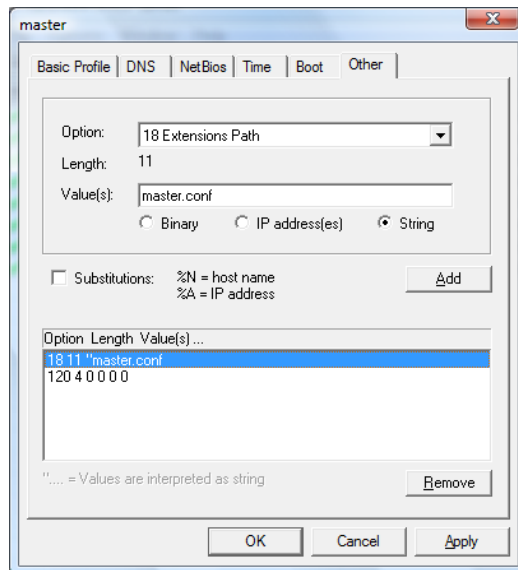


Figure 6 Other tab

Now repeat the same steps to create the Slave profile. The only difference is the name of the auto-configuration file under extension 18 will be “Slave.conf” or whatever the filename of your slave configuration file is.

Once you have the profiles, you can proceed to assign a profile to each of your modems. This assignment is based on the adapter’s MAC address.

Note: The HD200 CableLAN Wall Mount can be used only as a slave (CPE, Customer Premises Equipment). Therefore another adapter from Corinex’s portfolio needs to be installed in the network to act as a master (i.e. LV Gateway).

In the main window of the HaneWin server, click the button labeled, “**New**” in the lower button bar. A new window will open, as shown in figure 7.

In this window, you must enter the MAC address of the modem, the IP address that you want assigned to this modem, and the configuration profile. When you click **OK**, it will create an entry in the static leases list.

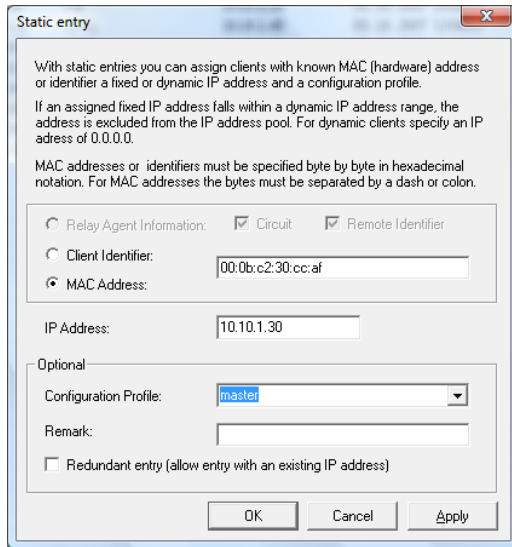


Figure 7: Assigning an IP and a profile to a given modem (by MAC address)

Note that the MAC address must be typed in the following format: xx:xx:xx:xx:xx:xx (where x is a hexadecimal). You cannot assign the same IP address to two different modems running at the same time.

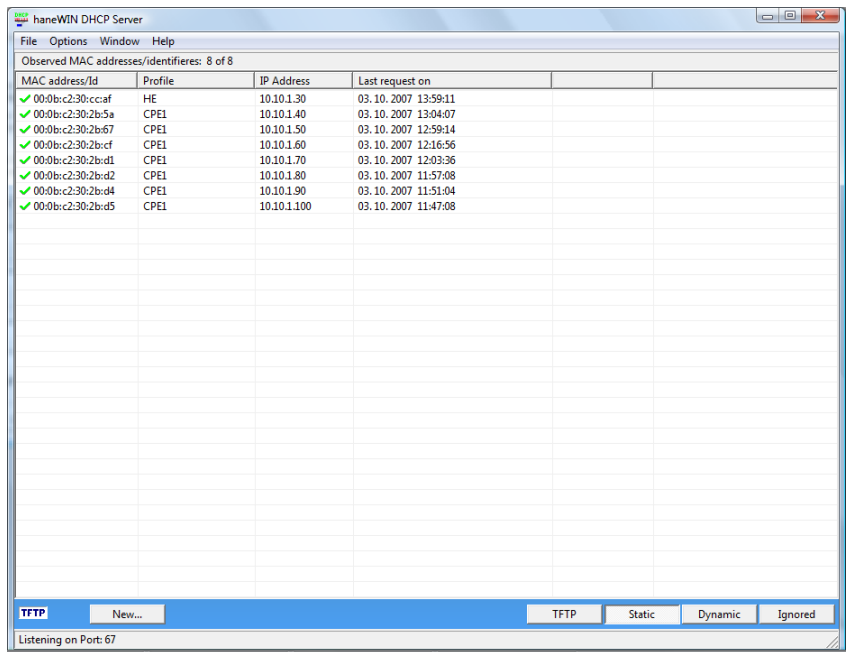
Once you have entered all the modems in the list, connect the device you want to operate as Master to your computer and connect the others via CableLAN.

If everything is properly configured, the Master will request an IP address first, and then each Slave will also request an IP address. The DHCP server reports the time and date of the last request in the static leases list.

If any of the modems does not get an IP address, the possible causes are:

- The MAC address was mistyped
- The modem does not have the factory-default configuration
- The modem is not linked to the Master

If none of the Slaves obtains an IP address, the probable cause is that the Master was not properly configured. If the Master modem does not become Master, the Slaves will not be able to find a network signal to link to.



The screenshot shows the 'thaneWIN DHCP Server' application window. It has a menu bar with 'File', 'Options', 'Window', and 'Help'. Below the menu bar, it says 'Observed MAC addresses/identifiers: 8 of 8'. The main area contains a table with four columns: 'MAC address/Id', 'Profile', 'IP Address', and 'Last request on'. There are 8 rows of data, each with a green checkmark in the first column. At the bottom, there is a 'TFTP' section with a 'New...' button and four tabs: 'TFTP', 'Static', 'Dynamic', and 'Ignored'. The status bar at the very bottom says 'Listening on Port: 67'.

MAC address/Id	Profile	IP Address	Last request on
✓ 00:0b:c2:30:cc:af	HE	10.10.1.30	03.10.2007 13:59:11
✓ 00:0b:c2:30:2b:5a	CPE1	10.10.1.40	03.10.2007 13:04:07
✓ 00:0b:c2:30:2b:67	CPE1	10.10.1.50	03.10.2007 12:59:14
✓ 00:0b:c2:30:2b:cf	CPE1	10.10.1.60	03.10.2007 12:16:56
✓ 00:0b:c2:30:2b:d1	CPE1	10.10.1.70	03.10.2007 12:03:36
✓ 00:0b:c2:30:2b:d2	CPE1	10.10.1.80	03.10.2007 11:57:08
✓ 00:0b:c2:30:2b:d4	CPE1	10.10.1.90	03.10.2007 11:51:04
✓ 00:0b:c2:30:2b:d5	CPE1	10.10.1.100	03.10.2007 11:47:08

Figure 8: Static leases list, showing date and time of the recently configured nodes

5 Providing an IP Address

This section describes how to assign an IP address to the modem, without actually configuring the modem. As soon as the modem has an IP address, its web interface can be accessed via any web browser.

We will use the HaneWin DHCP server to provide a dynamic IP to the modem. Follow these steps to configure a dynamic range of IP leases (see figure 9):

1. Start the HaneWin DHCP server
2. Go to **Options > Default Client Profile**
3. In the “**Basic Profile**” tab, select under “**Profile for**” “**Interface IP**” and also select the corresponding address.
4. Input a range for dynamic IP addresses, in the fields “**from**” and “**until**”
5. Input a subnet mask that is compatible with your computer’s.
6. In the tab, “**Other**”, select option **120**. Then select type “**Binary**” and in the value field type “**0 0 0 0**” putting spaces between zeroes. Finally, click “**Add**”.

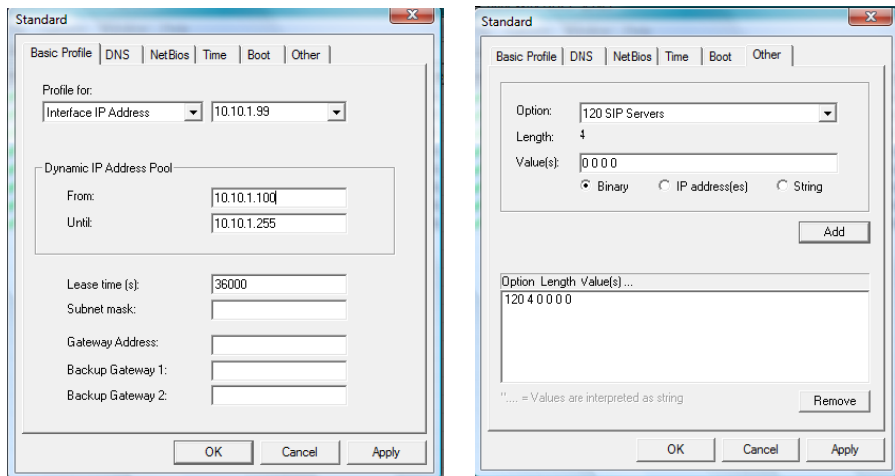


Figure 9: Configuration of the DHCP server for dynamic IP leases

Shortly after you click **OK**, the application will provide a dynamic IP address to the modem. This process can be displayed in Wireshark (see Figure 10).

The option 120 is used to disable PTPP in the DHCP response. This will prevent the modem from trying to obtain the management VLAN from another CableLAN modem. In some cases, the PTPP has been known to interfere with Windows XP network services.

Capturing from Atheros L1C PCI-E Ethernet Controller - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression: Clear Apply

No.	Time	Source	Destination	Protocol	Info
1385	609.404742	10.10.1.7	10.10.1.255	BROWSER	Browser Election Request
1386	609.410040	Corinex_Ob:65:a1	Spanning-tree-(for-br	STP	RST, Root = 36864/80/00:0b:c2:0b:65:a1 Cost =
1387	610.404760	10.10.1.7	10.10.1.255	BROWSER	Browser Election Request
1388	611.404775	10.10.1.7	10.10.1.255	BROWSER	Browser Election Request
1389	611.461966	0.0.0.0	255.255.255.255	DHCP	DHCP Discover - Transaction ID 0x8e22cb4d
1390	611.462268	10.10.1.7	255.255.255.255	DHCP	DHCP Offer - Transaction ID 0x8e22cb4d
1391	611.540376	Corinex_Ob:65:a1	Spanning-tree-(for-br	STP	RST, Root = 36864/80/00:0b:c2:0b:65:a1 Cost =
1392	612.404901	10.10.1.7	10.10.1.255	BROWSER	Browser Election Request
1393	612.443745	0.0.0.0	255.255.255.255	DHCP	DHCP Request - Transaction ID 0x8f22cb4d
1394	612.444011	10.10.1.7	255.255.255.255	DHCP	DHCP ACK - Transaction ID 0x8f22cb4d
1395	613.401957	10.10.1.7	10.10.1.255	NBNS	Registration NB WORKGROUP<id>
1396	613.444024	Corinex_Ob:65:a1	Broadcast	ARP	who has 10.10.1.7? Tell 10.10.1.18
1397	613.444044	AsustekC_51:f8:41	Corinex_Ob:65:a1	ARP	10.10.1.7 is at 48:5b:39:51:f8:41
1398	613.447404	10.10.1.18	10.10.1.7	TFTP	Read Request, File: cpe10_cx_conf_000, Transfer
1399	613.463861	10.10.1.7	10.10.1.18	TFTP	Write Packet, File: cpe10_cx_conf_000, Transfer
1400	613.545805	Corinex_Ob:65:a1	Spanning-tree-(for-br	STP	RST, Root = 36864/80/00:0b:c2:0b:65:a1 Cost =
1401	613.547703	10.10.1.18	10.10.1.7	TFTP	Acknowledgement, Block: 1
1402	614.154857	10.10.1.7	10.10.1.255	NBNS	Registration NB WORKGROUP<id>
1403	614.904882	10.10.1.7	10.10.1.255	NBNS	Registration NB WORKGROUP<id>
1404	615.654921	10.10.1.7	10.10.1.255	NBNS	Registration NB WORKGROUP<id>
1405	615.741057	Corinex_Ob:65:a1	Spanning-tree-(for-br	STP	RST, Root = 36864/80/00:0b:c2:0b:65:a1 Cost =
1406	616.405012	10.10.1.7	10.10.1.255	NBNS	Registration NB <01><02>_MSBROWSE_<02><01>
1407	617.154960	10.10.1.7	10.10.1.255	NBNS	Registration NB <01><02>_MSBROWSE_<02><01>
1408	617.740453	Corinex_Ob:65:a1	Spanning-tree-(for-br	STP	RST, Root = 36864/80/00:0b:c2:0b:65:a1 Cost =
1409	617.904976	10.10.1.7	10.10.1.255	NBNS	Registration NB <01><02>_MSBROWSE_<02><01>
1410	618.327936	AsustekC_51:f8:41	Corinex_Ob:65:a1	ARP	who has 10.10.1.18? Tell 10.10.1.7
1411	618.330275	Corinex_Ob:65:a1	AsustekC_51:f8:41	ARP	10.10.1.18 is at 00:0b:c2:0b:65:a1
1412	618.655045	10.10.1.7	10.10.1.255	NBNS	Registration NB <01><02>_MSBROWSE_<02><01>

Boot file name not given
 Magic cookie: (OK)
 Option: (t=53,l=1) DHCP Message Type = DHCP ACK
 Option: (t=54,l=4) DHCP Server Identifier = 10.10.1.7

0020 ff ff 00 43 00 44 02 2c 0d 4e 02 01 00 8f 22 ...C.D., .N..
 0030 cb 4d 00 00 80 00 00 00 00 00 0a 0a 01 12 0a 0a ..M.....
 0040 01 05 00 00 00 00 0b c2 0b 65 a1 00 00 00 00 e.....
 0050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Figure 10: DHCP configuration process

The DHCP process involves 4 steps: DHCP discovery, DHCP offer, DHCP request and DHCP acknowledgement. Discovery and request are issued by the modem, while offer and acknowledgement are issued by the client computer. Once the modem has an IP address, you should be able to ping it.

6 Writing an Auto-configuration File

There are hundreds of parameters that can be configured on a modem. These parameters are assigned in the configuration file, which is a human-readable text file. The configuration file can have any name (not including spaces) and any extension. The explanation of all possible parameters can be found in a separate document called Alma auto-configuration manual, that can be found on the Documentation CD.

For a basic network with one Master and several Slaves, only two configuration files are needed. The simplest configuration file for a Master is shown in figure 11. Figure 12 presents the simplest configuration file for a Slave.

```
# File: master.conf

# General parameters
GENERAL_USE_AUTOCONF = yes
GENERAL_MAC_MODE = ACCESS

# Configure the node as Master (HE)
GENERAL_TYPE = HE
GENERAL_FW_TYPE = LV
GENERAL_AUTHENTICATION = none
GENERAL_STP = yes

# Signal parameters
GENERAL_SIGNAL_MODE = 6
AGC_TX_GAIN = 0

# QoS Configuration
QOS_ENABLE = no

# vlan configuration
VLAN_ENABLE = no

# Ovlan configuration
OVLAN_ENABLE = no
```

```
# File: slave.conf

# General parameters
GENERAL_USE_AUTOCONF = yes
GENERAL_MAC_MODE = ACCESS

# Configure the node as Slave (CPE)
GENERAL_TYPE = CPE
GENERAL_FW_TYPE = LV
GENERAL_AUTHENTICATION = none
GENERAL_STP = yes

# Signal parameters
GENERAL_SIGNAL_MODE_LIST.1 = 6
GENERAL_SIGNAL_MODE_LIST.2 = 1
GENERAL_SIGNAL_MODE_LIST.3 = 2
GENERAL_SIGNAL_MODE_LIST.4 = 3
GENERAL_SIGNAL_MODE_LIST.5 = 13
AGC_TX_GAIN = 0

# QoS Configuration
QOS_ENABLE = no

# vlan configuration
VLAN_ENABLE = no

# Ovlan configuration
OVLAN_ENABLE = no
```

Figure 11: Simplest Master configuration Figure 12: Simplest Slave configuration

With these two files and some configuration on the DHCP / TFTP server, a simple one-level network can be built.

Note: The HD200 CableLAN Wall Mount can only be used as a slave (CPE, Customer Premises Equipment). In order to create a simple network as described above, another adapter from Corinex's portfolio has to be set as the master device.

7 Device specific parameters

This chapter describes autoconfiguration parameters and MIBs, that are specific for the Corinex HD200 CableLAN Wall Mount. The general parameters can be found in the remaining two documents: Alma auto-configuration and SNMP manual.

7.1 Enable/disable multicast aging

A new functionality was added in the firmware to enable/disable multicast aging. In the auto-configuration file it can be added as a parameter:

`MCAST_IGMP_AGING = [yes|no]`

Default value is “yes”.

7.2 Enable/disable interface EXT_A

It is possible to enable/disable the interface EXT_A (Ethernet) by using either an auto-configuration file or SNMP.

A new parameter can be added in the auto-configuration file in order to enable/disable the interface EXT_A:

`DISABLE_EXT_A = [yes|no]`

Default value is “no”.

Alternatively the interface EXT_A can be enabled or disabled using SNMP:

```
private(4)
  enterprises(1)
    ds2 (6798)
      wisconsin (3)
        corinexMAC (20)
          plCorinexDisExtA(2)
            plDisExtA (1)
              (0) INTEGER rw enable/disable interface EXT_A.
```

To find the current status, the following full SNMP get command can be used (where x.x.x.x is the IP address of the wall mount unit):

```
snmpget -v 2c -c public x.x.x.x .1.3.6.1.4.1.6798.3.20.2.1.0
```

The device will return:

```
iso.3.6.1.4.1.6798.3.20.2.1.0 = INTEGER: 0
```

- where 0 means that EXTA is enabled,
- where 1 means that EXTA is disabled

To enable EXTA, the following SNMP set command can be used:

```
snmpset -v 2c -c public x.x.x.x .1.3.6.1.4.1.6798.3.20.2.1.0 i 0
```

To disable EXTA, the following SNMP set command can be used (where x.x.x.x is the IP address of the wall mount unit):

```
snmpset -v 2c -c public x.x.x.x .1.3.6.1.4.1.6798.3.20.2.1.0 i 1
```

7.3 Show all MAC addresses for interface EXTA

It is possible to show all the MAC addresses on interface EXTA by using SNMP:

```
private(4)
enterprises(1)
ds2 (6798)
wisconsin (3)
corinexMAC (20)
plCorinexExtA (1)
pIMACEXTATable (1)
pIMACEXTAEntry (1)
    pIMACEXTAIndex (1) INTEGER      ro Index of the MACs.
    pIMACEXTAMAC (2) PhysAddress ro MAC addresses on port EXTA
```

To view the MAC addresses connected to EXTA, the following SNMP walk command can be used:

```
snmpwalk -v 2c -c public x.x.x.x .1.3.6.1.4.1.6798.3.20.1.1.1
```

The answer will be:

```
iso.3.6.1.4.1.6798.3.20.1.1.1.1.1 = INTEGER: 1
```

```
iso.3.6.1.4.1.6798.3.20.1.1.1.1.2 = INTEGER: 2
```

```
iso.3.6.1.4.1.6798.3.20.1.1.1.2.1 = Hex-STRING: 48 5B 39 51 F8 41
```

```
iso.3.6.1.4.1.6798.3.20.1.1.1.2.2 = Hex-STRING: 08 00 27 2E 3C B3
```

7.4 Node number

A new parameter `NODE_NUMBER` can be added in each configuration file. It allows the configuration of the node number of the adapter.

The parameter `NODE_NUMBER` has to be placed before the parameter `GENERAL_TYPE` in the configuration file.

A valid value for the parameter is 1 - 99. Factory default value is 0.

8 Troubleshooting Guide

The Corinex HD200 CableLAN Wall Mount has been designed to be a reliable and easy-to-use network connection device. Please refer to the list below to aid in troubleshooting.

The AP LED is off.

1. Make sure the power adapter is plugged directly into the electrical outlet, and that the outlet has power.
2. Try another outlet.

The VPI LED is red (low or no connectivity between adapters).

1. Make sure the coaxial cables on all adapters are properly installed (the connector on the coaxial cable must be firmly screwed to the F-type connector on the device).
2. Make sure the IEC connector is correctly connected to the coaxial outlet (if using a coaxial diplexer both the IEC connector and diplexer have to be correctly connected).
3. Try another coaxial cable and/or coaxial outlet.

The ETH LED is off.

1. Make sure the adapter is connected with an Ethernet enabled device with a Cat 5E/6 cable (with RJ-45 connectors). and both devices are powered on.

If the trouble persists, please visit www.corinex.com and go to the appropriate section for information about your product. There you will find news, manuals and software updates, as well as frequently asked questions (FAQ).

To avoid personal injury and damage to the system:

1. The principal method to disconnect the device completely from the electrical power network is to unplug the device from the electrical socket.
2. Never install the unit in wet areas or next to radiators/heaters.
3. Never use the unit outside.
4. Unplug the unit during severe storms.
5. Never open the equipment enclosure.

If after using the information sources listed above, you still are not able to find a solution to the problem you are experiencing, please send us a description of the problem via <http://www.corinex.com/support/technical-support>. We will need as much information as possible about your devices and your network setup in order

to best assist you. This includes:

- The types of devices installed, if possible with serial numbers and model number (printed on the safety labels)
- Indicate the devices which are having issues (specify all of the problems)
- If possible, send us a network diagram which includes the IP addresses for computers/router/access point/Corinex devices. This can speed up the problem estimation. If you use any non-Corinex equipment, please specify what kind. The drawing can be made in any graphics editor and exported to one of the standard graphic formats (JPEG, GIF). Or you can just draw it on paper and scan it
- Specify which operating systems are used with the devices in the network.
- Please send us the firmware version and configuration of the Corinex devices.