How to Find MAC Address

MAC Address

A Media Access Control address (MAC address) is a unique identifier assigned to network interfaces for communications on the physical network segment. MAC addresses are used for numerous network technologies and most IEEE 802 network technologies, including Ethernet. Logically, MAC addresses are used in the Media Access Control protocol sub-layer of the OSI reference model.

MAC addresses are most often assigned by the manufacturer of a network interface card (NIC) and are stored in its hardware, the card's read-only memory, or some other firmware mechanism. If assigned by the manufacturer, a MAC address usually encodes the manufacturer's registered identification number and may be referred to as the burned-in address. It may also be known as an Ethernet hardware address (EHA), hardware address or physical address. A network node may have multiple NICs and will then have one unique MAC address per NIC.

MAC addresses are formed according to the rules of one of three numbering name spaces managed by the Institute of Electrical and Electronics Engineers (IEEE): MAC-48, EUI-48, and EUI-64. The IEEE claims trademarks on the names EUI-48 and EUI-64, in which EUI is an acronym for Extended Unique Identifier.

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10/10/2012

What is a MAC Address?

A MAC address, or Media Access Control address, is a 48- or 64-bit address associated with a network adapter. While IP addresses are associated with software, MAC addresses are linked to the hardware of network adapters. For this reason, the MAC address is sometimes called the hardware address, the burned-in address (BIA), or the physical address. MAC addresses are expressed in hexadecimal notation in the following format: **01-23-45-67-89-AB**, in the case of a 48-bit address, or **01-23-45-67-89-AB-CD-EF**, in the case of a 64-bit address. Colons (:) are sometimes used instead of dashes (-).

MAC addresses are often considered permanent, but in some circumstances, they can be changed. There are two types of MAC addresses:

Universally Administered Address

The UAA, or Universally Administered Address, is the most commonly used type of MAC address. This address is assigned to the network adapter when it is manufactured. The first three octets define the manufacturer, while the second three octets vary and identify the individual adapter. All network adapter manufacturers have their own code, called the Organizationally Unique Identifier (OUI). For example, in the MAC address 00-14-22-01-23-45, the first three octets are 00-14-22. This is the OUI for Dell. Other common OUIs include 00-04-DC for Nortel, 00-40-96 for Cisco, and 00-30-BD for Belkin. Most large manufacturers of networking equipment have multiple OUIs.

Locally Administered Address

The LAA, or Locally Administered Address, is an address that changes an adapter's MAC address. The LAA is a type of administered MAC address, and it is possible to change the LAA of a network adapter to any address of allowed length. When the LAA is set, the network adapter uses the LAA as its MAC address. Otherwise, the network adapter uses the UAA as its MAC address. All devices on the same subnet must have different MAC addresses, however. MAC addresses are very useful in diagnosing network issues, such as duplicate IP addresses, so it is a good practice to allow devices to use their UAAs instead of assigning LAAs, unless there is a compelling reason to do so.

MAC addresses are useful for security purposes, as they are only rarely changed from the default. IP addresses can change dynamically, especially on networks using DHCP to assign IP addresses, so MAC addresses are often a more reliable way to identify senders and receivers of network traffic. On wireless networks, MAC address filtering is a common security measure to prevent unwanted network access. In MAC address filtering, a wireless router is configured to accept traffic from certain MAC addresses. In this way, as whitelisted devices are assigned new IP addresses through DHCP, they retain their ability to communicate on the network. Any intruder attempting to impersonate a valid user on the network by masquerading with a faked IP address will not be able to do so because the computer's MAC address will not match any of those in the whitelist. This security method is only minimally successful, however, as a determined intruder can fake a MAC address almost as easily as an IP address.

MAC address of your computer

Windows 2000 / XP / 2003 / 2008 / Vista / Windows 7

1. Open a Command Prompt window by clicking the **Start** button, clicking **Programs** or **All Programs**, clicking**Accessories**, and then clicking **Command Prompt**.
2. In the Command Prompt window type **ipconfig /all**
3. Find the **Physical Address** line under the section that describes your network adapter. MAC address is listed as six groups of two hexadecimal digits, separated by hyphens (-).

```
C:\Documents and Settings\admin>ipconfig /all

Windows IP Configuration
   Host Name . . . . . . . . . . . . : mypc
   Primary Dns Suffix  . . . . . . . : domain.local
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No
   DNS Suffix Search List. . . . . . : domain.local

Ethernet adapter Wireless Network Connection:
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel(R) PRO/Wireless 3945ABG Network
Connection
   Physical Address. . . . . . . . . : 00-13-02-80-92-7A
   Dhcp Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   IP Address. . . . . . . . . . . . : 192.168.0.3
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.0.1
   DHCP Server . . . . . . . . . . . : 192.168.0.1
   DNS Servers . . . . . . . . . . . : 192.168.0.1
   Lease Obtained. . . . . . . . . . : Sunday, February 15, 2008 3:19:03 PM
   Lease Expires . . . . . . . . . . : Friday, February 20, 2008 3:19:03 PM

Ethernet adapter Local Area Connection:
   Media State . . . . . . . . . . . : Media disconnected
   Description . . . . . . . . . . . : Intel(R) PRO/1000 PL Network Connection
   Physical Address. . . . . . . . . : 00-0E-7B-89-C4-E0

Ethernet adapter Local Area Connection 2:
   Media State . . . . . . . . . . . : Media disconnected
   Description . . . . . . . . . . . : Bluetooth Personal Area Network from
TOSHIBA
   Physical Address. . . . . . . . . : 00-03-7A-F3-6C-E7
```

Windows Vista / Windows 7 / Windows 2008 (Full Installation only)

1. Open a Command Prompt window by clicking the **Start** button, clicking **Programs** or **All Programs**, clicking **Accessories**, and then clicking **Command Prompt**.
2. In the Command Prompt window type **getmac**
3. MAC address is listed as six groups of two hexadecimal digits, separated by hyphens (-) in the beginning of the line.

```
C:\Users\admin>getmac
Physical Address      Transport Name
==================    =========================================================
00-21-85-0C-52-A3     \Device\Tcpip_{4B89E525-B2FE-4E02-B769-D671265BBDE6}
```

Note:
 If your computer has more than one network adapter use **getmac /v /fo list** command.

Windows 8

1. Go to the Desktop.
2. Open a Windows Explorer window by clicking on the Windows Explorer icon on the taskbar.
3. Click on the small Folder icon in the Address bar, type **cmd** and then press Enter. New Command Prompt window will be opened.
4. In the Command Prompt window type **getmac /v /fo list**
5. Find the section that describes the adapter you want to find MAC address of. The **Physical Address** line shows MAC address as six groups of two hexadecimal digits, separated by hyphens (-).

```
C:\Users\admin>getmac /v /fo list

Connection Name: Local Area Connection
Network Adapter: NVIDIA nForce 10/100/1000 Mbps Ethernet
Physical Address: 00-26-18-4F-55-B7
Transport Name: \Device\Tcpip_{CE306346-5423-4218-8F88-BDBA73D04924}

Connection Name: VirtualBox Host-Only Network
Network Adapter: VirtualBox Host-Only Ethernet Adapter
Physical Address: 08-00-27-00-66-7F
Transport Name: \Device\Tcpip_{7AF27739-CB07-4B45-8BD4-CE809F5B9F1B}
```

LINUX

1. Open a terminal or console window.
2. In the window type **ifconfig**
3. MAC address is marked as **HWaddr** and listed as six groups of two hexadecimal digits, separated by colon (:).

```
root@host:~# ifconfig
eth1 Link encap:Ethernet HWaddr 00:10:5A:0D:5A:A5
    inet addr:192.168.0.2 Bcast:192.168.0.255 Mask:255.255.255.0
    inet6 addr: fe80::210:5aff:f00d:5bb5/64 Scope:Link
    UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
    RX packets:1206866 errors:54423 dropped:0 overruns:0 frame:81536
    TX packets:941228 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:1000
    RX bytes:332783971 (317.3 MiB) TX bytes:214601237 (204.6 MiB)
    Interrupt:10 Base address:0xa000

lo Link encap:Local Loopback
    inet addr:127.0.0.1 Mask:255.0.0.0
    inet6 addr: ::1/128 Scope:Host
    UP LOOPBACK RUNNING MTU:16436 Metric:1
    RX packets:1573 errors:0 dropped:0 overruns:0 frame:0
    TX packets:1573 errors:0 dropped:0 overruns:0 carrier:0
    collisions:0 txqueuelen:0
    RX bytes:99765 (97.4 KiB) TX bytes:99765 (97.4 KiB)
```

Apple Mac OS X 10.2-10.6

1. Launch Finder, open Applications folder, then open Utilities folder and start Terminal.
2. In the Terminal window type **ifconfig**
3. Find the **ether** line under the section that describes your network adapter. MAC address is listed as six groups of two hexadecimal digits, separated by by colon (:).

```
host:~ user$ ifconfig
lo0: flags=8049<UP,LOOPBACK,RUNNING,MULTICAST> mtu 16384
    inet6 fe80::1%lo0 prefixlen 64 scopeid 0x1
    inet 127.0.0.1 netmask 0xff000000
    inet6 ::1 prefixlen 128
gif0: flags=8010<POINTOPOINT,MULTICAST> mtu 1280
stf0: flags=0<> mtu 1280
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    ether 00:25:bc:de:96:74
    media: autoselect status: inactive
    supported media: none autoselect 10baseT/UTP <half-duplex> 10baseT/UTP <full-
```

```
duplex> 10baseT/UTP <full-duplex,flow-control> 10baseT/UTP <full-duplex,hw-
loopback> 100baseTX <half-duplex> 100baseTX <full-duplex> 100baseTX <full-
duplex,flow-control> 100baseTX <full-duplex,hw-loopback> 1000baseT <full-duplex>
1000baseT <full-duplex,flow-control> 1000baseT <full-duplex,hw-loopback>
fw0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 4078
    lladdr 00:25:bc:ff:fe:de:98:64
    media: autoselect <full-duplex> status: inactive
    supported media: autoselect <full-duplex>
en1: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    inet6 fe80::225:ff:fe4e:a73d%en1 prefixlen 64 scopeid 0x6
    inet 192.168.0.101 netmask 0xffffff00 broadcast 192.168.0.255
    ether 00:25:00:4e:a8:39
    media: autoselect status: active
    supported media: autoselect
```

MAC address of a system connected to the same subnet as your computer

Windows 2000 / XP / 2003 / 2008 / Vista / Windows 7

1. Open a Command Prompt window by clicking the **Start** button, clicking **Programs** or **All Programs**, clicking**Accessories**, and then clicking **Command Prompt**.
2. In the Command Prompt window type **ping** <remote_system>
   Replace <remote_system> with an IP address of the system you want to find MAC address.
3. In the same Command Prompt window type **arp -a**
   MAC address is listed in the **Physical Address** column as six groups of two hexadecimal digits, separated by hyphens (-).

```
C:\Documents and Settings\User>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time<1ms TTL=127
Reply from 192.168.0.1: bytes=32 time<1ms TTL=127
Reply from 192.168.0.1: bytes=32 time<1ms TTL=127
Reply from 192.168.0.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\User>arp -a

Interface: 192.168.0.101 --- 0x2
Internet Address  Physical Address  Type
192.168.0.1       00-17-9a-46-7c-a3 dynamic
```

LINUX

1. Open a terminal or console window.
2. In the window type **ping -c1** <remote_system>
   Replace <remote_system> with an IP address of the system you want to find MAC address.
3. In the same window type **arp**
   MAC address is listed in the **HWaddress** column as six groups of two hexadecimal digits, separated by colon (:).

```
root@host:~# ping -c1 192.168.0.1
PING 192.168.0.1 (192.168.0.1) 56(84) bytes of data.
64 bytes from 192.168.0.1: icmp_seq=1 ttl=127 time=4.22 ms

--- 192.168.0.1 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 4.223/4.223/4.223/0.000 ms
root@host:~# arp
Address     HWtype HWaddress           Flags Mask Iface
192.168.0.1 ether 00:17:9A:46:7C:A3 C           eth1
```

MAC address of your Smart Phone / Mobile device

iPhone / iPod Touch

1. Tap **Settings**. Select **General** and then **About**.
2. Scroll down until you find **Wi-Fi Address** line. **Wi-Fi Address** line shows MAC address as six groups of two hexadecimal digits, separated by colon (:).

iPad

1. Tap **Settings**. Select **General** on the left side and then **About** on the right.
2. Find the **Wi-Fi Address** line. **Wi-Fi Address** line shows MAC address as six groups of two hexadecimal digits, separated by colon (:).

Procedure to find the Mac address in Android Mobile Phone:

- First up, you will first need to tap on the Menu Key and then just go to **Settings**.

- Now just tap on the **Wireless & networks** as shown in the below screen shot.
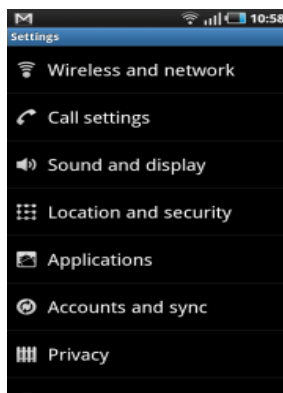
- Now just tap on the **Wi-Fi Settings** as shown below. Now, in the advance settings, you can see that the MAC Address for your console will be displayed.


That's it, so in this way you can easily find the Mac address of the WiFi on your Android mobile phone very easily by following the above procedure. Please note that this tip will work in every android phone.

Procedure to find the Mac address in Symbian S60 Based Mobile Phone:

Sometimes you need to know your device's MAC address, e.g. to add it to the list of devices allowed to connect to your wireless router.

To check MAC address of your S60 phone's WLAN adapter simply type the following code on the standby screen:

*#62209526#
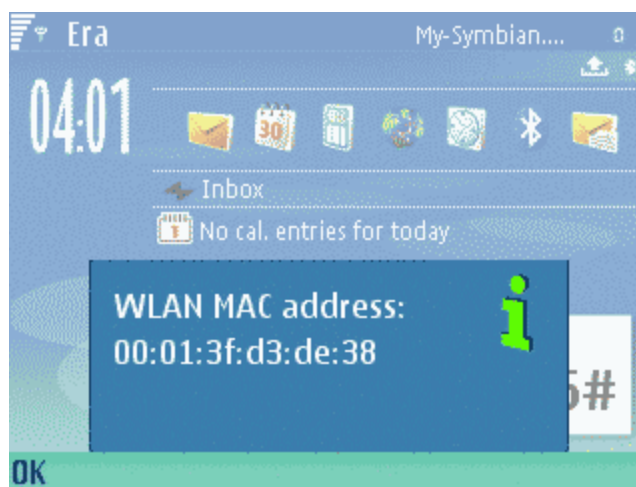
Note: this code only works on phones equipped with WLAN adapter.

Procedure to find the Mac address in Windows Based Mobile Phone:

1. Click on the Windows Mobile (Windows Phone) "Start" button.

2. Click on the "Settings" menu.

3. Click on the "Connections" tab, which is located at the bottom.

4. Click on the "Wireless LAN" or "WLAN Utility" icon, depending on the mobile operating system version.

5. Click on the "Advanced" tab in the "Wireless LAN" screen. Locate "MAC Address" in the "Advanced" tab.

"Please go through the Device Manual or contact the manufacturer support for more information if in case of those devices / operating systems not listed above"

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