Canopy® Wireless Broadband Platform

MOTOROLA

Frequently Asked Questions

Software Ordering and License Fulfillment Process

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CONTENTS

GENERAL SOFTWARE ORDERING PROCESS 2

USING THE LICENSING PORTAL 5

LICENSE MANAGERS AND MAC ADDRESSES 5

ORDERING AND UPGRADING TO PRIZM 8

CANOPY LITE THROUGHPUT UPGRADES 9

GETTING ADDITIONAL HELP WHEN THINGS GO WRONG 11

FOR MORE INFORMATION 12

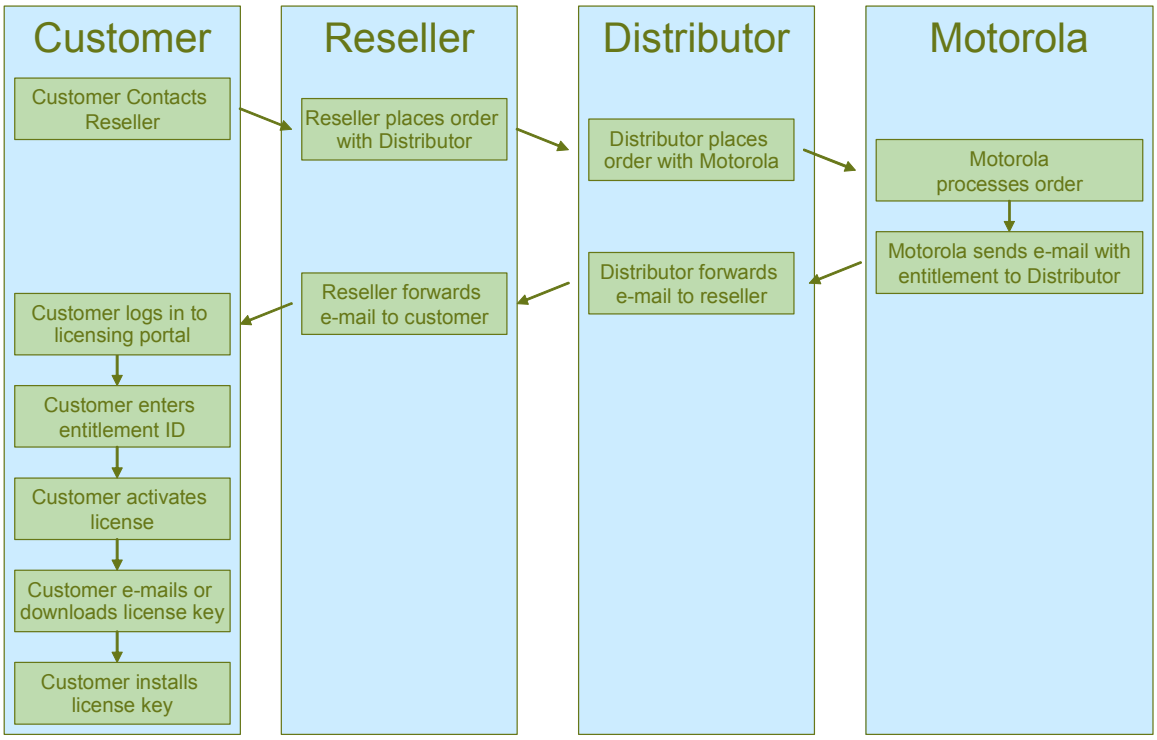
GENERAL SOFTWARE ORDERING PROCESS

What are the high-level steps in ordering software from Motorola?

The ordering process consists of the following 3 steps:

1. Place an order with your reseller with the part number and quantity of the software licenses you would like to purchase.
2. After your order is processed, you will receive an e-mail containing an entitlement ID.
3. Whenever it is convenient for you, login to Motorola's licensing portal (http://licensing.motorola.com) and using the entitlement ID and the MAC address of your license manager collect the software license key.

The entire process is summarized in the following flowchart:



Which products does this process refer to?

The software ordering process described in this document refers to the following products:

Floating Licenses:

- Prizm servers
- EMS license packs
- BAM license packs
- Canopy Lite SM throughput upgrades
- Canopy Advantage SM upgrades

Fixed Licenses:

- Canopy Advantage AP upgrades
- Canopy Advantage SM upgrades

What is the difference between fixed and floating licenses?

Floating licenses are managed with the license manager component of the Prizm element management system. While floating licenses are locked to the license manager server hardware they can 'float' to different radios or servers as needed. This provides much higher flexibility to network operators because licenses can be recovered and re-used in the case of radio hardware failure or customer churn.

Fixed license are permanently associated with a specific piece of hardware and can't be transferred.

Note that the license fulfillment process is slightly different for the fixed licenses used to upgrade Canopy Advantage APs. With the Advantage AP upgrades you will use the MAC address of the AP itself to generate the license. With all other products you will use the MAC address of the license manager hardware to generate the license.

What is the licensing portal?

The licensing portal is a self-service website used by Motorola Canopy customers to activate and collect software licenses using entitlement codes. These entitlement IDs are delivered in response to software orders. The licensing portal is located at: http://licensing.motorola.com.

What is an entitlement ID?

An entitlement ID is a unique string of characters that references an order for a particular set of software. The entitlement ID can be activated into a software license key at the licensing portal. Note that the entitlement key is only valid until activated the first time. Therefore it should be kept in a safe place. As an example, an entitlement id looks something like this:

Entitlement ID: **D9F76BE0-20B2-11DB-ABE0-A478192F6349**

What is a license key?

A license key is used by Prizm's license manager server to authorize a copy of software to run on a particular network. The license manager 'checks out' licenses and limits the number of copies that can concurrently run at the same time. The license key itself is a text file that is installed on the license manager server. As an example, a license key looks like this:

```
SERVER this_host 001422b12345 27000
VENDOR motocnpy
# License ID: 1827
# Customer Information: Motorola : Bruce Collins
INCREMENT PrizmEMSServer motocnpy 1.0 30-apr-2006 uncounted \
        HOSTID=001422b12345 ISSUED=02-Feb-2006 SN=CollinsEvalFromWeb \
        SIGN="014D 4966 3350 3B5E E295 D36C 7AFD 3335 45EC C74D 8400 \
        9B1D 749B 2D80 8055 1429 7843 23E3 95FC 718A 3F79"
INCREMENT PrizmElementPacks motocnpy 1.0 30-apr-2006 uncounted \
        HOSTID=001422b12345 ISSUED=02-Feb-2006 SN=CollinsEvalFromWeb \
        SIGN="02D0 434E C145 2023 7AA3 B7A1 0A39 1617 2D4D 27CA 7800 \
7E36 3042 FBCC 2E0D 1557 FDF8 7039 7A68 81F9 176B"
```

I want to order software, but I do not yet have my server hardware selected. Can I still order the software?

Yes. You can go ahead and order the software by contacting your reseller. After your order is processed, you will receive an e-mail with an entitlement code. When you have selected the server where you will run the license management software, you can login to the licensing portal and collect the software license using the standard process.

USING THE LICENSING PORTAL

Where can I find the licensing portal?

Using any standard web browser, visit: http://licensing.motorola.com. The licensing portal is available 24 hours a day to support activation of software license keys using entitlements.

Do I need a user account on the licensing portal?

The first time you visit the portal you will create a user account. You will need an entitlement code to create your initial user account. During this initial visit, a temporary password will be created which will be e-mailed to you. On future visits to the licensing portal, you will login using your userid and password.

I just activated an entitlement ID and realized that I used the wrong MAC address. Can I switch to a different MAC?

Each entitlement ID can only be activated once. After it has been activated, it will be necessary to request a license transfer by contacting technical support.

LICENSE MANAGERS AND MAC ADDRESSES

What is a license manager?

The license manager is a copy protection software application that runs in a network and provides authorization for individual pieces of software or software features to run in that network. When a software element starts up in the network it requests permission to run from the license manager. The license manager determines if there are any copies of that particular software available. If so, the license manager checks out a license to run that software.

Where do I get the license manager? How much does it cost?

The license manager is available at no charge from the Canopy website.

How is a license manager used with the Prizm element management system?

The license manager is always used in conjunction with the Prizm element management system. When a copy protected piece of software such as an EMS license for Prizm or a Canopy Lite SM throughput upgrade is needed, Prizm checks with the license manager to see if there is a license available before taking the appropriate action.

Can I use the license manager without Prizm?

No. Prizm manages the distribution of software features. The license manager is simply an external tool that is used to support this functionality in Prizm.

What is required on Prizm to manage Canopy Lite SM or Canopy Advantage SM upgrade licenses?

Prizm is structured as a server license plus individual AP licenses. To manage throughput upgrades such as Lite SM or Advantage SM licenses, each AP must have a license to be managed by Prizm.

What is redundant license management?

The license manager software can run in two configurations. The first and most common is single server mode. In single server mode, the license manager is typically installed on the same server hardware as the Prizm server.

Alternatively, the license manager can run in triple redundant mode which provides higher availability. In redundant mode, the license manager must run on three independent hardware servers. If any of these three servers become unavailable, license management will continue to work as usual. Note that all software licenses in a network must be

Why would I need 3 MAC addresses instead of 1?

The license manager software requires either a single server or three servers. There is no option to run the license manager on just 2 machines for redundancy. In redundant operation, each software license must reference the MAC addresses of all three machines.

I need to move the license manager software to new hardware server. How do I transfer the license keys?

Whether the hardware server running the license manager software has failed and needs replacing or you are simply planning to upgrade or migrate to different hardware, you will need to contact technical support and request a license transfer form. This transfer form will then need to be completed and returned to technical support.

Why is the MAC address of the license manager required to activate a software license key?

Motorola software applications use an industry standard technique for copy protection which locks a software license or licenses to a particular license management server. The software license that Motorola provides uses a highly secure encryption of the MAC address along with other information such as the number of licenses, the version of software, and key dates. Since the license file can't be created without a MAC address, the licensing portal can’t generate the software license until the MAC address is available.

What is a MAC (Media Access Control) address?

Every Ethernet port on every networking device in the world is assigned a unique MAC address at the time of manufacture. In networking applications, the MAC address is used to identify network elements on a given segment and allow them to communicate with each other. It is most typically used in Layer 2 protocols within the OSI seven layer network models. Since a MAC address is unique to each network element, many copy protection techniques also use this as a unique serial number to identify whether the software is being run on the machine or machines it is allowed to be run on.

How do I locate the MAC address on my license server?

Once you've selected the server to run the license management software, you will need to collect the MAC address in order to get the necessary software license key. In some cases, the MAC address will be printed on a label next to the Ethernet port and can be read directly. If the MAC address isn't on a label, the method used to collect it will be different depending on the operating environment that the server is running. If your hardware has multiple addresses or you aren't sure, contact your network administrator to find this information.

Linux Systems

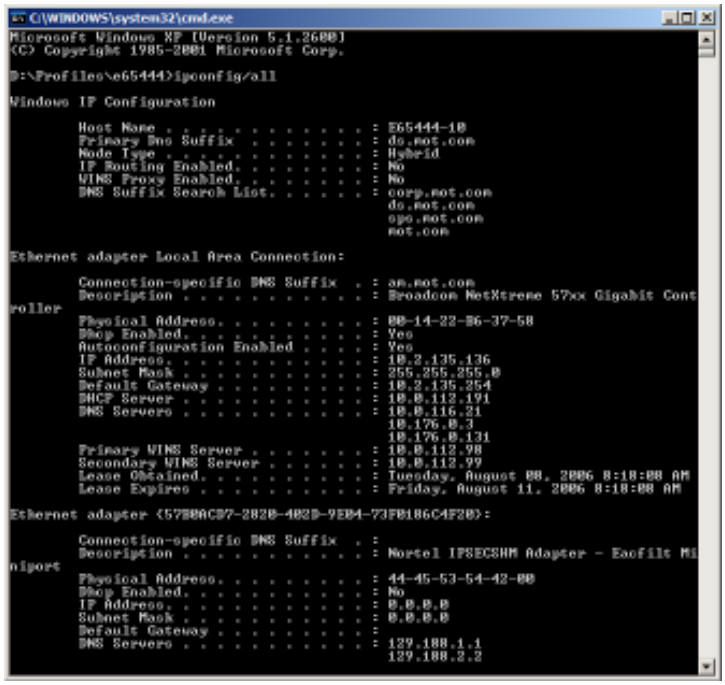
On **Linux** systems, the Ethernet device for license management is typically called eth0. In order to find the MAC address of the Ethernet device, you must first become root, through the use of *su*. Then, type *ifconfig -a* and look up the relevant info. For example:

```
# ifconfig -a
eth0 Link encap:Ethernet HWaddr 00:60:08:C:99:AA
       inet addr:131.225.84.67 Bcast:131.225.87.255 Mask:255.255.248.0
       UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
       RX packets:15647904 errors:0 dropped:0 overruns:0
       TX packets:69559 errors:0 dropped:0 overruns:0
       Interrupt:10 Base address:0x30
```

The MAC address is the HWaddr listed on the first line. In the case of this machine, it is 00:60:08:C4:99:AA.

Windows Systems

On **Windows** systems open a command prompt window (click *Start*, then *Run*, then type *cmd* in the text box. Type in ipconfig/all at the command prompt. The 12-digit hexadecimal number labeled 'Physical Address' is the same as the MAC address.



ORDERING AND UPGRADING TO PRIZM

What is Prizm?

Prizm is the element management platform for the MOTOwi4™ Canopy®, PTP, and Powerline product lines

How do I order Prizm?

Prizm is structured as a server license plus a license feature packs for each AP, Powerline MU gateway or PTP link. After you've determined how many servers and license packs are needed in your network, contact your reseller to place an order. After your order is processed you will receive an entitlement ID in the mail.

I'm a current Prizm 2.x customer. When should I upgrade to Prizm 3.0?

Motorola strongly encourages customers to perform this upgrade by September 30th, 2007. Customers requiring technical support will be encouraged to upgrade to Prizm 3.0 as it is the latest release of the functionality and corrects many defects identified in previous releases. Current Prizm 2.x customers can upgrade to Prizm 3.0 free of charge.

What are the steps for upgrading to Prizm 3.0 for existing Prizm 2.x customers?

There are three easy steps to upgrade to Prizm 2.0.

1. Collect the Prizm 3.0 server license key either via the e-mail invitation sent to all Prizm 2.x customers or by visiting the Prizm order authorization page at www.motorola.com/canopy and entering your contact and license manager MAC address information.
   (These instructions and the downloaded key assume that the hardware running the license manager software is remaining the same. If the hardware platform is changing, contact technical support to request a migration of all software keys to a new hardware platform.)
2. Download Prizm 3.0 from the Canopy website at:
   http://motorola.canopywireless.com/support/software/
3. Follow the upgrade instructions in the Prizm 3.0 release notes and user guide to run the upgrade process to ensure that all current data and configuration information is preserved as the system is upgraded to Prizm 3.0.

CANOPY LITE THROUGHPUT UPGRADES

Canopy Lite SM throughput upgrades are managed and deployed with the Prizm element management system. Following are several frequently asked questions about how the throughput upgrades are used in conjunction with Prizm.

Do floating license keys require Prizm?

Yes. Prizm is required to deploy Canopy Lite SM throughput upgrades.

Can throughput upgrades be reused by moving them from one SM to another?

Yes. When a subscriber moves, downgrades, or cancels their service, the throughput upgrade can be moved to another SM preserving the software investment. This is why they are sometimes referred to as floating software licenses.

How are the throughput upgrades used by Prizm?

Prizm checks out a throughput upgrade when an SM registers to an AP and is authenticated by the bandwidth and authentication management functionality in Prizm. A license will only be checked out if the SM is assigned to a bandwidth that requires the throughput upgrade.

Can Prizm bandwidth service plans be configured to check out a throughput upgrade based on the desired tier of service?

Yes. The bandwidth service plan feature of Prizm gives you simplified control over which SMs in your network you will allow to use throughput upgrades. A license is only checked out if the SM needs a higher speed to perform at the requested bandwidth.

Can multiple Canopy Lite SM throughput upgrades be applied to an SM?

No. Each key is an upgrade from the base 512kbps Canopy Lite SM. For example, if a floating key is used to upgrade a 512kbps Canopy Lite SM to 1Mbps and in the future needs to be upgraded to 2Mbps, the 1Mbps upgrade is replaced with 2Mbps throughput upgrade. With that said, the 1Mbps throughput upgrade can then be reused to upgrade another Lite SM to 1Mbps.

How do throughput upgrades work when the Lite SM goes offline? Does the license go back to the license pool or not?

Yes, it goes back to the pool, though depending on how the SM goes offline, it could take a little time for this to occur. Generally we leverage a trap coming off the AP that indicates a registration of an SM was lost. If you don't have Traps enabled on the AP and/or you have trap routing issues (such as not having the Prizm server IP set as a trap handler address in the AP), then the only way Prizm can detect this is through failed polling intervals. So, if you are seeing significant delays in this, check the settings in your network.

Do I have to have Prizm Authentication enabled on the AP in order to use throughput upgrades?

Yes. Note that Canopy Lite throughput upgrades require authentication to be used, so if you didn't have authentication enabled the previous statements about SM bandwidth licenses aren't

valid and you wouldn't see any licenses checked out. To make sure this all works you will need to make sure:

- AP has the Prizm server IP in the Authentication Server IP address list
- You have an AP Authentication Access floating license available for use by the AP (should see a count greater than one for this type of license in the licensing info of Prizm).

What needs to be configured at the AP and on Prizm in order for new SMs to associate to an AP whose authentication is enabled?

You need to add the new SM into Prizm as a Provisioned item. Provisioned means it is allowed into the network. An SM doesn't have to be on the network or fully managed to be added to a Provisioned status. You can also indicate that such an item should be setup for full management once it does come on the network. See the Prizm User Guide for more details.

Are the keys locked to my Prizm Server?

No. They are locked to your license manager, which means they can be used by any Prizm server or redundant BAM server on your network

Can I move my throughput upgrade keys to a different license server after I purchase them?

Yes. Contact Canopy Technical Support to understand the license transfer process.

GETTING ADDITIONAL HELP WHEN THINGS GO WRONG

General support information for software ordering.

Depending on what kind of problem you are experiencing, you can get help in a variety of ways. In general, the following support is available:

Type of Question	Who should I contact?
Questions on the status of an order	Contact your reseller.
Questions about using the licensing portal (after you've received the entitlement ID)	Contact the license portal support team at: SDSCNPY@email.mot.com . Response time will typically average one business day as this e-mail support is available 9AM to 4PM M-F Central Time Zone.
Questions about installing your license key (after you've activated and collected the key(s) from the licensing portal.)	Contact technical support at: +1 888-605-2552 or +1 217-824-9742 or via email at: technical-support@canopywireless.com

For more specific scenarios, please see the questions below.

Who can I contact to check on the status of my software order?

You should contact your reseller.

What if I haven't received the e-mail with my entitlement ID?

If you haven't received the entitlement ID in e-mail, you should follow up with your reseller to determine the status of your order. In some cases, a physical print out of the entitlement ID will be delivered instead based on certain country's import requirements.

What if I lose my entitlement ID?

The entitlement ID is a valuable piece of data that proves your purchase of a particular software license. The license portal will only activate this entitlement ID once. If you've lost the entitlement key, please contact your reseller about getting the ID re-issued.

What if I forget my userid or password to the licensing portal?

The licensing portal has a feature that allows each user to generate a new password. This feature requires that you set up the secret question and answer when you first establish your password based on the temporary password assigned during initial account creation.

If you still can't get the password using the password recovery feature, you can send a request to SDSCNPY@email.mot.com to have your password reset.

What if I lose the software license key after I've activated it?

With the licensing portal, you can simply login to your user account and collect another copy of the key. You can either save the key as a file or have it sent to an e-mail address.

The key is installing fine, but I think the contents are wrong, i.e. the wrong quantities or parts. Who should I call?

If you believe the license key is incorrect, you should contact your reseller for additional help on confirming the order.

What if I'm having trouble installing the software key?

For installation and technical support issues with the software product that you purchased, you should contact technical support at:

+1 888-605-2552 or +1 217-824-9742

or via email at: technical-support@canopywireless.com

Please note that Canopy technical support cannot address order issues or issues with the way in which license keys are generated. Technical support cannot generate or provide status on orders or the location of entitlement codes.

FOR MORE INFORMATION

How do I get more information?

More information about Motorola Canopy software including release notes and user guides are available on the Canopy website at: http://www.motorola.com/canopy

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