



**Killer Network Interface Card**  
**Models M1 / K1**  
**User's Guide**

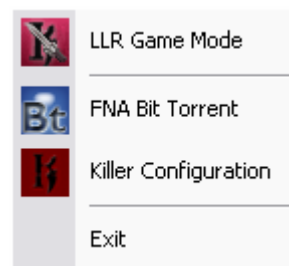


## Quick Info:

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The Killer NIC installs several pieces of software to help configure and maintain your Killer NIC.

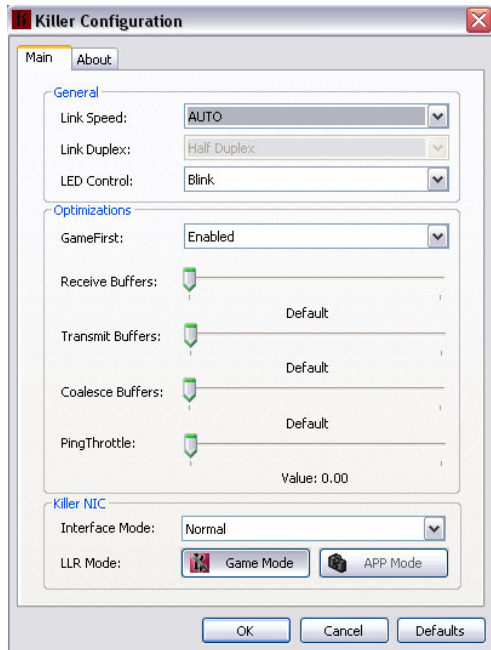
- 1.) **KillerTray.exe** - a system tray ICON and program that is vital to keeping your Killer up to date.
- 2.) Right-click the tray icon to access your Killer NIC's features.
  - a. Checks for updates automatically (no need to click).
  - b. Click on Killer Config to run the full config program
  - c. Click on LLR Game Mode or LLR App Mode to change the state of LLR.
  - d. Click any of the installed Flexible Network Applications (FNApps) you have installed, such as FNA Torrent or FNA Firewall.



- 3.) **KillerConfig.exe** – a Configuration program accessible from the Start Menu (under Bigfoot Networks) or via the KillerTray.exe. This program allows the user to set various options (including some very advanced configuration options) that are all explained in detail later in this document.
- 4.) **PortManager.exe** – this is a background program that does NOTHING except handle FNA Port requests. It's cpu utilization will be 0% except when you first start an FNApp where it will be 1% or less.

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## What is the difference between LLR Game Mode and App Mode?:

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LLR stands for Lag and Latency Reduction. When LLR is configured to run in App Mode, your Killer is functioning as an optimized, but normal, NIC. App Mode is a ‘fail-safe’ mode that should only be used to run / troubleshoot any application compatibility that may occur, particularly with network-stack integrated programs such as VPN clients.

When LLR is configured to run in Game Mode, your NIC is optimized for gaming! LLR Game Mode, enables features such as MaxFPS™ and UltimatePing™.

Note: Other network adapters will not function properly with LLR Game Mode. It is recommended that you disable all other network adapters if you wish to use LLR Game Mode.

## KillerConfig.exe “Normal Mode”

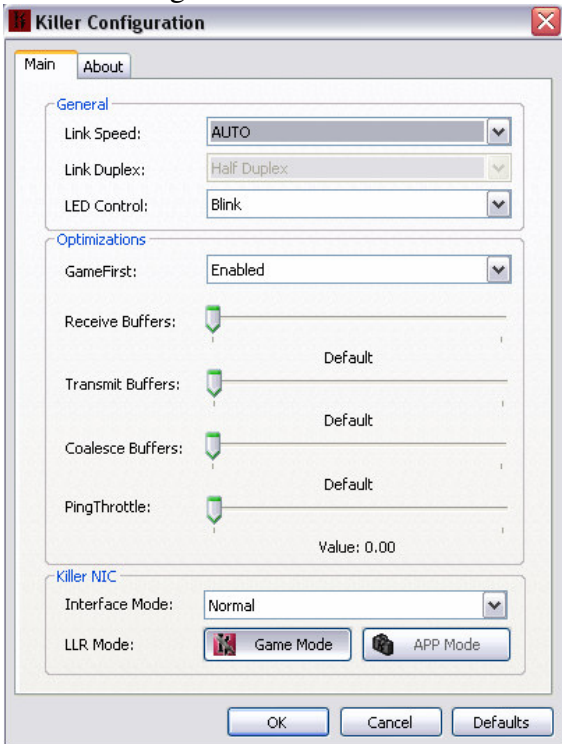
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The KillerConfig.exe program allows the user to change tons of settings on The Killer NIC. KillerConfig.exe has 2 modes: normal and advanced. It is recommended that users only use the Normal Mode unless they are extremely computer and network savvy.



Note: The ‘defaults’ button will reset the Killer NIC Control Panel to factory defaults.

The following is a screenshot of “Normal Mode” (and then an explanation of every setting):



### Link Speed:

Auto=auto-negotiates the fastest speed on the link. This is the recommended setting.  
1000=REQUIRES the link to support Gigabit or the NIC won’t work (e.g. forces gigabit).  
100=REQUIRES the link to support 100Megabit or the NIC won’t work (e.g. forces 100Megabit).  
10=REQUIRES the link to support 10Megabit or the NIC won’t work (e.g. forces 10Megabit).

**Link Duplex:** This setting only matters if 1000, 100, or 10 is selected above.

Full Duplex=Forces the link to Full Duplex only (e.g. the Ethernet cable is DEDICATED and TX and RX are not shared: and TX can happen at the same time as RX).

Half-Duplex=Forces the link to Half Duplex only (the TX and RX cannot happen at the same time, and the signal may be shared).



### **LED Control:**

Blink=the normal custom heartbeat pattern that varies based on network speed.

Steady=the LEDs on the card are on all the time.

Off=the LEDs on the card are turned off.

### **GameFirst:**

Enabled=turns on Gaming Packet Prioritization for both inbound and outbound game traffic.

Disabled=turns off packet prioritization.

**Receive Buffers:** Amount of Receive buffers (and memory footprint) in excess of normal to add to focus more on networking performance. (Normal+1% is default and has been optimized for good overall performance/memory footprint balance).

**Transmit Buffers:** Amount of Transmit buffers (and memory footprint) in excess of normal to focus more on networking performance. (Normal+1% is default and has been optimized for good overall performance/memory footprint balance)

**Coalesce Buffers:** Amount of Coalesce buffers (and memory footprint) in excess of normal to add to focus more on networking performance. (Normal+1% is default and has been optimized for good overall performance/memory footprint balance)

**Ping Throttle:** Allows users to handicap their ping: *increasing the latency* by the indicated amount. DEFAULT(normal is 0)::: WARNING: increasing the ping of the Killer WILL decrease network performance (in some online games, increasing the ping using this setting has a bigger effect than intended: the user should 'tweak' their ping control for in-game ping desired.

### **LLR Game Mode / App Mode:**

LLR stands for Lag and Latency Reduction. When LLR is configured to run in App Mode, your Killer is functioning as an optimized, but normal, NIC. App Mode is a 'fail-safe' mode that should only be used to run / troubleshoot any application compatibility that may occur, particularly with network-stack integrated programs such as VPN clients.

When LLR is configured to run in Game Mode, your NIC is optimized for gaming! LLR Game Mode, enables features such as MaxFPS™ and UltimatePing™.

Note: Other network adapters will not function properly with LLR Game Mode. It is recommended that you disable all other network adapters if you wish to use LLR Game Mode.



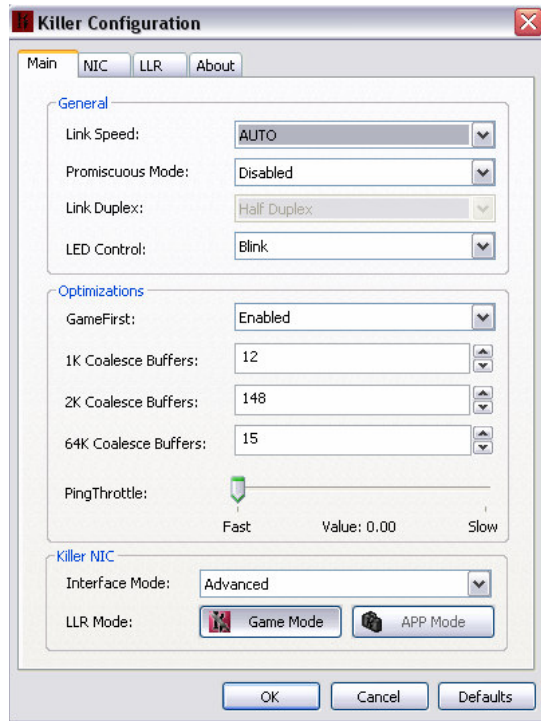
**Interface Mode:** (default: normal) changes from normal to advanced, and back again.

## KillerConfig.exe “Advanced Mode”

The KillerConfig.exe program allows users to alter the settings on The Killer NIC. KillerConfig.exe has 2 modes: normal and advanced. It is recommended that users only use the Normal Mode unless they possess advanced expertise of operating systems and networking

The following is a screenshot of Advanced Mode Main Page (and then an explanation of every setting):

### MAIN TAB





**Link Speed:**

Auto=auto-picks the fastest speed on the link. This is the recommended setting.  
1000=REQUIRES the link to support Gigabit or the NIC won't work (e.g. forces gigabit).  
100=REQUIRES the link to support 100Megabit or the NIC won't work (e.g. forces 100Megabit).  
10=REQUIRES the link to support 10Megabit or the NIC won't work (e.g. forces 10Megabit).

**Promiscuous Mode:**

Disabled = Ethernet packet filters on, device operates normally. (Default)  
Enabled = Ethernet packet filters OFF: device receives from all MAC addresses.

Note: For security reasons the Promiscuous Mode setting will be disabled after a reboot. You will need to Enable it again each time you wish to use it.

**Link Duplex:** This setting only matters if 1000, 100, or 10 is selected above.

Full Duplex=Forces the link to Full Duplex only (e.g. the Ethernet cable is DEDICATED and TX and RX are not shared: and TX can happen at the same time as RX).  
Half-Duplex=Forces the link to Half Duplex only (the TX and RX cannot happen at the same time, and the signal may be shared).

**LED Control: LED Control:**

Blink=the normal custom heartbeat pattern that varies based on network speed.  
Steady=the LEDs on the card are on all the time.  
Off=the LEDs on the card are turned off.

**GameFirst:**

Enabled=turns on Gaming Packet Prioritization for both inbound and outbound game traffic.  
Disabled=turns off packet prioritization.

**1k Coalesce Buffers:** Absolute number of 1k coalesce buffers available for use when number of host buffers exceeds the NIC or UDP limit.



**Ping Throttle:** Allows user to INCREASE {or handicap} their ping: INCREASING THE LATENCY by the indicated amount. DEFAULT(normal is 0)::: WARNING: increasing the ping of the Killer WILL decrease network performance (in some online games, increasing the ping using this setting has a bigger effect than intended: the user should 'tweak' their ping control for in-game ping desired.

### **LLR Game Mode / App Mode:**

LLR stands for Lag and Latency Reduction. When LLR is configured to run in App Mode, your Killer is functioning as an optimized, but normal, NIC. App Mode is a 'fail-safe' mode that should only be used to run / troubleshoot any application compatibility that may occur, particularly with network-stack integrated programs such as VPN clients.

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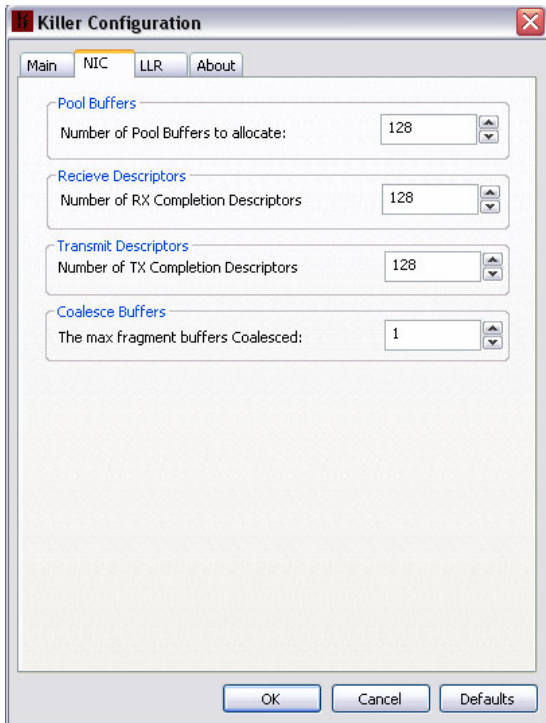
Note: Other network adapters will not function properly with LLR Game Mode. It is recommended that you disable all other network adapters if you wish to use LLR Game Mode.

**Interface Mode:** (default: normal) changes from normal to advanced, and back again.

## **NIC TAB**

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**Pool Buffers to Allocate:** Absolute number of Pool buffers given to Killer to be used when a packet is received from the wire in NIC mode (e.g. a non-UDP packet).

**RX Completion Descriptors:** Absolute number of RX Descriptors given to Killer to be used when a packet is received from the wire in NIC mode (e.g. a non-UDP packet).

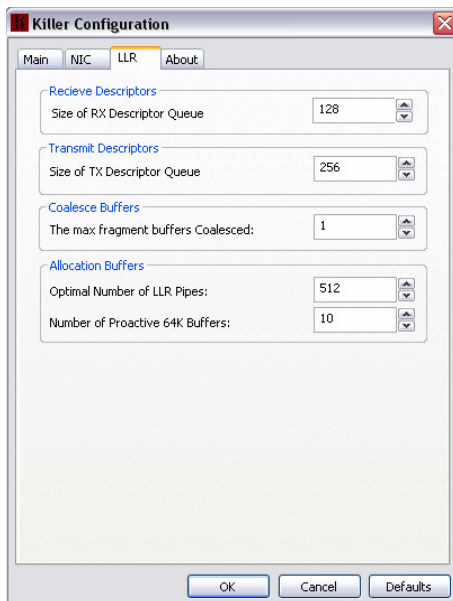
**TX Completion Descriptors:** Absolute number of TX Descriptors given to Killer to be used when a packet is received from the wire in NIC mode (e.g. a non-UDP packet).

**TX Completion Low Water Mark:** NOT USED.

**Max Frags for Coalesce:** NIC MODE (non-UDP packets) When packets are TX from host: sets the maximum number of fragments allowed to be passed to Killer per packet. (when number of fragments is bigger than this number: Killer Driver will coalesce (copy) all the frags to a buffer of the appropriate size).



## LLR TAB



**RX Completion Descriptors:** Absolute number of RX Descriptors given to Killer to be used when a packet is received from the wire in LLR mode (e.g. for UDP packets).

**TX Descriptors:** Absolute number of TX Descriptors given to Killer to be used when a packet is to be sent on the wire in LLR mode (e.g. for UDP packets).



**Max Frags for Coalesce:** LLR Mode (UDP packets) When packets are TX from host: sets the maximum number of fragments allowed to be passed to Killer per packet. (when number of fragments is bigger than this number: Killer Driver will coalesce (copy) all the frags to a buffer of the appropriate size).

**Optimal LLR Pipes:** Maximum number of networks sockets that can be open simultaneously without SEVERE performance degradation.

**Number of Proactive 64K buffers:** Number of Proactive 64K buffers for use in Receive processing: increase when network application is sending lots of large UDP datagrams (not needed for gaming/normal use).

## Other Information/Troubleshooting

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**Support URL;** <http://www.killernic.com/support/>  
**Support Forums:** <http://www.killernic.com/forums/>

### How to get support:

Bigfoot Networks technical support is available via our forums, live chat, inbound phone channels and self help tools. It is recommend users check these locations for answers, as Bigfoot will always keep answers to the most common questions updated here.

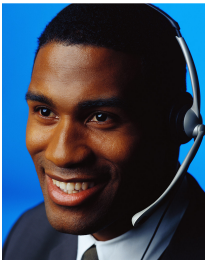
A screenshot of the Killernic.com support site interface. The top section is a red header with a white arrow icon and the text "Login" and "[Lost Password]". Below this is a white form with fields for "Email:" (with a person icon), "Password:", and "Remember Me:" (with a checkbox). A "Login" button is at the bottom of this section. The next section is a red header with a white arrow icon and the text "Search". Below this is a white search bar with a "Search" button and a dropdown menu showing "-- Entire Support Site --".



Tickets submitted to <http://www.killernic.com/support> are answered between the hours of 10:00AM – 7:00PM (central time zone) Monday through Friday, and 12:00 PM – 6:00 PM (central time zone) Saturday and Sunday.



Live Chat is also available between the hours of 10:00AM – 7:00PM (central time zone), Monday through Friday, and 12:00 PM – 6:00 PM (central time zone) Saturday and Sunday. Click on the “Live Chat” icon (shown below) found at <http://www.killernic.com/support>



Phone Support can be reached by dialing (512) 879-4181, option 1 and is available between the hours of 10:00AM – 7:00PM (central time zone), Monday through Friday, and 12:00PM – 6:00PM (central time zone) Saturday and Sunday.

## **COMMON TROUBLESHOOTING TIPS AND HINTS**

**CANNOT CONNECT TO INTERNET:** If you cannot connect to the internet, try disabling LLR by right-clicking on the system tray icon and selecting LLR Enabled (if it says LLR Disabled, no need to click). If this does not work, remove Killer from your system and reinstall your old NIC and contact customer support.

**OTHER NETWORK CARDS DO NOT WORK:** If you wish to use 2 network cards, you MUST Disable LLR (using the Killer Tray or Killer Config Tool). When LLR is enabled, it is recommended that the other NICs in the system be disabled.

**KILLER DRIVER PROBLEMS:** If you are having problems with the Killer Drivers, ensure you are running Windows XP 32-bit (When 64-bit drivers are ready, they may be found in the



'downloads' section of <http://www.killernic.com/support/> ) Windows 2000 is not supported. Then try to reinstall the Killer Drivers using the installation CD-ROM, or if you have previously downloaded any Killer Updates, they are in C:\Windows\Bigfoot run the latest KillerSetup.exe (sort by last modified to find the latest KillerSetup).

**KILLER LED'S NOT BLINKING, NO KILLER DETECTED BY OPERATING SYSTEM:** Power off the PC and reseal the card. Ensure that the Killer NIC is firmly seated into the PCI slot, and securely fastened to the PC case. If you need to try another PCI slot, you MUST re-run the Killer NIC Installer found on your installation CD.

**KILLER NOT DETECTED:** Try reinstalling the Killer Drivers using the latest drivers, available at [www.killernic.com/support](http://www.killernic.com/support)

**BfLLR.dll** : this file is used to install a Layered Service Provider (LSP) into the windows network stack to provide Network Stack bypass. Some virus scanners or spyware blockers may detect this file as dangerous because it is 'hooking' in to the network stack (and has access to all packets sent and received). This is normal, and BfLLR.dll should NOT be removed. If there is additional concerns, Disable LLR and verify that the BfLLR.dll is no longer loaded (however the device cannot operate in LLR mode without this LSP hook).

**UPGRADE NOTIFICATIONS:** Running the system tray will help keep your Killer NIC up to date. Occasionally Bigfoot Networks will release new firmware and driver upgrades, at which times, you will be asked to upgrade (yes/no). If you choose no, you will get another warning at next startup. To remove notification: remove the KillerTray.exe from the StartMenu->Startup folder (this is not recommended).

**FIRMWARE OUT OF SYNCH:** If a firmware warning is ever shown, indicating that your firmware does not match your card: verify you have a Killer installed (you may have removed it), and if it is installed and blinking, it is recommended that you click YES and allow Killer's flash to be re-synchronized to the current driver. Removing KillerTray.exe from the StartMenu->Startup folder will remove these warnings.