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## **Book Descriptions:**

# Dfi Lanparty Nf680I Sli Manual

We delete comments that violate our policy, which we encourage you to read. Discussion threads can be closed at any time at our discretion. Snapdragon 8cx Snapdragon 8cx DFI is one of the few companies in the market which are genuinely in tune with what overclockers and enthusiasts are interested in. LANParty boards are flashy and overthetop, but at their core, they have been solid through and through. Nvidias new 600series chipsets, on the other hand, are widely supported and will be around for quite a long time. With the RD600 buzz dying down, its now time to see what DFI has up their sleeve next. DFI has opted to skip the highend 680i SLI and the midrange 650i SLI, opting for the 680i LT and soon the 650i Ultra, both of which are brand new and will be around for quite a while. The 680i LT, in particular, should appeal to DFIs target audience, as it has a lower price point compared to the highend 680i SLI, but still maintains full PCI Express 16 x 16 SLI performance, stripping out a lot of the less utilized fluff which is bundled with the highend chipset. DFI has taken the 680i LT SLI and jazzed it up with a slick board design and a lot of extras which certainly allow this board to stand out in the crowd of 680i LT SLI boards currently on the market. Lets get to it. It is regarded as the highest spec. This chipset is a dedicated design for the enthusiast. It is versatile and has tremendous functionality; SLI support, Teaming, RAID and has a lot more functions for hardcore gamer and enthusiasts alike. These features allow the NF680i LT to set the standard for one of the highest gaming chipsets in the industry now. This highgrade chipset matches well with the best motherboard designer, in order to fully unleash the potential of the NF680i.Nvidias reference 680i LT SLI platform does not include dual Gigabit Ethernet ports and DualNet support, nor does it include the third PCI Express x16 sized slot, both of which were only featured on the highend 680i

SLI.http://fanaf.com/article\_ressources/bpl-microwave-oven-manual.xml

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DFIs 680i LT SLI board, however, includes both of these features, making it surprisingly close featurewise to a full 680i SLI board. This board still maxes out at 800 MHz officially, but given DFIs highly overclockable nature, those wanting to push memory speeds beyond 800 MHz should not have much trouble. DFIs product is also much flashier on the board level, using custom cooling systems, elaborate heatpipes, and colormatched components all around. The contents. All products and trademarks are the property of their respective owners. Reproduction in whole or in part, in any form or medium, without express written permission of HotHardware.com, LLC. is prohibited. Inc. All rights reserved. Privacy and Terms. The LanParty boards are not for the firsttime overclcocker, based on the amount of options in the BIOS. Today we will look at the items most of you will want to see and stick to the Genie BIOS settings. Its where we will spend most of our time anyhow. Also shown is the main Genie BIOS screen. This should be in the neighborhood of 1.94 volts. Only the brave ones with extreme cooling will venture this high.Northbridge voltage maxes at 1.74 volts to help achieve your overclocking goals. The CPU frontside bus is adjustable up to 625 FSB while the memory is adjustable up to 700. These are some pretty lofty numbers to shoot for. You may not get there, but at least it will be fun trying. There are two options Optimal which is equivalent to the auto setting and Expert which allows you to make your adjustments manually. CMOS reloaded is a DFI motherboard feature that allows you to save specific BIOS settings to a profile so that you dont have to go back and forth in the BIOS any more if you want a different setting for benching, gaming or

just standard clocks when you dont need the extra performance. Just save the settings you want to a profile so that you can go straight to the CMOS Reloaded page and change it. Much simpler if you ask me.<u>http://dmete.com/editor/filemanager/connectors/UserFiles/20200829054209\_a02vyr.xml</u>

The last page we will look at is the PC health page. You can check the status of a few key voltages, adjust the fan speeds to suit your noise or performance levels, view component temperatures and fan speeds. This motherboard adopts NVIDIAs NF680I LT SLI northbridge and MCP55P southbridge chipsets and furnishes both SLI and Physics rendering solutions. Moreover, it offers the highestend 6 phase digital PWM technology. The UT NF680I LT motherboard features unique heat pipe cooling solution for the North Bridge. DFI also offers a particular coppersink for the South Bridge. Further, the EZ Clear is the easiest way to clear the CMOS without opening the chassis. Additionally all DFI LAN Party UT NF680I LT SLIT2R motherboards will come with customized and tweaked BIOS, which will give full control and overclocking potential of your system. It is certain that this model offers many new elements to satisfy all highend users. It is the only 680 board where two PCI slots remain free when 8800s are used in SLI. Just checked Austria and Germany, still only EVGA and XFX boards available. And vep, thats definately a 680i chipset, which means intel 775 Pentium 4, conroe, kentsfield and all that shebang. And the 8pin CPU power near the CPU socket could they have moved it any further away from the main ATX lead. And yep, thats definately a 680i chipset, which means intel 775 Pentium 4, conroe, kentsfield and all that shebang. And the 8pin CPU power near the CPU socket could they have moved it any further away from the main ATX lead.My case No problemo. So much space, like 5cm from drive bays. That lanparty heatsink looks kinda BLING BLING. Power layout is kind of a mess, but not unmanageable modular PSUs anyone. Lets see, at least its not the sick orange and yellow all over the place colors. I love the included heatsinks and how you yourself can place them on AS5 rules, and ceramique too!. Uhm, Packaging is simple and nice.not overly flashy.

For an LT, it has 3 PCIe16x connections for physics, I dont know of any 680i full fledged nvidia board that has 3 lanes, so thats nice. If it had built in HDMI, this would be a kick ass board. One thing that worries me, even though its pretty kick ass, is the cutomized BIOS. Will there ever be updated BIOS that are also customized. I hope they worked out all the kinks and such with this board, just in case they never do an update But I suspect they would, no sense in keeping that ONE bios just in case something needs a bit of tweaking. All around nice board and Im assuming a nice price Plain black would look much better. Intel Core i910900K All trademarks used are properties of their respective owners. Radeon RX 5700 XT Our latest article investigates whether it has succeeded, or if the power was in the colors. All of its products, ranging from the Infinity to the LanParty line have all made a really good impression on me. Without exaggerating, I believe that DFI set a whole new standard on enthusiast and overclocking products. As of today, I'm still unable to find any motherboard manufacturer able to compete with DFI in terms of BIOS and clever designs. Unfortunately, the motherboard was a bit of a failure despite of receiving positive reviews.One of the motherboards introduced by DFI this summer is the DFI LanParty UT NF680i SLIT2R, a motherboard which I've been granted the opportunity to have a closer look at.Now, I'm sure you're thinking "Why doesn't DFI use NVIDIA's' topoftheline circuit instead". The answer is quite simple. First of all, in terms of performance the difference is nonexisting and secondly, it helps to keep the prices down. Something very much appreciated in this world of overpriced motherboards. Also the 680i LT has just got one Gigabit Ethernet connector whereas the 680i has two and the third PCIE connector for physics accelerators has been removed. Officially the 680i LT only supports 800MHz DDR2 RAM while the 680i has got support for 1200MHz.

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And lastly but not least, NVIDIA has rated the overclocking ability on the 680i chipset as "Best" while its lightweight brother only gets "Great". A clear example of that is that DFI added all the

features that was removed in the light weight version of the 680i. Like a third PCIE 16x connector for physics cards and a second Gigabit Ethernet connector. The UT NF680i LT SLIT2R also sports 10 USB2.0 connectors and features two PCIE 16x connectors along side with the 16x connector for physics cards, a PCIE 8x connector, a PCIE 4x connector and three ordinary PCI connectors. Another major difference between the ordinary NVIDIA 680i LT and DFI's' 680i LT is the overclocking potential. DFI's 680i LT is one of the best boards when it comes to overclocking and tweaking today. Earlier most LanParty boxes had a clearly defined theme, containing a lot of bright colors and associations to LAN parties. But this box features a whole new design, which is much simpler and cleaner compared to the older LANParty boxes. The white with gray stripes on the front stretching over the entire box. On the top left corner, a small DFI logo printed in bright green colors can be found and the motherboards model number and name can be found on the lower right corner, also printed using the same bright green colors. There's also a hole on the front side where one can see the southbridge heatsink, which is a pretty nice feature. Personally, I welcome the change and appreciate the new design, although I'm sure there's someone who'll miss the old LANPARTY theme found on the older models. The first one contains all of the bundled accessories, the second one contains the heatsink and the third is a plastic one containing the motherboard itself.

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In the accessories box we find one IDE cable, a floppy cable, four SATA cables, power cables for converting from the old molex connector to the newer SATA power connector, SLI bridge, the Karjan Audio module, floppys containing drivers and the motherboard manuals. In other words, nothing really fancy, but considering the pricing on this motherboard, I'm happy. Don't take me wrong though, I do like a lot of bundled hardware, but only to the extent that it doesn't increase the price of the motherboard. Unlike ASUS, DFI's decided to use a rigid bridge instead of a flexible one. Also the SLI bridge is a very short one, due to the relatively small space between the two PCIE x16 ports on the motherboard. The bad thing about this is that it limits the use of extreme cooling on the video cards when two cards are used. The good thing is that the third PCIE connector can be used when using two video cards as well. Those of you using a separate sound card, will never need to connect the module. According to me, the manuals has improved greatly since the age of the nForce 4. Here's detailed instructions on everything a user needs to know on connecting and setting up the motherboard. In the user manual there's also a chapter dedicated to the BIOS, explaining the function of all the settings. Even though it's better than before, I'd like a lot more details on the functions of the settings. A "Quick Installation Guide" is also supplied, a short guide on how to install things like the CPU and memory sticks. All in all, an easily understood and good guide which is very appreciated. It does show a slight resemblance to the Thermalright HR05 with two heatpipes extending from the bottom plate to the cooling fins. DFI's cooler has a thick aluminum base with some cooling fins on top while the heatpipes extends from the base upwards into a separate set of cooling fins. One could say that this is a weird hybrid between the Thermalright HR05 and a Zalman NB47J.

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The cooler has a special installation system, making it really easy to mount. And there's always the "Quick Installation Guide" giving thorough instructions on how to mount it. Even though it clearly shows a lot of resemblance to the other cards of the LANPartyseries, there are some differences between this and its older nForce 4 relatives. For instance, yellow has been replaced by orange as the main color. The only thing yellow is the four memory slots, the IDE connectors and the floppy connector. But as always, all the yellow and orange slots react to UV light. A lot of work has been done to the layout of the board as it is simply superb. It isn't very often that I feel that almost everything is in place. But the DFI UT NF680i LT SLIT2R is one of those boards. The six SATA connectors are angled 90 degrees on the edge of the motherboard, even the floppy connector's

angled by 90 degrees. The front panel connectors can be found at the lower right corner of the board, instead of between the memory slots and the 24pin ATXheader as it was on the reference model. Personally I find that all the changes that have been made since the first release of the reference model has been improving the layout greatly. Also the FDD connectors can be a little hard to connect when the PCI slots are fully populated, being placed above the first PCI slot and the second above the third PCIE slot. Aside from those it also features two FDD power connectors to help powering SLI systems. This however isn't a new invention, as it has been used since the times of the nForce 4. Now, a SLI system will run without the two FDD connectors being connected, but during overclocking of a SLIsystem, it might help to have them plugged in. The 24pin ATXheader is located at the edge of the board, just above the IDE connector and is really simple to plug in.However, if you haven't got a CPU fan with the four pin connector, do not despair as a ordinary three pin connector fits as well.

All the fans can be monitored in the "PC Health Status" setting in the BIOS. Two buttons to start and restart the system if the front panel connectors haven't been plugged in yet. This feature's highly appreciated by overclockers who doesn't want run their systems inside a computer chassis. An equally appreciated function is the simplified "Clear CMOS" function. To clear the CMOS, simply press both the EZ Power and the EZ Restart button at the same time for about four seconds. Then release the power button first then the reset button. This function will hopefully also work with the power on and reset buttons on the chassis. On top of the southbridge we find a reasonably guiet 40mm fan on a pretty heatsink. The heatsink does show some resemblance to an Evercool chipset cooler often used back in the nForce 4 ages. The difference is that this one feels a bit bigger and more robust. It's definitely a good thing to equip the motherboard with a reasonably good heatsink right from the start, as a lot of the future owners will probably be overclockers. And since overclockers do tend to put a lot of voltage through components, a sturdy heatsink is mcuh appreciated. In addition to the chipset heatsink, there are numerous smaller heatsinks on a multitude of components on the board to help the components to stay cool. There's also a lot of free space around the chipset, making it possible to use extreme cooling techniques here too. However, as the chipset heatsink uses a special kind of retention mechanism it might be a bit hard installing a new chipset heatsink. Our guess is that this is because the motherboard wouldn't fit inside the box with the heatsink attached. This however gives the end users the wonderful opportunity to apply their own thermal paste, without having to remove the heatsink and then wash it clean from the old thermal paste. The third one is an 8x connector and can be utilized by other expansion cards, like physics cards.

The last connector is only 4x wide and can be used by less bandwidth intensive cards, such as network cards for example. Space isn't directly a problem, although I would've preferred if the first and third PCIE slots were used in SLI, not the first and the second one. Using the first two connectors for SLI does have an advantage though. Since a physics accelerator card wouldn't be stuck between two video cards, which often happens on other 680i motherboards. Aside from the PCIE connectors we also have three older 32bit PCI connectors. But due to their placement, anyone running SLI won't be able to use them. Since the video cards will block the connectors. The memory slots can be found on the upper right part of the motherboard. The Karjan Audio Module's a sound card using Realteks' ALC885 8channel HD sound codec. This should be enough for most people. Here, the DFI 680i LT is no exception. A lot of the layout and the most basic settings looks just the same here as on earlier models, which might be helpful for new users as well as older ones. For those of you not all too familiar with the DFI BIOS, the manual contains detailed instructions on almost every feature. Help can also be found in the BIOS as some of the settings there do have a small description to the right when highlighted. Sorry to say, this information does tend to be very rudimentary but in some cases it might be helpful. Under Advanced BIOS Features we find the ordinary boot sequence settings, full screen logo, Delay for HDD, CPU L1L2L2 cache settings and

Quick POST Power On Self Test. The only thing one does change here is the boot sequence and perhaps the full screen logo. Advanced Chipset Features contains three settings. DFI recommends these not to be changed, but left at their default values. The LAN and audio settings can also be found here. Settings include turning of one or both LAN ports, choosing between USB 1.1 or 2.0 and of course, configuring the harddrives in RAID, etc.

PC Health Status is just what it sounds like, fan speed and temperature monitoring mostly. Settings include turning off the computer if the CPU reach a specific temperature, fan speed at a specific temperature, etc. The CPU temperature can also be calibrated if it's malfunctioning and displaying an incorrect temperature. A rather unique function as well as a welcome one, as most motherboards measures the temperature in seemingly strange ways. Here you can find overclocking settings, and the 680i doesn't disappoint. Geni BIOS includes voltage settings, latencies, CPU settings and a lot of other tweaks that will enhance the end result. This is the most competent Core 2 Due overclocking BIOS that I have seen so far. DFI has put a lot of effort into the voltage settings. And there is the possibility that, if you're not careful, you could burn every part of this motherboard. These settings favor Quad Coreusers who wants to increase the FSB. As most know, there have been problems with high FSB overclocking on the 680i when used together with Kentsfield CPUs, but it seems like DFI has solved this by implementing the GTL refsettings. The memory can be increased to 700 which also should be enough. The last part used for overclocking is the memory latencies. This part is not as extensive as in the days of the nForce 4; this is probably because the latency doesn't have as much effect on the performance when using DDR2 memory. But although this part doesn't have as many settings as earlier, they are sufficient. The only thing I really miss is TRFC. Both DFI 680i LT and the Striker Extreme use the NVIDIA MCP55P which, theoretically, should give a similar result, which is also true. DFI and Asus are quite equal. The UT NF680i LT SLIT2R lies side by side with the Asus Striker Extreme in both tests and the two are only separated by a few points.

The DFI motherboard wins the Processor Arithmetic test with a few points while the Striker Extreme has a somewhat bigger margin in the Multimedia test. Out of ten Super PI sessions, the DFI won three and the Striker Extreme seven, which shows that it's the circumstances that determines who wins and not that one card is faster than the other. As you can see, the UT NF680i LT SLIT2R does somewhat better than the Striker Extreme in most tests. I also made a few tests with SLI in F.E.A.R in order to get a better picture of the performance when using two video cards with the 680i LT compared to other 680i motherboards. Besides, none of the tests really separates the two motherboards, some are won by DFI and some by Asus and since the margins are so small I proclaim this round a tie which is not bad for DFI, because it's a much cheaper motherboard than the Striker Extreme. Since these tests paints a good picture of how the system performs on the whole, it's also one of the most important tests too many. DFI LANParty UT NF680i LT SLIT2R is a very good example of this. Both the BIOS and the layout of the board truly is amazing and leaves the end user with enormous possibilities, in terms of overclocking and extreme cooling. Most other 680ibased motherboards has been experiencing problems when trying to reach higher FSBs. But the DFI board didn't disappoint me, since the BIOS includes some settings that makes Kentsfield overclocking much easier. One setting I especially like is the GTL ref voltage setting, which does wonders on FSB overclocking. I think that the voltage settings is the thing that impresses me the most with the DFI LANParty UT NF680i SLIT2Rs' BIOS. If you have the right cooling, then voltages shouldn't be the limiting factor. One of the improvements DFI has done since the nForce 4 era is that CPU Vid Special can be set with significantly smaller increments than before. Also the CPU Vid Control can be set using smaller increments than before.

The voltages don't seem to fluctuate much under load either, which's always a good thing. First up is 1T 431MHz 3331022 at 2.34V, the second result is 1T 470 4441022. This was done using 2.34 V. These sticks are guaranteed by OCZ to be able to hold 2.5V but as the temperature was so high I

decided to stop at 2.3V. This does however show us that this DFI board does have some potential in terms of memory overclocking, especially using 1T. I know that the sticks can do it, but no matter what I did, I only got errors past 1100MHz. As I started investigating the problem, I discovered that there were some problems running high speeds with 2T on the UT NF680i LT SLIT2R. I hope that this is something that'll be fixed in later BIOS revisions. But DFI fixed this problem by implementing the GTL rev voltage in the BIOS, so the end user can adjust it and find the most optimal setting by him or herself. At first I only changed the CPUVTT and NB Core Voltage settings a bit, and left the GTL ref Voltage at default. This enabled me reaching 410MHz FSB without any stability issues. Tinkering with the GTL ref Voltage made it possible to run 471 MHz and I'm quite positive that further adjusting and testing would take this board closer to or over 500MHz FSB.Quad Cores do get really hot during overclocking sessions, making it harder to attain a stable system when using an ordinary cooler. But to show you the possibilities of this board I did some 3DMark rounds at 3580MHz and 1.44V. This is really good since I needed to feed the CPU with closer to 1.48V to get it 3D stable at the same frequency with another board. The big difference comes from the relatively small fluctuations on the CPU Vcore. The competition isn't close to the stability or the overclocking potential of the DFI UT NF680i LT SLIT2R. The most surprising thing was the incredible high FSB I managed to get when overclocking my Kentsfield QX6700 CPU.

The NF680i LT SLIT2R is without doubt one of the best motherboards in terms of overclocking the Core 2 Duo and Kentsfields of today. Getting one setting wrong might make your system unstable and unable to boot. At the same time you can achieve greater stability by being able to control a greater number of settings. This is especially important during overclocking sessions, as finetuning the system might be enough to gain those last points needed to break a world record. The thing that surprised me with the DFI 680i LT is that I had almost no stability problems at all, even though I've been fiddling around with settings in the BIOS. A little increment here and decrement there and the hardware just kept playing along. I believe that the considerable small amount of stability problems has to do with DFI shipping this board with a really good BIOS to begin with. Something not very common amongst motherboard manufacturers. DFI has also equipped the motherboard with good cooling to battle the heat problems that may arise when doing some heavy overclocking. All in all, it feels that DFI has done something extra with this motherboard. In most of the tests we find that the ASUS Striker Extreme, based on NVIDIA's' topoftheline circuit 680i and DFI's' 680i LT is side by side. One board was always just marginally faster than the other in the tests and we noticed that DFI won approximately 50% of the tests and ASUS won the other 50%. We did however have some tests that differed a little more, such as the Everest tests where DFI were ahead of ASUS, and SuperPI where ASUS won over DFI.Most of the time I think that those kind things are guite unnecessary, but on the DFI 680i LT it feels right. As the extras does have a purpose. First up we find the EZ Power and Reset buttons, making it real easy for those of you running your system outside a computer case.

Now, most 680i motherboards does have similar power up and reset buttons but DFI decided to implement a Clear CMOS function in their version. Just press the two EZ buttons for five seconds, release them in the correct order and the CMOS's cleared. Another important feature is the so called "CPU Core Temperature Adjust". As some of you might guess, it's used to adjust the value of the temperature displayed in the BIOS.Whilst gamers and other enthusiasts, not to mention the ordinary user, prefers a silent system. The DFI 680i LT has a good balance between noise level and cooling capacity. The southbridge is cooled by a small heatsink and a fairly quiet fan. If the fan isn't quiet enough, the BIOS features a setting for lowering the fan speed at a specific temperature. The BIOS also features a similar setting for the CPU fan. On the northbridge DFI lets the user decide for him or herself. The cooler works flawless without a fan, but if one wants to feel a bit more secure about their temperatures, a fan can be added easily. Making any cooler which uses a special retention bracket on the backside of the motherboard, useless. To be able to use a backplate, several holes

would have to be cut out so that the small circuits on the backside wouldn't be crushed. Another thing is that the northbridge cooler's so big that some CPU coolers might not fit. By using its experience in designing and creating enthusiast hardware, the DFI 680i LT is without doubt one of the best boards for Core 2 and Kentsfield overclocking today. Here we find the best features from the older LanParty series combined into an almost perfect board. As I overclocked my QX6700, I reached 400MHz FSB on the first try, without changing any other setting. This indicates that the DFI 680i LT overclocks really good with both dual and quad core CPUs'.

Even the memory performance is incredible with the DFI 680i LT, especially running the RAM at 1T command rate, where DFI virtually didn't have any competition at all. But the superb BIOS isn't the only reason why this board performs incredibly good, as the design, layout and cooling of the board is equally important. The area surrounding the CPU socket and northbridge circuit is quite free of components. Making it easy for the extreme enthusiasts to use heavier cooling on both the CPU and the northbridge. This goes for the video cards as well, as it shouldn't be too hard to replace the stock cooler with something heavier. Besides from getting rid of the fluctuation problems, the Vcore set in the BIOS's guite close to the actual Vcore supplied to the CPU. This board really is one of the best boards I've tested so far in my life. By using a cheaper alternative to the 680i circuit and then implement the missing functions directly to the motherboard instead, DFI's managed to create a product that not only is better than the competition, but also cheaper. We're truly impressed. While we did not get the chance to test a board due to limited samples, we certainly liked the idea of the 680i LT. It has a number of features we wanted to see implemented in the 650 chipset, as there is quite a big step between the 650i SLI and 680i SLI. 680i LT is the bridge that everyone has been looking for. Its design implements the most important feature we wanted to see, fullspeed SLI, with two PCI Express x16 slots running at full x16 speeds, one running off the SPP and one off the MCP. The 680i LT lacks the extra 8 lanes that a full fledged 680i SLI has for a physics engine setup, however, there are ways around this, as even the latest hardware dedicated card from Ageia only requires a PCI slot, so a single PCI Express x1 slot should give these cards all they need. Also there are a few changes in the SPP such as reduced support for SLIReady memory.

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