

Forum:[Hack Forums](#)

Thread: [\\$450 Dolphin Emulator / Budget Gaming Build Guide \(Overclock\)](#)

Captain Falcon - February 25, 2016, 11:18 am

I have seen a few people around who play GameCube / Wii games using Dolphin Emulator and wanted to make a quick build guide for those that might be interested.

This build also makes for a great low budget gaming build.

The Pentium G3258 is a great budget CPU that can reach stable overclocks of ~4.5GHz on the stock cooler which gives it amazing value. The per-core performance of this CPU make it a great choice for Dolphin.

Note: after Intel's microupdate, it is advised to stick with Windows 7 for your Dolphin Machine, or try this fix for Windows 10 in order to keep overclocking ability:

<https://www.youtube.com/watch?v=rXEnjmm0UmA&feature=youtu.be>

[PCPartPicker part list](#) / [Price breakdown by merchant](#)

CPU: [Intel Pentium G3258 3.2GHz Dual-Core Processor](#) (\$66.88 @ OutletPC)
Motherboard: [MSI H81M-P33 Micro ATX LGA1150 Motherboard](#) (\$45.75 @ OutletPC)
Memory: [Kingston HyperX Fury Black 8GB \(1 x 8GB\) DDR3-1600 Memory](#) (\$29.99 @ Newegg)
Storage: [Crucial BX100 250GB 2.5" Solid State Drive](#) (\$69.97 @ Amazon)
Video Card: [EVGA GeForce GTX 750 Ti 2GB Video Card](#) (\$108.99 @ NCIX US)
Case: [Deepcool TESSERACT SW ATX Mid Tower Case](#) (\$48.98 @ Newegg)
Power Supply: [SeaSonic G 550W 80+ Gold Certified Semi-Modular ATX Power Supply](#) (\$69.99 @ NCIX US)
Total: \$440.55
Prices include shipping, taxes, and discounts when available
Generated by PCPartPicker 2016-02-25 15:49 EST-0500

If you wish to use it for newer titles in gaming, an increase in budget to \$480-500 is suggested in order to get a better GPU with more VRAM:

[PCPartPicker part list](#) / [Price breakdown by merchant](#)

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Memory: [Kingston HyperX Fury Black 8GB \(1 x 8GB\) DDR3-1600 Memory](#) (\$29.99 @ Newegg)
Storage: [Crucial BX100 250GB 2.5" Solid State Drive](#) (\$69.97 @ Amazon)
Video Card: [Sapphire Radeon R7 370 4GB Nitro Video Card](#) (\$148.98 @ Newegg)
Case: [Deepcool TESSERACT SW ATX Mid Tower Case](#) (\$48.98 @ Newegg)
Power Supply: [SeaSonic G 550W 80+ Gold Certified Semi-Modular ATX Power Supply](#) (\$69.99 @ NCIX US)
Total: \$480.54
Prices include shipping, taxes, and discounts when available
Generated by PCPartPicker 2016-02-25 15:50 EST-0500

Either way you go, you will have more than enough power to play all of your favorite GC/Wii titles

and will also be able to play many PC titles with decent settings.

Enjoy :)

shadowwc - February 25, 2016, 12:07 pm

I just came here for the arguing. jk

I've read somewhere that the g3258 was locked by a bios update on all chipsets except the Z97 one which is obviously made for overclocking. Is this still the case or have manufacturers gotten around it and have it enabled on B85/H97 chipsets or certain not Z97 boards, if you know?

Breeze26509 - February 25, 2016, 12:17 pm

I'm going to be brutally honest here, good luck overclocking the G3258 on an H97 board.

Spoiler ([Click to View](#)) You can't overclock it on H97.

PSU is shit. It's a B1 model.

?Opulence - February 25, 2016, 12:19 pm

(Feb 25, 2016 01:17 PM)Breeze26509 Wrote: ([CITE](#)) I'm going to be brutally honest here, good luck overclocking the G3258 on an H97 board.

Spoiler ([Click to View](#)) You can't overclock it on H97.

PSU is shit. It's a B1 model.

agreed.. I have also heard that in order to get a good stable OC with that CPU you end up spending as much as you would on a better CPU

Gt403cyl - February 25, 2016, 12:30 pm

(Feb 25, 2016 01:07 PM)shadowwc Wrote: ([CITE](#)) I just came here for the arguing. jk

I've read somewhere that the g3258 was locked by a bios update on all chipsets except the Z97 one which is obviously made for overclocking. Is this still the case or have manufacturers gotten around it and have it enabled on B85/H97 chipsets or certain not Z97 boards, if you know?

It has been locked via bios update Intel only want overclocking done with unlocked CPUs and appropriate motherboards.

Captain Falcon - February 25, 2016, 12:51 pm

Shit you guys are right, didn't even pay attention to the mobo. Fixed.

if the h81m-p33 has since been locked and unable to OC, let me know. I can't find anything saying this is the case.

Breeze26509 - February 25, 2016, 1:02 pm

(Feb 25, 2016 01:51 PM)Captain Falcon Wrote: ([CITE](#)) Shit you guys are right, didn't even pay attention to the mobo. Fixed.

if the h81m-p33 has since been locked and unable to OC, let me know. I can't find anything saying this is the case.

Non-Z chipsets cannot overclock. It has to be a Z-series chipset.

Captain Falcon - February 25, 2016, 1:06 pm

(Feb 25, 2016 02:02 PM)Breeze26509 Wrote: ([CITE](#)) Non-Z chipsets cannot overclock. It has to be a Z-series chipset.

So this article no longer has any validity?

<http://forums.anandtech.com/showthread.php?t=2389948>

even after the bios updates following haswell refresh, h81 boards lost the ability to OC yet again?

Xycon - February 25, 2016, 1:09 pm

I wouldn't exactly put an \$70 gold rated PSU in an \$440 budget build.

The PSU is fine, but it just doesn't belong there, as gold for such a budget is just ... a waste really. There are plenty of cheaper bronze PSU that will also be perfectly fine, allowing the user to get a better GPU or something.

And yes, ONLY Z boards can OC.

Captain Falcon - February 25, 2016, 1:11 pm

(Feb 25, 2016 02:09 PM)Xycon Wrote: [\[CITE\]](#) I wouldn't exactly put an \$70 gold rated PSU in an \$440 budget build.

The PSU is fine, but it just doesn't belong there, as gold for such a budget is just ... a waste really. There are plenty of cheaper bronze PSU that will also be perfectly fine, allowing the user to get a better GPU or something.

And yes, ONLY Z boards can OC.
had a bronze PSU and had complaints

if the non-z board patch is on Win10, can't you just use win7 for a dolphin machine?

or try the hotfix: <https://www.youtube.com/watch?v=rXEnjmm0UmA&feature=youtu.be>

Xycon - February 25, 2016, 1:20 pm

Those complaints will not and can not have anything to do with it being gold or not.
As that's only the efficiency of a PSU, not the build quality or quality of components used.

A good solid bronze PSU can easily work way better than a crappy build gold rated PSU.

Gt403cyl - February 25, 2016, 3:43 pm

(Feb 25, 2016 02:20 PM)Xycon Wrote: [\[CITE\]](#) Those complaints will not and can not have anything to do with it being gold or not.

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A good solid bronze PSU can easily work way better than a crappy build gold rated PSU.
This^^

The gold or bronze or silver ect. is ONLY for the efficiency.....

TeslaAC - February 25, 2016, 3:49 pm

(Feb 25, 2016 02:20 PM)Xycon Wrote: [\[CITE\]](#) Those complaints will not and can not have anything to do with it being gold or not.

As that's only the efficiency of a PSU, not the build quality or quality of components used.

A good solid bronze PSU can easily work way better than a crappy build gold rated PSU.
Well you obviously need higher quality components to make power supply achieve higher efficiency.

CyberneticTitan - February 25, 2016, 7:47 pm

Might as well just buy a used Wii and softmod it if the purpose is just for the Wii/Gamecube experience. I've done so, and I can load WBFS games right off an external HDD. Costs less than your builds, but loses PC functionality.

Captain Falcon - February 25, 2016, 9:32 pm

(Feb 25, 2016 08:47 PM)CyberneticTitan Wrote: [\[CITE\]](#) Might as well just buy a used Wii and softmod it if the purpose is just for the Wii/Gamecube experience. I've done so, and I can load WBFS games right off an external HDD. Costs less than your builds, but loses PC functionality. dolphin is superior imo, 1080p, high res textures, AA, blah blah, then PC functionality as a bonus

Xycon - February 25, 2016, 9:52 pm

(Feb 25, 2016 04:49 PM)TeslaAC Wrote: [\[CITE\]](#) Well you obviously need higher quality components to make power supply achieve higher efficiency.

Not true either.

We have seen plenty of PSU with components that are barely capable of hitting said efficiency level, but after a few month of use it just wasn't able to hit it anymore, as components just degraded that fast due to their shit quality.

There are plenty of bronze PSU that will pretty much stay "bronze" forever.

TeslaAC - February 25, 2016, 10:47 pm

Not true either.

It's correct. Allow me to educate you.

We have seen plenty of PSU with components that are barely capable of hitting said efficiency level,

There's a good reason why standards are administered by a independent organisations. In this case, EPRI (electric Power Research institute). These PSU your might be talking about are most likely to be Chinese knockoffs. All name brands Power supply with their lower series PSU comply well within 80 plus spec.

but after a few month of use it just wasn't able to hit it anymore, as components just degraded that fast due to their shit quality.

This is load of BS, and I doubt you even have stats to even back that baloney statement.

Even the lowest quality of competent don't drift or degrade that quickly.

There are plenty of bronze PSU that will pretty much stay "bronze" forever.

Its goes by laws of engineering that components that run cooler will last longer. That is what 80 plus rating is what its all about.