

MEGA65

News from MEGA65 R6

Dear MEGA65 enthusiasts,

First and foremost, we wish you a happy New Year and would like to provide another status report on the production of the next batch of MEGA65.

We are pleased to announce that the next batch of MEGA65 will begin to ship on June 1st this year (2024)!

If your preferred shipping address has changed since your ordered, please make sure to update this, so that your MEGA65 doesn't end up going to the wrong address!

The board design has been thoroughly tested by the MEGA65 volunteers. Boards are beginning to be manufactured, ready to be assembled. All the parts are in stock.

In short, we are steaming ahead to get as many units out as possible before the Northern Summer, and hope that you share our excitement at this news.

For those who are curious as to why it has taken quite a while since the last batch, there are several reasons:

- First, there were some issues identified with the R3/R3A boards that we knew we should fix, before making any more boards, such as the HDMI Back-power problem.
- Second, there are still problems with supply chains, so at one point we had to do quite a bit of re-design work and testing to work around the lack of supply of certain vital power-supply components. This was quite frustrating, as we were ready to go to production with the R4 board design that we had at the time, and cost us several months.
- Third, from the broader MEGA65 community, we became aware of several very attractive improvements that we could incorporate into the new revision, while we waited for certain key components to arrive in stock, and worked through the testing of the corrections we had implemented before the supply chain threw us a curve-ball.



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The MEGA65 R6 boards that will be shipped this year include the following improvements over the R3A boards that were in the previous batch:

- Added 64 MB SDRAM, so that more MiSTer cores can be supported in the future – even some 32-bit consoles will be possible to port to the MEGA65 R6 that were impossible to contemplate on the R3A board.
- Greatly improved audio quality on the 3.5 mm audio jack. The audio quality on the R3A is quite fine, but it is really a lot better on the R6! Even at very high volume levels, there is now practically no hiss.
- There is also an internal audio break-out header on the R6 board, that makes it easier to make internal audio expansion boards, e.g., with real SID chips or other synthesiser chips.
- The whole Real-Time Clock feature has been overhauled: The R6 boasts a Super-Cap that can keep the Swiss Real-Time Clock ticking accurately for weeks at a time. But if you want to keep your clock ticking for years in the closet, you can now fit the very common CR2032 type battery.
- The cartridge port is now even more electrically flexible. We can't think of any C64 or C128 cartridge that the cartridge port won't be able to handle, once support is added to the C64 and MEGA65 cores.
- The joystick ports on the R6 are now fully bidirectional, allowing some uncommon peripherals to work that were not usable on the R3A joystick ports.
- A 12-pin FPGA GPIO header has been added to allow future functionality.

Thus, while we know you have all been waiting a long time, the reward for your patience is a greatly improved machine coming to you soon.

As always, if you have any question, we recommend joining the MEGA65 Discord server, where the community is quite active – including the many volunteers who have put in a lot of effort to help develop, test and improve the MEGA65 R6.

Greetings from MEGA Team and Trenz Team

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