

## VMM3a/SRS software, firmware and documentation

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Where can I find the software?

- Slow control software: <https://gitlab.cern.ch/rd51-slow-control/vmmsc>
- VMM test module: integrated module of the slow control software
- VMM test module data base browser: <https://github.com/FinnJaekel/VMM-Database-Browser>
- Online monitoring and DAQ software: <https://github.com/ess-dmsc/essdaq>
- Analysis and reconstruction software: <https://github.com/ess-dmsc/vmm-sdat>

Where can I find the latest firmware?

- The binary files of the firmware, both for the FEC and the RD51 VMM Hybrids, can be found here: [https://gitlab.cern.ch/SRS\\_firmware/bit\\_mcs\\_files](https://gitlab.cern.ch/SRS_firmware/bit_mcs_files)

What, if I want to take data at high rates?

- We propose the usage of tcpdump <https://github.com/the-tcpdump-group/tcpdump> to record high rate data. Please be aware that it is an external tool that we use, so it is not developed by us. In other words, we cannot provide the same kind of support as for the tools mentioned above

If I have some issues with the hardware, what to do?

- You may check out this online folder, where you will find all the documentation for the hardware and possible fixes (also for SRS parts that are non-VMM-related): <https://drive.google.com/drive/folders/1h5KLMaA7-bxbPoisnip5Adb4mYc2YMdq>
- As a general rule, it is advised not to modify the hardware without consultation of Hans Muller

Who can I contact if I have a question?

- Check out our Discord server, where your problem may have been already answered: <https://discord.gg/jsT9HgD>
- If your question was not asked there, post it in one of the corresponding channels of Discord.
- If you want to contact one of the developers directly, please check out the README files on the GitHub or GitLab pages of the software/firmware projects. Usually the contact details are mentioned there.

If I have a very specific problem, which could not be solved with the above hints, whom can I contact?

- Electronics in general, hardware: [hans.muller@cern.ch](mailto:hans.muller@cern.ch), [kaminski@physik.uni-bonn.de](mailto:kaminski@physik.uni-bonn.de)
- General questions, system operation: [lucian.scharenberg@cern.ch](mailto:lucian.scharenberg@cern.ch), [dorothea.pfeiffer@cern.ch](mailto:dorothea.pfeiffer@cern.ch), [michael.lupberger@cern.ch](mailto:michael.lupberger@cern.ch)
- Software: [dorothea.pfeiffer@cern.ch](mailto:dorothea.pfeiffer@cern.ch), [michael.lupberger@cern.ch](mailto:michael.lupberger@cern.ch), [lucian.scharenberg@cern.ch](mailto:lucian.scharenberg@cern.ch)
- Firmware:

- [michael.lupberger@cern.ch](mailto:michael.lupberger@cern.ch), [dorothea.pfeiffer@cern.ch](mailto:dorothea.pfeiffer@cern.ch)
- Virtual machine:  
[francisco.garcia@cern.ch](mailto:francisco.garcia@cern.ch)
- Discord:  
[caiazza@uni-mainz.de](mailto:caiazza@uni-mainz.de), [michael.lupberger@cern.ch](mailto:michael.lupberger@cern.ch)