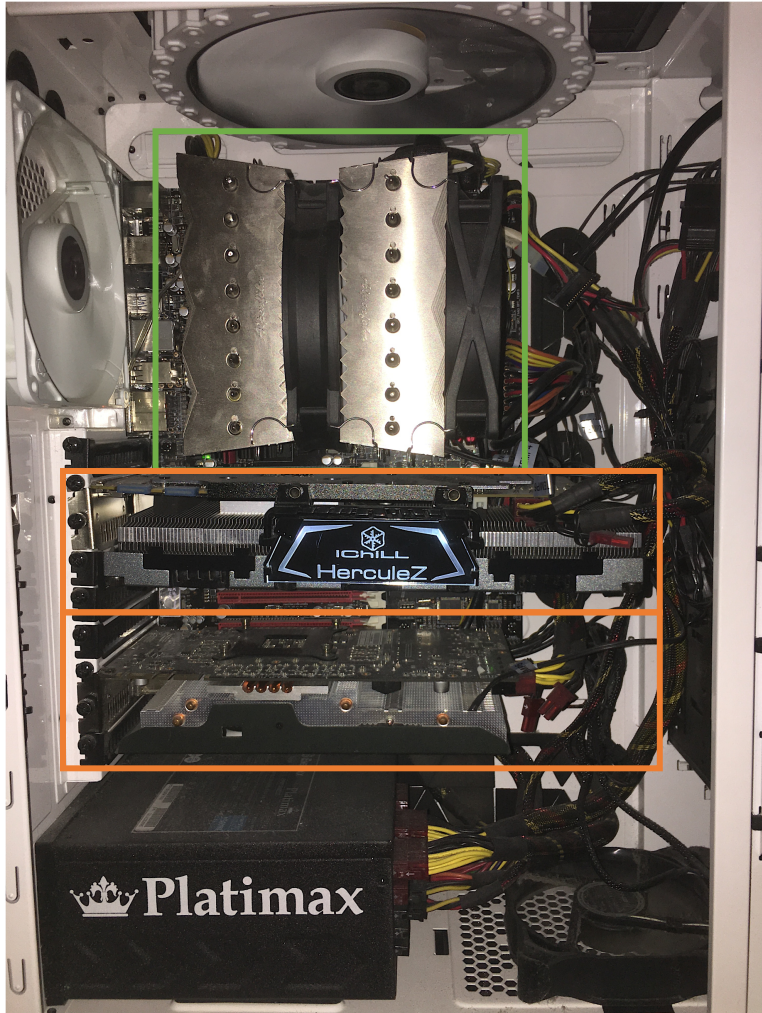


CUDA – Rechnen mit der GPU

Von Tobias Wahl

GPU – What is that?

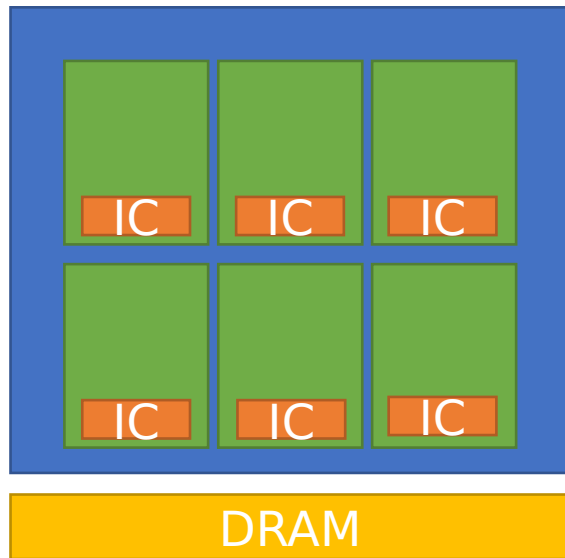


<http://media.bestofmicro.com/Greatest-Radeon-GeForce,E-M-302494-22.jpg>

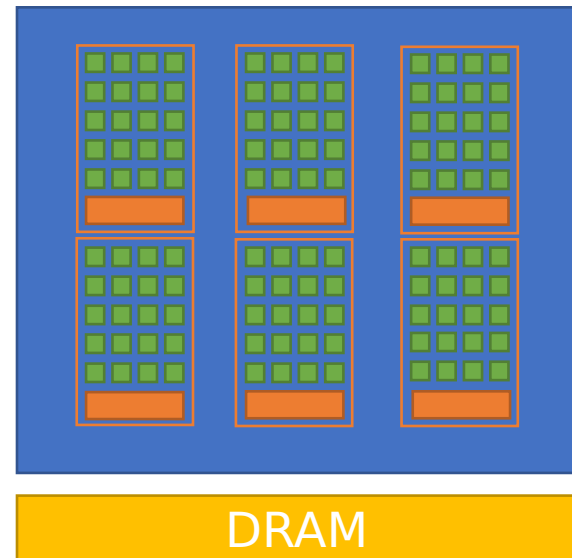


<http://www.chip.de/ii/2/2/5/8/1/3/9/2/187049-4bdd22df305f5f19.jpg>

GPGPU allgemein

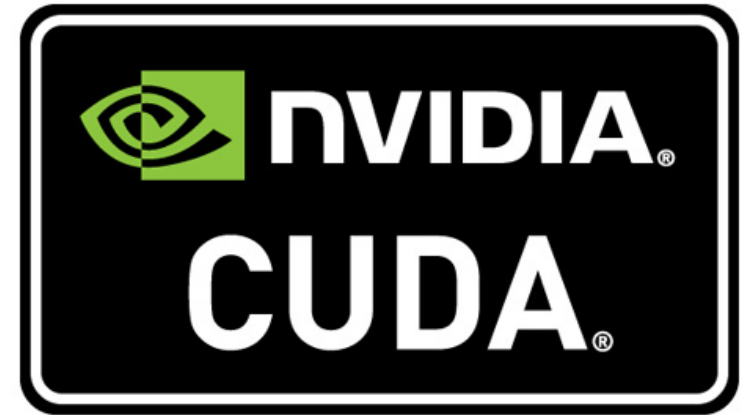


CPU

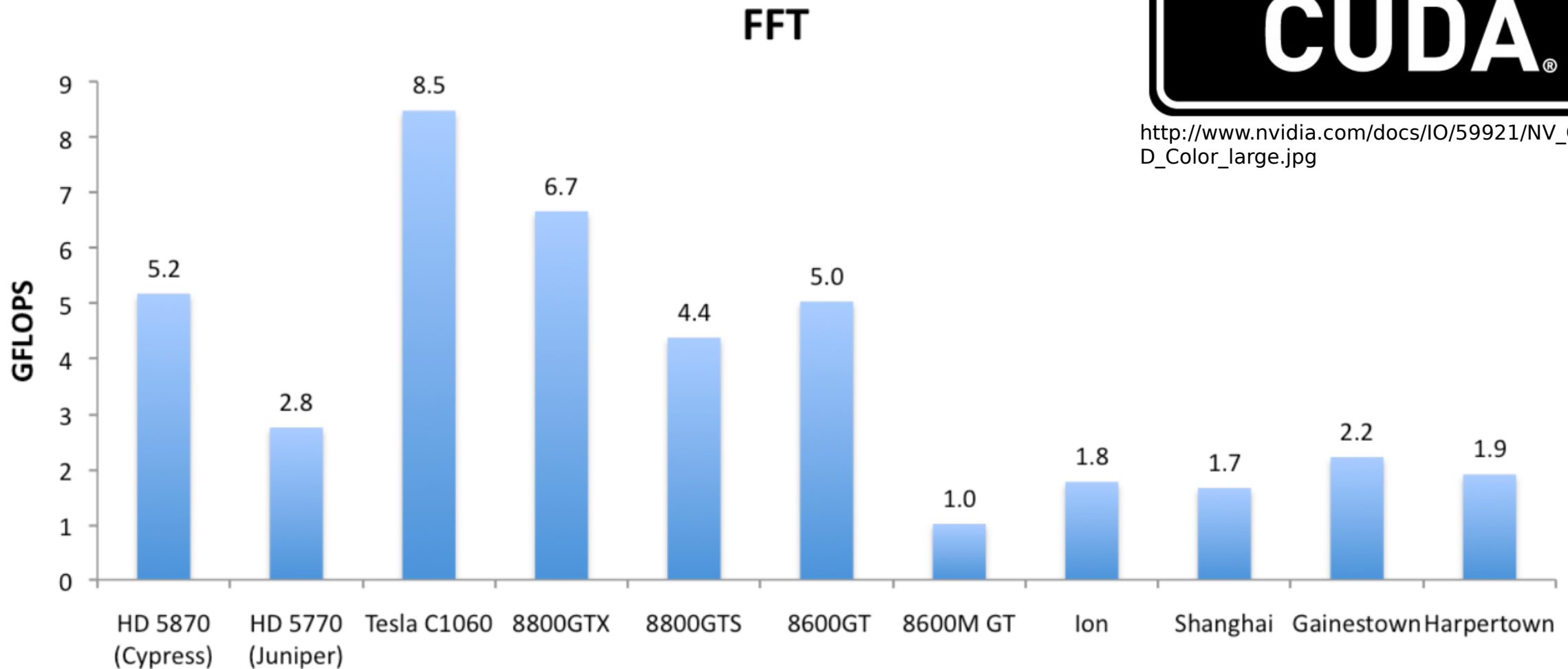


GPU

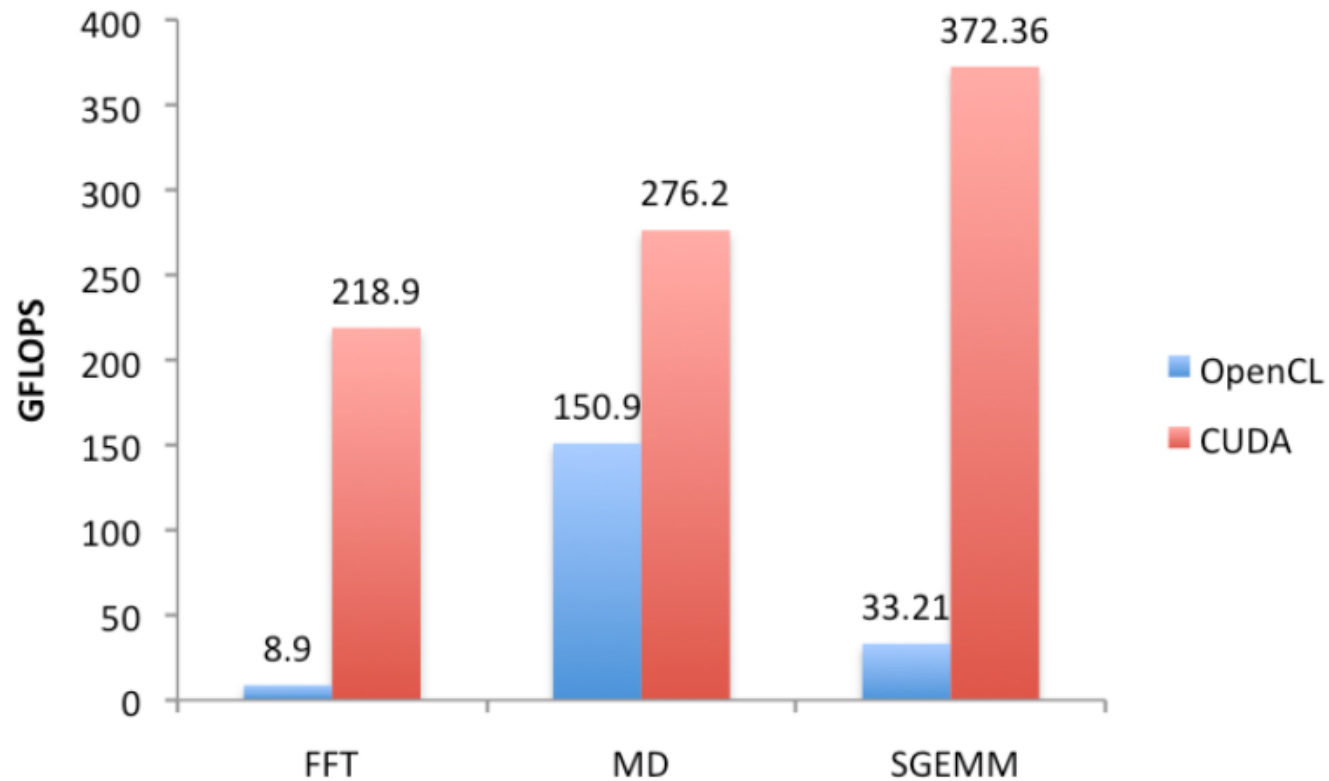
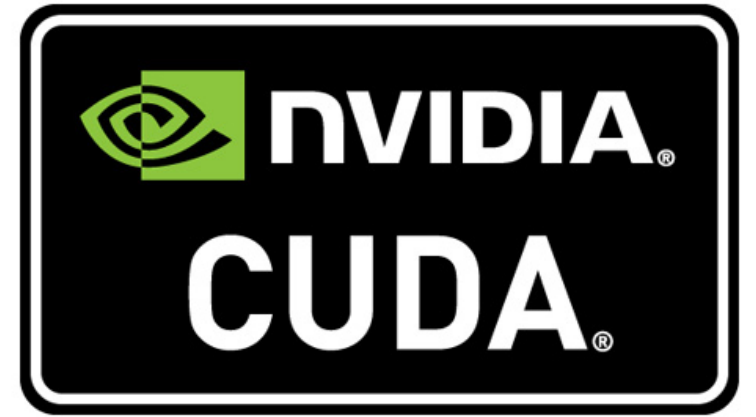
CUDA



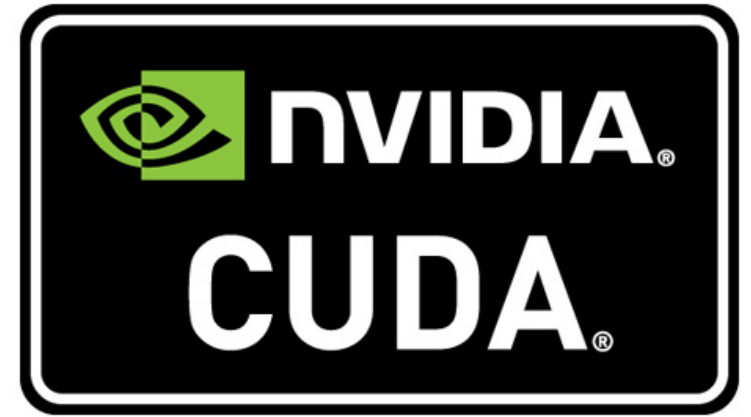
http://www.nvidia.com/docs/IO/59921/NV_CUDA_2D_Color_large.jpg



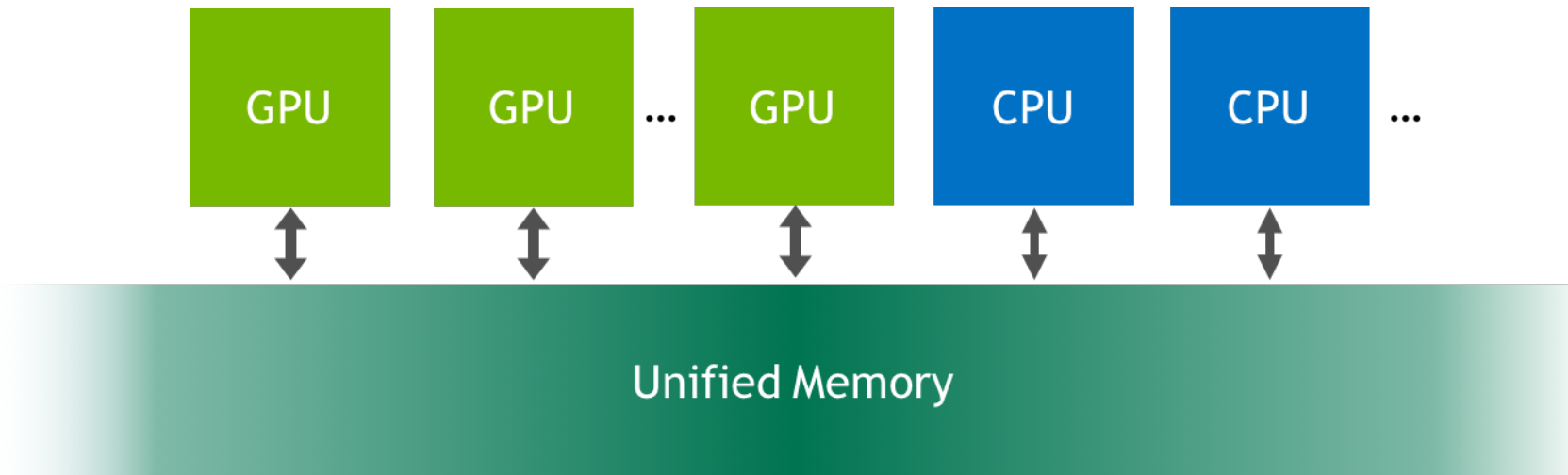
CUDA



CUDA



- Predefined Libraries like:
 - AmgX – linear solver
 - cuDNN – deep learning
 - cuFFT – Fast Fourier Transforms
 - FFmpeg
 - >> more on: <https://developer.nvidia.com/gpu-accelerated-libraries>
- Unified Memory



Toolchain

- Visual Studio 2015
- CUDA Toolkit
- Tutorial:
<https://devblogs.nvidia.com/parallelforall/even-easier-introduction-cuda/>
- Then maybe: <http://docs.nvidia.com/cuda/cuda-c-programming-guide/index.html>