

Datasheet: 3DMC – 3D Hall Camera chip

DESCRIPTION:

3DMC – 3D Hall Camera chip (sensor matrix)

With a spatial resolution of 100 μm and a tiny measurement volume of 27 μm × 9 μm × 4 μm per each pixel, 3DMC offers unprecedented precision in magnetic field measurement. This is particularly valuable when measuring complex magnetic fields with high gradients.

The 3DMC chip contains 128 x 128 (16,384) individual 3D Hall sensors pixels and can capture a complete 3D magnetic field image in a fraction of a second. The chip dimensions (with the whole matrix of 3D Hall chips) is 14mm x 16.8mm.

Each pixel provides measurements of all three magnetic field components (Bx, By, Bz) and Btotal.

Experience a new standard in magnetic sensing precision with the 3DMC chip — the core component enabling next-generation 3D magnetic field cameras for research, quality control, and industrial applications.

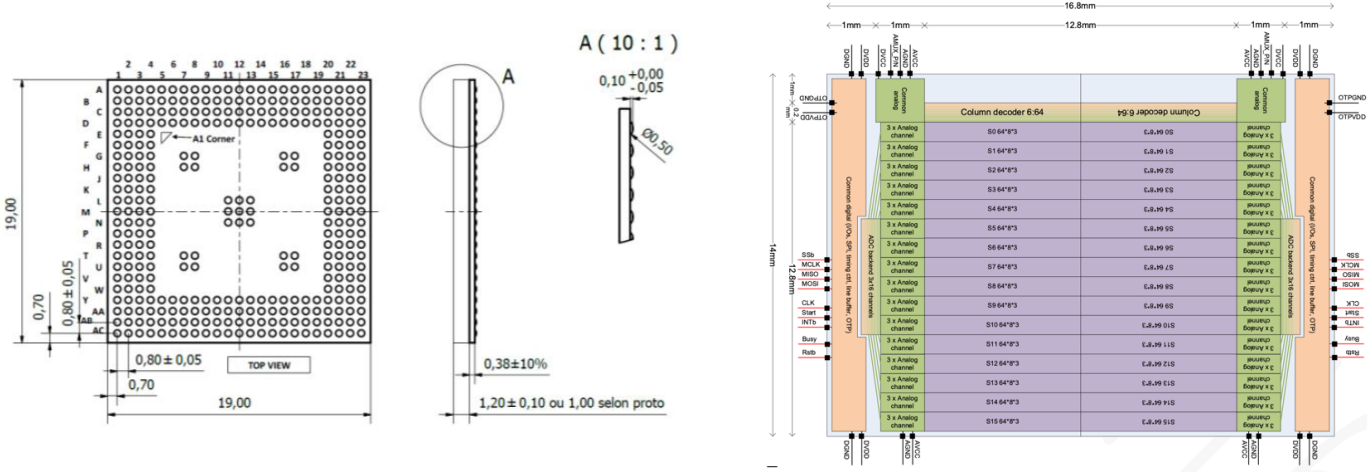


Figure 1: Chip BGA Package (left) and Floorplan of the ASIC (right)

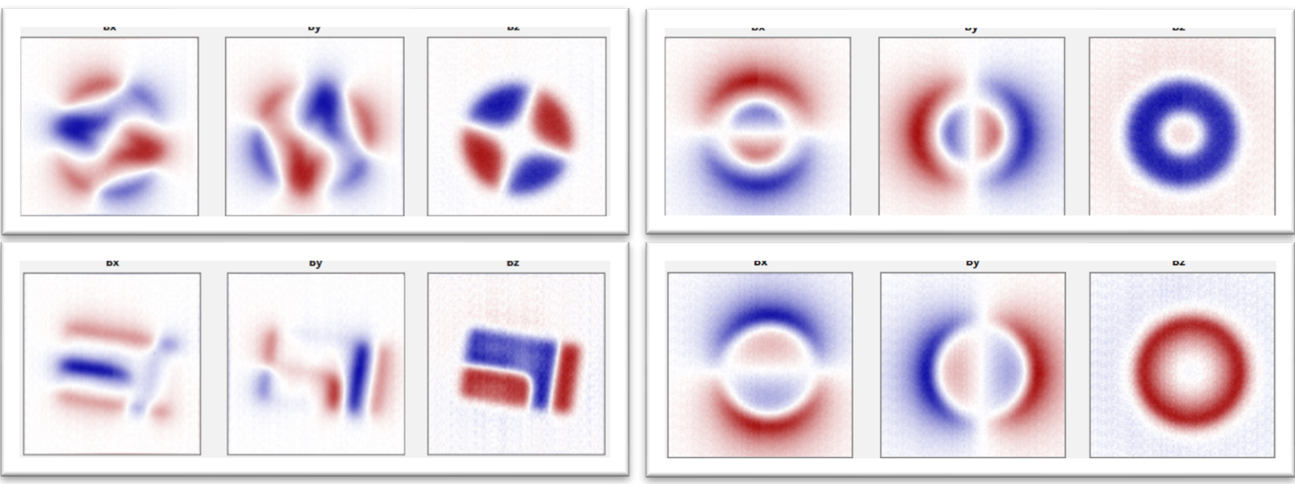


Figure 2: Magnetic Field Measurements acquired with 3DMC Chip

KEY FEATURES:

- Compact chip for easy installation
- Measures all three field components of a magnetic field (Bx, By, Bz)
- Very high magnetic and spatial resolution (16k pixels)
- World's smallest sensitive volume of 27µm x 9µm x 4µm in each pixel

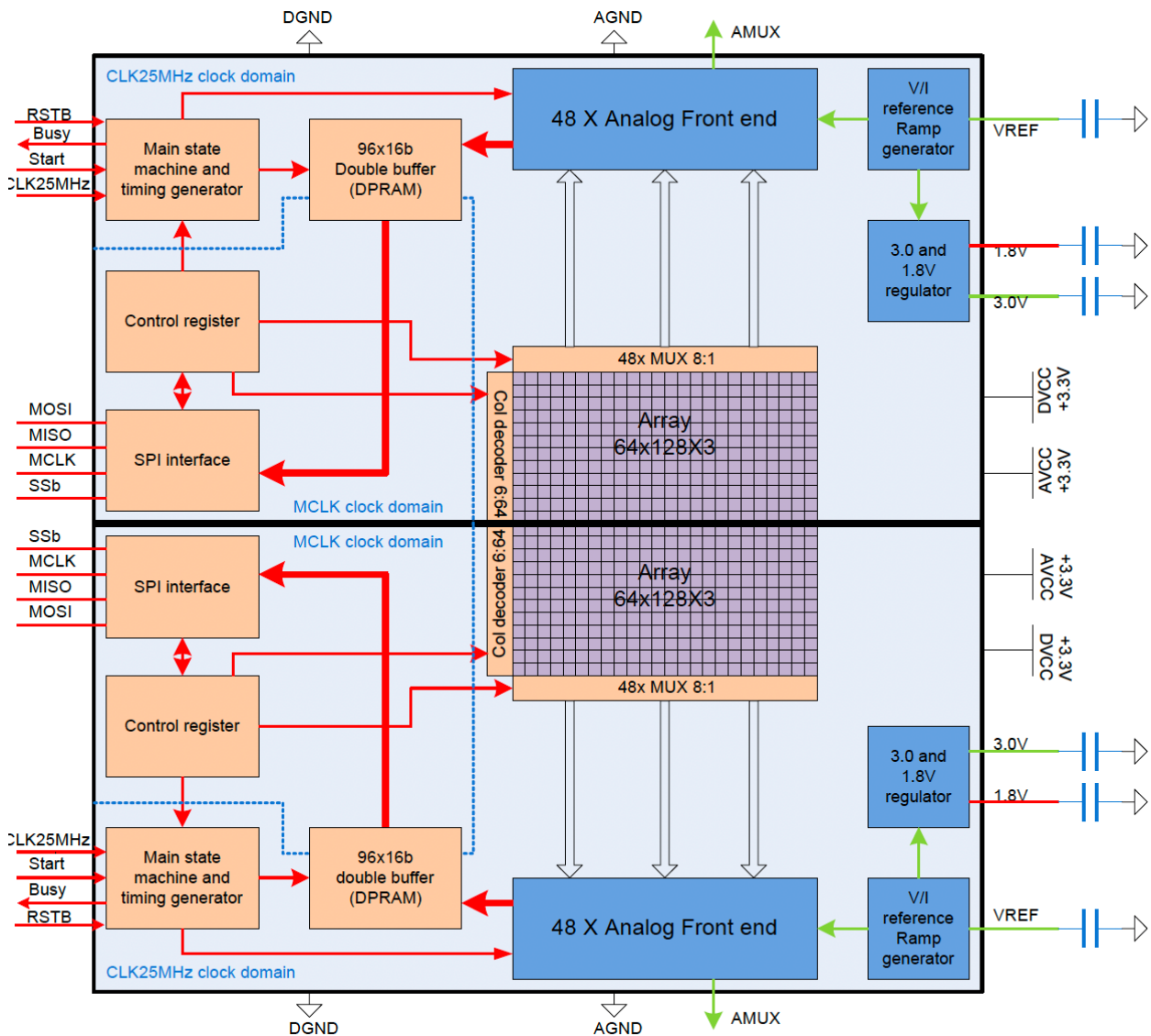


Figure 3: 3DMC Chip block diagram