

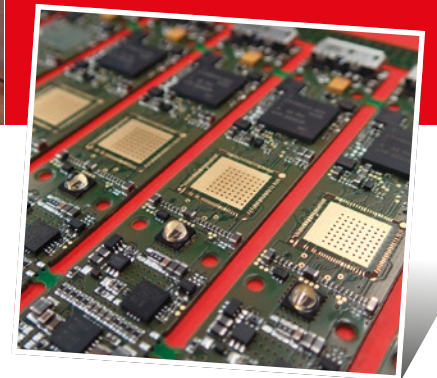
APPLICATION NOTE

Issue 28

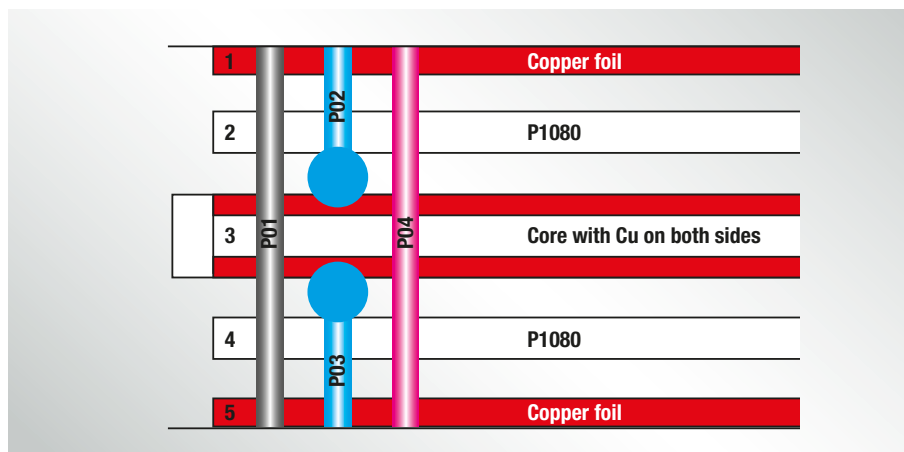
Wire-bonded 3D chip on an ultra-compact circuit board



**Gesture control by
3D camera systems.**



This HDI circuit board is used as a reference module for 3D camera systems. In this example this module allows for the implementation of gesture control. The circuit board is printed on one side and its rear side integrated in an aluminium housing, which is used simultaneously as a refrigeration unit. To guarantee optimum heat dissipation, mechanical thermal vias are placed underneath the chip. To protect the bond wires, a lens holder is glued to the circuit board.



Layer stack-up

At a glance:

- HDI 1 + 2 + 1 circuit board with optimum thermal management
- An SMD assembly coordinated to the wire bonding process
- Positioning and gold wire bonding of the 3D chip
- Lens holder assembly
- Functional testing of the finished module