

Abstract

A chip bonding apparatus comprises a first motion stage (110), a second motion stage (200), a chip pickup element (160), a transfer carrier (170), a chip adjustment system (1000), a bonding stage (420), and a control system (500). A chip bonding method comprises: temporarily retaining chips by means of a transfer carrier (170); accurately adjusting the positions of the chips on the transfer carrier (170) by means of a chip adjustment system (1000); and bonding the chips on the transfer carrier (170) to a substrate (430) in one step. The method implements batch bonding of chips, and greatly improves the efficiency of the flip chip bonding process. By means of batch pickup and batch bonding of chips, the time for chip pickup, the time for accurate chip position adjustment, and the time for chip bonding are balanced, so that the bonding accuracy of the bonding device can be ensured and also the productivity is improved.