

AAE-CNC 2 Test Fixture Production System

The bed-of-nails-fixture for the In-circuit- and Function test comes last in development and quality management, but it can only be built when the development is completed. If the bed-of-nails is contracted out, it often takes two days to get the functional specification document, documentation and the necessary signatures. Delivery times for a bed-of-nails are typically 3–4 weeks. A lot of time is needed for communication between the customer and the manufacturer of the bed-of-nails.

Our new test fixture production system AAE-CNC 2 enables you to produce a complete in-circuit test fixturing incl. wiring within half a day. You drill the exchange plates of the exchange fixtures for loaded electronic PCBs and place the contact pins automatically. Constructing, drilling and placing the contact pins on the bed-of-nails with typically 10-20 μ accuracy incl. wiring takes a few hours only. The bed-of-nails for the contact pins, reference pins, placing devices, maybe IC-Open-probes and polarity probes are drilled out of the data which were calculated and selected from the Gerber files. No offset or other special entries are required when the test fixture production system is set up. The contact pins incl. receptacle are pressed in very accurately with a special tool which is also controlled by the CNC-machine. Depending on the D-codes the system selects contact pins with different plunger tips from the bipartite magazine. Then comes the wire wrap-wiring. For that there are multi-way connectors which are already wrapped so that only the contact pins must be wired. In this way, a test fixture incl. the calculation times for the Gerber files can be finished in about 4 to 6 hours.

With two to three fixtures a year, the investment will be repaid within one year. With such low cost for a bed-of-nails (often less than 500 Euro original costs) bed-of-nails fixtures are cost-effective even for small series.