

Probe Card Motherboards

The board between the card and the tester

When a probe card will not run on a tester, the problem is often neither the card nor the machine but the motherboard between them. It does two jobs at once: mechanically it sets how the card is pressed, aligned and loaded; electrically it sets trace length, impedance control and how many channels actually come out. Probing designs and builds them as ODM for the tester platform and the target card, delivering the contact structure and the routing together.

Key figures

T5830 / T5833 / M5 / V93000	Platforms — Mainstream memory and SoC testers	4,000 pins	Highest channel count — The V93000 configuration
DC and AC (TDR)	Test coverage — AC available on the T5833 FULL configuration	ODM	Delivery model — Designed and built per platform and card

Evidence tiers: delivered, full-load measured, current platform capacity, architecture target - every figure carries one of them.

Specifications

Advantest T5830 • 8 TOM	DC test available; AC test built to order as ODM	Delivered configuration
Advantest T5830 • 32 TOM	DC test available; AC test built to order as ODM	Delivered configuration
Advantest T5833 • FULL	Both DC and AC (TDR) test available	Delivered configuration
Teradyne M5 • SSV / XV	DC test available; AC test built to order as ODM	Delivered configuration
Advantest V93000 • 4,000 pins	DC test available; AC test built to order as ODM	Highest channel count among delivered configurations
Configuration range	8 TOM / 32 TOM / FULL / SSV / XV, up to 4,000 pins	Selected by platform and card type
Contact and routing	Stable contact structure with low-resistance routing	Contact resistance and signal integrity are the board's two basic measures
Other platforms	Boards for T2000, 93K-DD and UltraFlex are assessed per project	A platform outside the delivered list needs a feasibility check first

Test workflow

01	Confirm platform and card	Fix the tester model, the TOM / FULL configuration, and the card's contact structure and signal definition.
02	Structure and routing design	Set the contact structure, contact element type, layer count and impedance targets.
03	Build and assemble	Machine the board, fit the contact elements, and check mechanical fit against card and test head.
04	Verify electrically, then deliver	Run opens, shorts, contact resistance and, where required, TDR on PCT5801 before delivery.

Configuration and acceptance notes

Delivered configurations — 8 TOM and 32 TOM for Advantest T5830, FULL for T5833, SSV / XV for Teradyne M5 and the 4,000-pin configuration for Advantest V93000 have all been designed, built and delivered.

Where AC stands today — The T5833 FULL board carries both DC and TDR AC test. On the other platforms AC is built to order as ODM, not an off-the-shelf capability.

Production deployment — Boards are in production use at several wafer fabs. Customers, unit counts and projects are not disclosed.

Position in the test path — The PCT5801 path runs ATE, relay matrix, motherboard, probe card. A mismatch at any of the four stops whole-card testing, and the motherboard is the link most often underestimated.

Project delivery

Sample evaluation → Technical agreement → FAT → SAT

Contact

Wenlanxin (Shanghai) Semiconductor Technology Co., Ltd. • Probing Semiconductor
4F, Building A, Building 5, No. 6818 Daye Road, Jinhui Town, Fengxian District, Shanghai
kenny@probing.com.cn • +86 13795427077 • probing.com.cn

Every figure in this sheet carries its basis and evidence tier and is provided for technical evaluation; the configuration, performance and acceptance of a formal project follow the technical agreement both sides confirm. Specifications may change with product iteration.