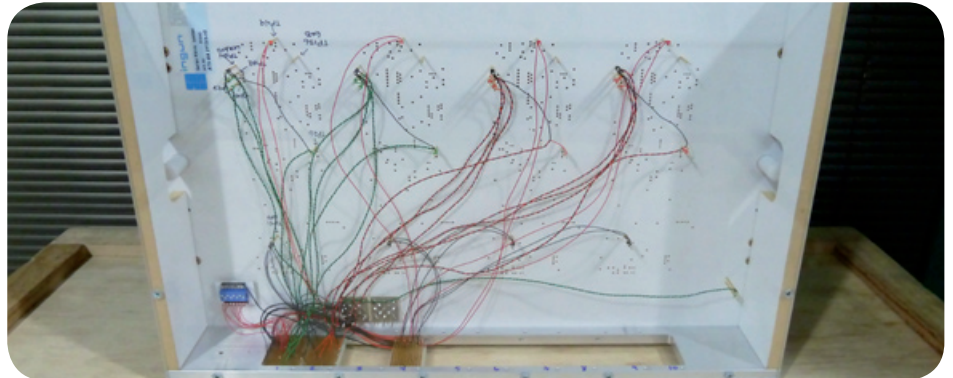


- Dynamic data programming (i.e. serial numbers and serializing routines for panels with a single serial number).
- Easy of integration and programming algorithms as fast as memory technology permits
- Administrator, technician and operator users
- Unique software and hardware features to ensure a low cost model change (from 10 to 15% of initial ISP station investment)
- Data security and LOG file generation for tracking purposes.
- Paperless technical manuals and training for sustaining and new model integration
- Qualified Support Team through TH MX as official and certified SMH and NI distributor
- 3 year warranty on hardware and life time warranty on the application
- Software updates as part of the yearly support contract.
- Ergonomic manual actuation (No vacuum or pneumatics required)
- Reliable Windows OS Workstation
- Electrical parameter testing for shorts test, discharge capacitors and VDC measurements
- Easy way of equipment installing on manufacturing for quick re-layout if necessary (no vacuum or shop air required, standard 120VAC mono phase power supply)

THE SOLUTION

Customer ICT solution was using a single bank Agilent 3070 ICT fixture, two FR01ENG SMH programmers and programming 2 microcontrollers at the same time in 40 seconds. This configuration was implemented due to ICT tester limited resources (only one bank with ICT resources) and ICT fixture space con-



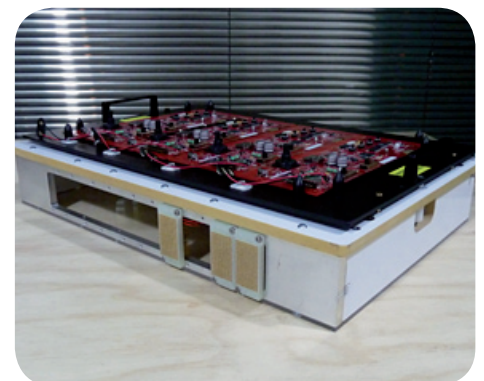
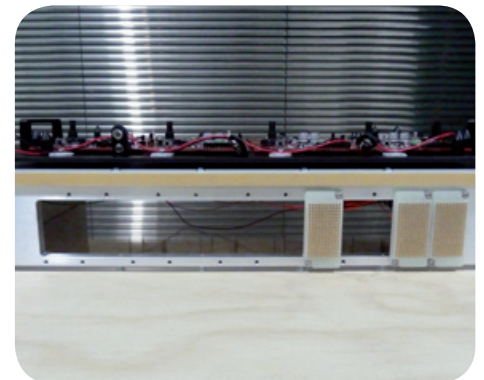
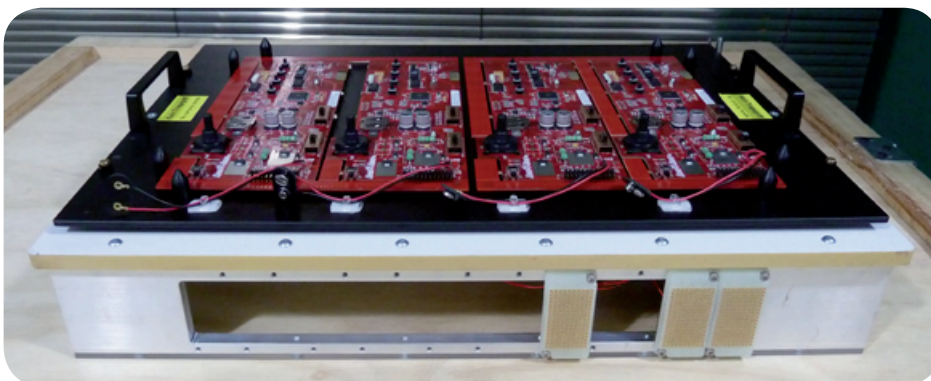
straints (single bank fixture). The MCU programming process with the EZ4000 station is currently taking the same 40 seconds but programming 4 MCU's / PWA's. The EZ4000 is also including the optional features of Electrical parameter testing for shorts (7 seconds for the four PAW's), discharge power (before and after power up) and VDC measurements.

For the EZ4000 station Testing House selected FR04A08 because:

- Galvanic isolation and possible to expand to 16 devices since two FR04A08 programmers are included on the EZ4000 station.
- Programming time with FlashRunner for target microcontrollers is about 40secs and 4 microcontrollers could be programmed at the same time with the FR04 technology.
- Previous used SMH solutions proven to be reliable at manufacturing environment.
- Lower combined (NI, INGUN, TH, SMH)

cost vs. existing programmers and ISP stations with limited expansion features or too expensive to expand.

With the EZ4000 station the throughput is now twice the one achieved on the ICT tester and with 50% of the asset investment as expected by the final customer. SW routines resulted easy to understand for Test Engineers with ICT or functional test background.



ABOUT TESTING HOUSE

Testing House (www.testinghouse.com.mx and www.testinghouse.com) is a global company whose mission is to produce in a creative way satisfied customers by designing, integrating and marketing technology solutions and services for the High Tech Industry through a world class system, formed with highly competitive persons and innovative processes, all managed with a totally human approach. Testing House is committed to continuously and systematically challenge our company IQ and, by being one of the

best places to work, ensure that every person is completely responsible for exceeding the level of service and value expected by our stakeholders. With a strong commitment in the investment on R + D + i which will make the difference in our products and services, reducing also the ecological impact of the High Tech Industry processes, and, at the same time, stimulating our people to make of this innovation process the cornerstone for a higher quality of life

