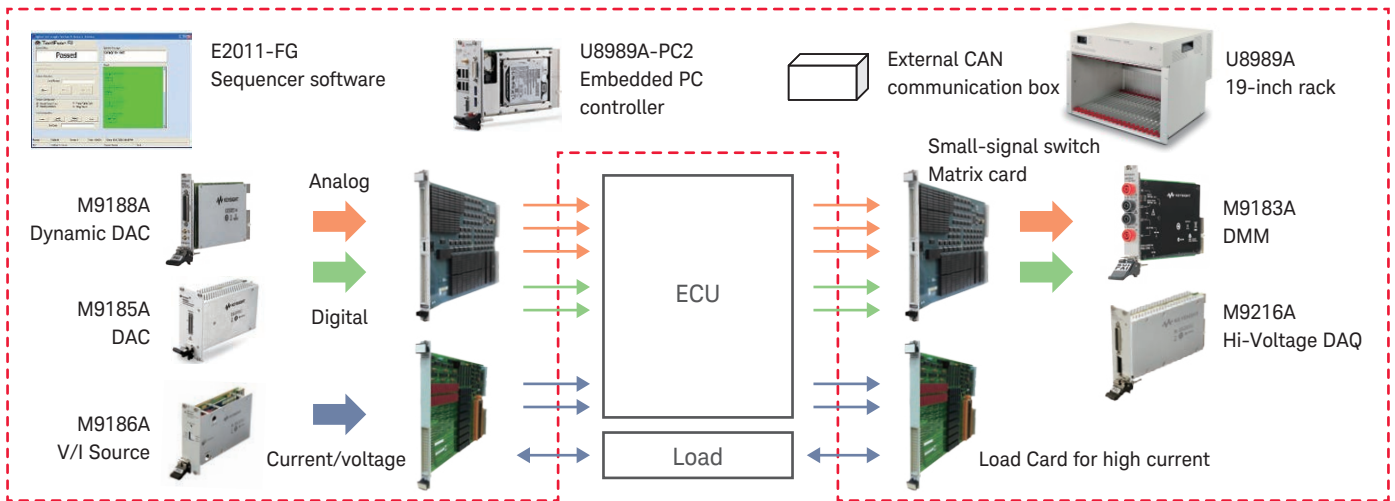


# [ECU Testing]

## Perform Automatic Input/Output Static Characteristics Tests on the Bench

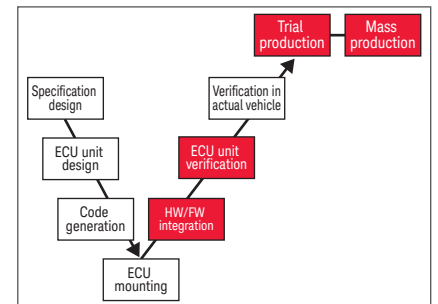
Ever wanted an automatic manufacturing test environment for design evaluation?



ECU automatic function test solution for design verification using TS-8989 function tester

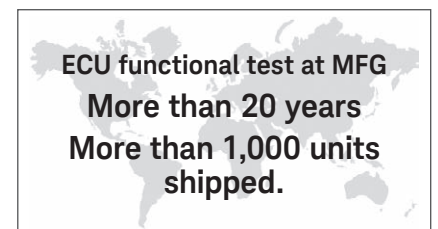
### Automatic function test for integration of design, QA and manufacturing

Are you forced to use HILS in the development environment to check block functions or do you spend a lot of time manually operating checkers and measuring instruments to acquire test data? We fulfill the desire of designers to only a part of the tester functions used in the production line and bring it to design evaluation. We have created a completely new automatic function test environment that improves production efficiency in a common test environment from design evaluation and manufacturing to QA.



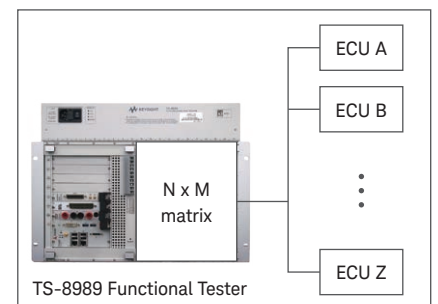
### Worldwide support for 20+ years, shipped 1,000+ units

Are you trying to develop a functional test solution for your ECUs and components? Warranty periods for auto parts commonly exceed 10 years. It is not realistic that a company permanently supports parts that it procured for itself or a test system that it internally developed. There is an option to outsource the tasks to professionals who have many years of experience in support and shipping.



### Universal solution for various ECUs. No need to change configuration.

With Keysight's solution, you no longer need to build a new test each time you design a new ECU. An N x M switching matrix is placed on each ECU pin and all lines connecting measurement equipment and power supply. Even if the pin layout changes, adjustment can be made simply by changing the connection of the switch using the software. This helps reduce the engineering resources and budget needed to develop each function tester and generate a high ROI.



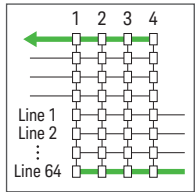
```

testgroup 0500 : Counter
test Checking Counter HP
if bCntr53131 = 1 then
test 0501 : Cntr 50 ohm
test 0502 : Cntr Hi Z
test 0503 : Cntr2 50 ohm
test 0504 : Cntr2 Hi Z
end if

```

### Switch matrix interlocking sequencer software

A test program can be created only by arranging a sequence. Necessary switches are automatically switched with a description of a line for connection between nodes.



### Matrix that absorbs changes in pin layout

24 × N or 16 × N switch matrix enables ECU tests of multiple models. Up to several hundred channels can be connected by adding the required number of cards.



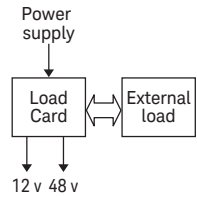
### Module configuration helps ensure flexible extensibility

The measuring section and signal and power line switching all use a card-type module structure. It allows easy creation of a test environment according to the ECU function to be evaluated.

LabView  
C++  
Lab Windows / CVI

### Access from other software environment

Various APIs are released. This allows access from sequencer software of your preferred software environment and creation of an operator mode.



### Power lines can also be constructed as necessary

Multiple power supply systems required for testing can be prepared by combining a Load Card that can supply up to 30 A per channel and an external load.



### Providing further scalability

In addition to the compact use of TS-8989 alone, external hardware such as other measuring instruments, a CAN communication control unit, and PLC can be connected with the TS-8989 sequencer software as the core.

## Typical Configuration

Model Number	Description
U8989 and other	Main unit*1
M9183A	6 ½ digit digital multimeter PXI module
M9188A	16-ch. D/A converter PXI module
E8792A-FG	16 x 32-ch. Matrix card
E6177A-FG	24-ch. 2A Load Card

\*1 The main unit includes E2011-FG TestExecSL sequencer software, U8989A-PC2 embedded PXI PC, U8989A 19-inch rack size mainframe.

Contact / Support:

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: [www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)