NOFFZ TECHNOLOGIES

UTP 9085

FLASH, CALIBRATION, VERIFICATION & PACKAGING SYSTEM FOR NETWORK ACCESS DEVICES (NAD)

PROJECTS

Customer: peiker acustic GmbH & Co. KG,
worldwide leading supplier of communication technologies

End-product: Network Access Devices / LTE modules

Industry: Automotive

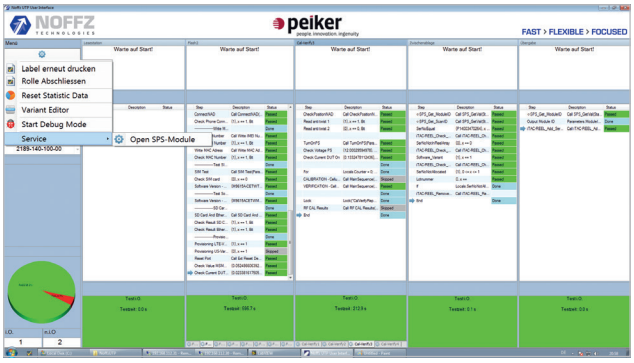
peiker

NATIONAL INSTRUMENTS Platinum Alliance Partner · Solution Partner Automation SIEMENS · TÜVRheinland ZERTIFIZIERT Management System ISO 9001:2015 · csia control system integrators association CERTIFIED

FAST > FLEXIBLE > FOCUSED

PROJECT DESCRIPTION

- Development of a complete system based on the NOFFZ UTP 9085 concept. In one production unit all stages are combined like multiple flashing, calibration, and verification as well as subsequent packaging station
- Programming of 8 DUTs (LTE NAD) in a flash station and parallel calibration/verification of four DUTs in a separate station
- Optional extension to a 16-fold flash station and 8-fold calibration and verification station
- Integration of the testing system into the customer's existing iTAC traceability system
- Connection to the customer's in-house production management software "SN Server"



NOFFZ UTP Test Execution Front-End (TEF) main program

CUSTOMER REQUIREMENTS

- Implementation of a flexible system providing parallel flashing, calibration, verification, and fully automated packaging
- Verification of modules to be performed on another RF instrument than calibration
- Flexible, time-optimised processing of the system control by optimal use of RF measuring technology
- Traceability of the products and variants within the system as well as their packaging on blister rolls with a database solution
- Connection to the traceability system iTAC which should manage the serial number, MAC IDs, etc.
- Compact system design due to the integration into an existiing production line with limited open space

HARD- AND SOFTWARE

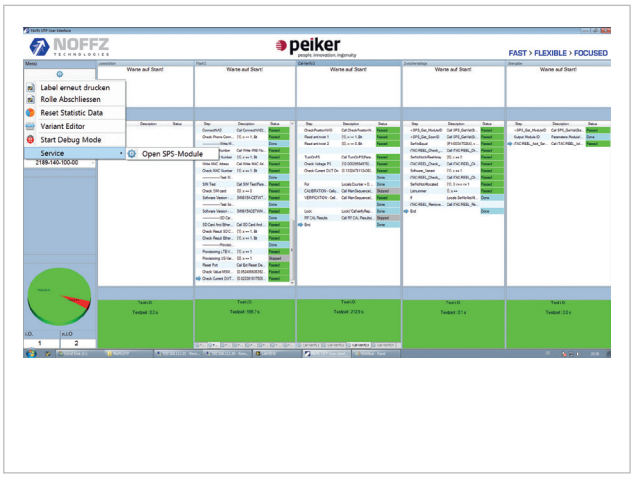
Design and execution of the testing system include the following main measuring and stimuli components (examples):

Hardware components

- Line server with UTP UTP 3012 Siemens IPC647D, touch monitor
- Flash station with UTP 3012 Siemens IPC647D, MXI-Express, PXI 18-Slot 3U chassis to accommodate the measuring and circuit boards, 8x NI PXI-4110 programmable power supply to supply the evaluation boards with a DUT as well as for operational current measurement, with NI PXI-6225 DAQ 80 analog input for the parallel measuring of different voltages and DUT conditions, 2x NI PXI-6509, 96 digital IO card for DUT-In, reverse voltage and IO test
- RF calibration and verification station: NI Wireless Test System (WTS) with dual VST instrument and 16 port RF switching technology as well as further PXI components for supplying and controlling the DUTs

The system's UTP software is organised as follows:

- Line server with the UTP main application as well as the head program with variant management and the database connection to the customers network
- Main PC RF cal/ver 1
- MCT RF cal/ver 1
- IPC flash 1 main
- SPS program for system control
- Expandability: RF cal/ver station 2 and flash station 2



Basic concept for a multi-DUT RF test:
The innovative NI wireless test system

By intelligent linking of different standards and in combination with a UTP 9085 system base a very effective and redundant testing system was created, which is able to simultaneously perform different tasks. It is possible to program the modules on up to 16 individual positions, to calibrate or verify them on up to 8 individual positions and to subsequently shrink-wrap them on a blister roll. The facility allows the fully automated production of a minimum of 500,000 modules per year.

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