

Common Test Platform

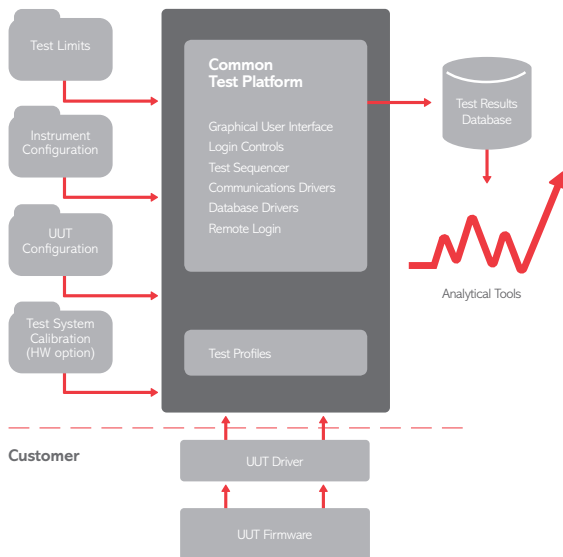
Overview

Benetel can provide a cost effective and on-time turnkey test solution because of our investment in Mass production Test Systems (MTS). At the core is a Common Test Platform (CTP) of software and hardware which we utilize in the rapid delivery of a given MTS. The CTP software has been developed over several years and is focused on accurate RF measurements in mass production. The software is a Test Management, Test Sequencer and User Management platform and has an intuitive GUI which is easily customized to specific applications. The CTP has been developed using National Instruments LabView and Test Stand.

Benetel has shipped test systems for GSM, UMTS-FDD, UMTS-TDD, CDMA2000, GPS, Bluetooth, SRD, 802.11, Broadband wireless, UWB, RFID, Audio and Wireless Video.

CTP Software

There are two version of the CTP software license. The entry level version, suitable for low volume or pilot production, is employed utilizing a single manual test box. The full version license is for parallel testing of a number of units from one test rack and is provided as part of our turnkey solution. .



We have an extensive library of instrument drivers, communication drivers, RF test cases, database drivers and database analysis tools. The customer must provide the UUT driver or a set of API commands to enable Benetel to develop the driver. The following calibration and test profiles are currently available from Benetel:

Test profile	Description	Test Profile	Description
TP-001	UMTS – FDD	TP-012	802.11a/b/g
TP-002	UMTS – TDD	TP-013	GPS
TP-003	CDMA2000 (1xEV-DO)	TP-014	Audio (FM etc)
TP-004	GSM	TP-015	Vision systems
TP-005	EDGE	TP-016	Camera testing
TP-006	DCS1900	TP-017	Medical sensors
TP-007	PCS1900	TP-018	Wireless HDMI
TP-008	RFID	TP-019	Pack & Ship
TP-009	UWB	TP-020	WiMax
TP-010	SRD	TP-021	Bluetooth
TP-011	HSPA		



CTP Hardware

Benetel have a tried and tested configuration for Mass-production Test Systems which is designed to minimize floor area requirements and to streamline the manufacturing process. Our systems have LAN and remote login capability enabling remote monitoring and data analysis. We can maximise throughput by providing fixture automation and parallel test strategies.



Benetel design a range of shielded enclosures, both pneumatic and manual, which form an integral part of the CTP system. The enclosures provide RF shielding of greater than 70 dB which is often essential if the product under test requires Over The Air (OTA) testing in a factory environment. For individual customers Benetel only have to design the internal fixturing of the shielded enclosures for the customers UUT, enabling a fast turn around time.

The pneumatic shielded enclosure currently comes in three sizes:

- BTF-120Small UUT max size 120 x 220
- BTF-130Medium UUT max size 150 x 200
- BTF-140Large UUT max size 200 x 300

CTP Features

Combining Benetel's test hardware and software capability provides the following features:

- Sequential or Parallel Testing
- Programmable number of Calibration Frequencies
- Programmable number of Power steps
- Auto Calibration
- Pneumatic Shield Enclosure Design & Control
- Read and Record Various Software Parameters, e.g.
 - Software Versions
 - Serial Numbers
 - Board ID
- Test System Software Version Control
- UUT Test Limits Version Control
- UUT Calibration Data Version Control
- Current Consumption
- Calibration Temperatures
- I/Q DC offset Calibration
- LO Leakage Measurement
- Transmitter Output Power Calibration
- ACLR Measurements
- Transmitter ALC Calibration
- Modulation Accuracy
- Receiver Sensitivity
- Receiver RSSI
- Record all Calibration Data acquired for each UUT
- Sequencing for UUT parallel Testing
- Store Calibration Data to the UUT
- Storage of all test Results
 - HTML File
 - Excel File
 - Database
 - CSV

The Common Test Platform can be configured to perform all customer requirements. For example, we have drivers for test equipment from different vendors, currently Rohde & Schwarz, National Instruments, Agilent and Keithley Instruments are supported.

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