



The complexity of the TV system architecture increases rapidly with variety of input and output interfaces, multi-formats, supporting different picture size and different frame rates. In addition, current TV systems support various operational modes: PiP, PaP, PaT. As a result, functional and quality testing of TV sets and STBs has become more demanding task, requiring considerable time and human effort.

KEY FEATURES AND BENEFITS

Minimized test time

- This suite is intended for CE industry in order to speed-up testing procedure
- Accurate and complete functional test Suite for digital TV set verification
- Provides fast and objective way to assess the status of expected functionality
- Overnight test execution
- More than 1500 test cases which cover different TV functionality

Flexible business models

Test suite could be delivered as:

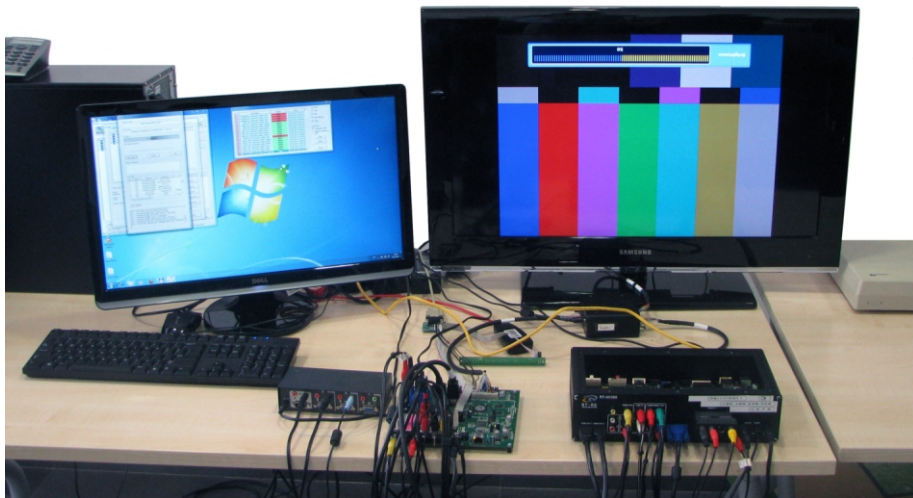
- Hardware and software
- Only software, installed on customer existing hardware
- Testing service in our laboratories

Open Solution

- No time/project limits
- Open for further improvement and modification

In-house TV/STB software design expertise

Since 2001, team of 200+ experts is in this arena implemented various software modules and solutions on different TV/STB controllers: Micronas, Zoran, Broadcom, ST and many more.



Integrated Digital Television Functional Test Suite

RT-TS-iDTV offers integrated solution as functional and stress testing for TV sets.

RT-TS-iDTV combines manual and automated test execution in a single system.

RT-TS-iDTV provides many possibilities to validate product features against requirements.

RT-TS-iDTV is market proven solution with Tier 1 chip vendors (Trident, Micronas, Zoran) and TV set manufacturers (Vestel, Grundig).



Black Box Testing

RT-TS-iDTV

Test Suite example

iDTV Test Summary	Total
	3464
<01> Picture	
Test Set <1>: Picture Setting	480
Test Set <2>: Picture Preference	120
Test Set <3>: Picture Size	140
Test Set <4>: Blue Back	80
Test Set <5>: DNR	80
Test Set <6>: Reset	80
Test Set <7>: PC Setting	340
Test Set <8>: Warm Start (FLASH storing)	320
<02> Sound	
Test Set <1>: NICAM	80
Test Set <2>: Bass Control	80
Test Set <3>: Treble Control	80
Test Set <4>: Balance Control	80
Test Set <5>: HDMI Audio	80
Test Set <6>: Digital Audio Output	80
Test Set <7>: Digital Audio Delay	60
Test Set <8>: Reset	20
Test Set <9>: Warm Start (FLASH storing)	20
<03> Channels	
<ATV>	
Test Set <1>: Auto Channel Scan	3
Test Set <2>: Manual Channel Scan	2
Test Set <3>: Add/Skip Channels	4
Test Set <4>: Favorite Channels	3
Test Set <5>: Channel Labels	3
Test Set <6>: Clear Channel List	6
<DTV>	
Test Set <1>: Input Signal	5
Test Set <2>: Auto Channel Scan	3
Test Set <3>: Manual Channel Scan	2
Test Set <4>: Add/Skip Channels	4
Test Set <5>: Favorite Channels	3
Test Set <6>: Channel Labels	3
Test Set <7>: EPG	3
Test Set <8>: Clear Channel List	6
<04> Settings	
Test Set <1>: First time installation	1
Test Set <2>: Blue Background	3
Test Set <3>: AV Colour	3
Test Set <4>: Auto Shut Off	3
<05> Source Testing	
Test Set <1>: Automatic Source Detection (SCARTs)	8
Test Set <2>: SCART Output (ATV, DTV, Composite and SCARTs)	10
Test Set <3>: Supported Resolutions and Timings (VGA, SCARTs, HDMI, Composite)	154
Test Set <4>: Source List Check (Menu, RC)	40
Test Set <5>: EU AV Input (CVBS, S-Video)	18
<06> ATV Tuning	
Test Set <1>: Manual Tuning (PAL B/G, SECAM L)	230
Test Set <2>: Auto Tuning (PAL B/G, SECAM L)	230
Test Set <3>: Channel naming	2
Test Set <4>: Tuning with no Sound Standard (PAL B/G, SECAM L)	4

<07> Multimedia	
Test Set <1>: USB Recognition	4
Test Set <2>: JPEG viewer	9
Test Set <3>: MP3 Songs	7
<08> DVB Tuning	
Test Set <1>: DVB-C Scan Dialog (default setting)	27
Test Set <3>: DVB-C Manual Tuning (typical channels, 8kHz)	58
Test Set <4>: DVB-C Auto Tuning (Quick and Full scan for typical 8kHz channels)	116
Test Set <5>: DVB-T Scan Dialog (default setting)	6
Test Set <6>: DVB-T Manual Tuning (CH05-CH12, CH21-CH69)	57
Test Set <7>: DVB-T Automatic Channel Scan (CH05-CH12, CH21-CH69)	57
Test Set <8>: DVB-T System in 7MHz channels (QPSK, QAM16, QAM64)	60
<09> DVB Audio Streaming	
Test Set <1>: DVB-C audio supported (MPEG1, AAC, HEAAC, AC3, EAC3)	5
Test Set <2>: DVB-T audio supported (MPEG1, AAC, HEAAC, AC3, EAC3)	5
<10> DVB Video Streaming	
Test Set <1>: DVB-C supported streams (codec, resolution)	15
Test Set <2>: DVB-T supported streams (codec, resolution)	15
<11> Teletext (ATV, DVB-T, DVB-C)	
Test Set <1>: ATV Teletext On/Off	6
Test Set <2>: ATV Teletext Page number	1
Test Set <3>: ATV Subpage Mode Functionality	3
Test Set <4>: ATV Mixed Mode On/Off	1
Test Set <5>: ATV Shortcuts	4
Test Set <6>: DVB-C TXT Functionality	11
Test Set <7>: DVB-T TXT Functionality	11
<12> Language Settings	
Test Set <1>: Menu - Settings - OSD	3
Test Set <2>: Audio - Settings - OSD	3
Test Set <3>: Subtitle - Settings - OSD	3
Test Set <4>: Digital Service - Settings - OSD	3
<13> Parental Settings	
Test Set <1>: PIN	3
Test Set <2>: Maturity Lock	3
Test Set <3>: Child Lock	3
Test Set <4>: Set PIN	3
<14> Timer Settings	
Test Set <1>: Sleep Timer	3
Test Set <2>: Sleep Timer while doing ATS	2
Test Set <3>: Set Current Time	1
<15> Power Management	
Test Set <1>: Switch from Power Off to Standby Mode	1
Test Set <2>: Switch from stand by to power on mode	10
Test Set <3>: Switch from power off to power on mode	2
Test Set <4>: Power Management System Reliability	2
<16> EPG - Electronic Program Guide	
Test Set <1>: Functionality test	9
<17> Miscellaneous Settings	
Test Set <1>: Settings - Software update	1
Test Set <2>: Settings - Common interface	1
Test Set <3>: Front Panel	1
<18> CI - Common Interface	
Test Set <1>: No CI inserted	1
Test Set <2>: CI specific tests	0

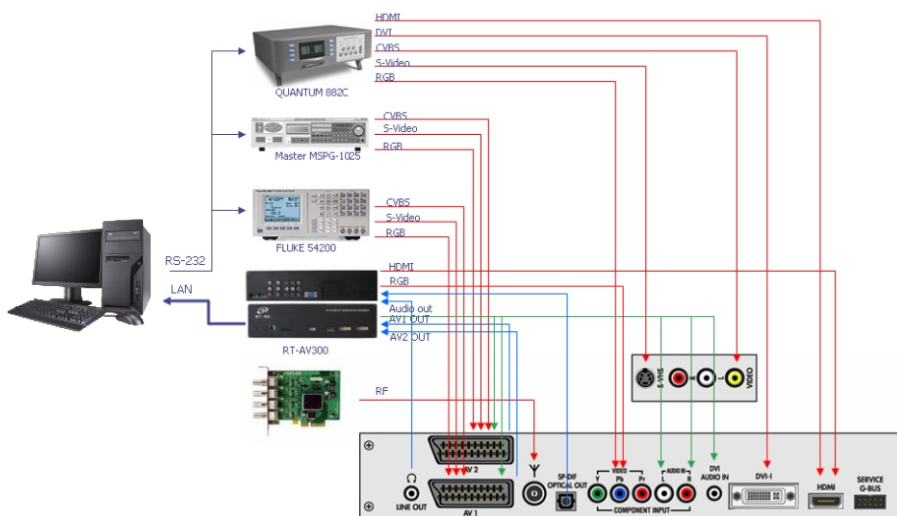
Features

- Clearly defined test cases separated in functional groups
- Covers full set of functional tests for digital TV sets
- Test suite modification and customization on request
- Simple graphical user interface (GUI)
- Supports more than 50 different device (generators, grabbers and algorithms)
- Flexible test environment: complete test setup (SW + HW) or only SW with own equipment
- Test results are stored in local database
- Results are available in different forms: HTML, Excel, etc.

Test Plan and Reporting

- Clearly defined test plan with test definitions, preconditions, expected results and last execution results
- Test execution reports, history reports, report template generator

Test environment



Package

- CD with
 - Documentation
 - User Manual
 - RT-Executor
 - Device drivers
- HASP key
- Test cases
- Hardware
 - RT-AV300
 - PC Workstation*
 - DekTec DTA-115/DTA-107 Card*

*optional

All information and data contained in this product information are without any commitment, are not to be considered as an offer for conclusion of a contract, nor shall they be construed as to create any liability. Product or development sample availability and delivery are exclusively subject to our respective order confirmation form.

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