

# R&S® TS-BCAST DVB-H IP Packet Inserter Compact DVB-H signal generator with integrated IP packet inserter



**75** Years of  
Driving  
Innovation

  
**ROHDE & SCHWARZ**

# R&S®TS-BCAST DVB-H IP packet Inserter At a glance

The R&S®TS-BCAST is a compact DVB-H signal generator with integrated IP packet inserter. It makes it possible to generate a DVB-H data stream from any IP data (e.g. audio and video streams) received via the network interface and to transmit this stream as a radio signal. This DVB-H data stream is required for OMA BCAST test cases. The combination of the new generator with the R&S®CRTU-W WCDMA system simulator and the R&S®CA-AC08 BCAST test cases yields a compact OMA BCAST test solution.

## Key facts

- DVB-H transmit module with integrated IP packet inserter for simple test setups
- Additional ASI interface
- Robust platform based on the R&S®PSL1 industrial controller
- Convenient remote control function
- Built-in transport stream player and recorder

The R&S®TS-BCAST contains all the components that are required to generate a DVB-H transmit signal from any type of IP data (e.g. audio and video streams). The media content provided by an external source is recorded via the generator's Ethernet interface.

The content is then converted into a DVB-H transmit signal without any additional processes and made available to a device under test via the integrated transmitter module. The system can be conveniently remote-controlled by means of the R&S®CRTU-AP01 ATE desktop.

Using the generator's standardized ASI interface, it is also possible to broadcast the DVB-H signal via an optional external DVB-H transmitter. If an external transmitter such as the R&S®SFU is used, additional channel characteristics such as fading can be set.

The built-in transport stream player makes it possible to output any DVB-H transmit signals; the integrated recorder can be used for storing a DVB-H transmit signal for future processing.

## Supported equipment and applications

The BCAST test scenarios can be implemented by means of the R&S®TS-BCAST system. For this application, the R&S®TS-BCAST DVB-H packet inserter is controlled using the R&S®CA-AC08 test scenarios specified by OMA. This creates an easy-to-operate test solution for OMA BCAST test cases.

The R&S®TS-BCAST system supports the R&S®SFU as a DVB-H transmitter. The R&S®SFU makes it possible to convert a DVB-H transport stream into an RF signal and to broadcast this signal.

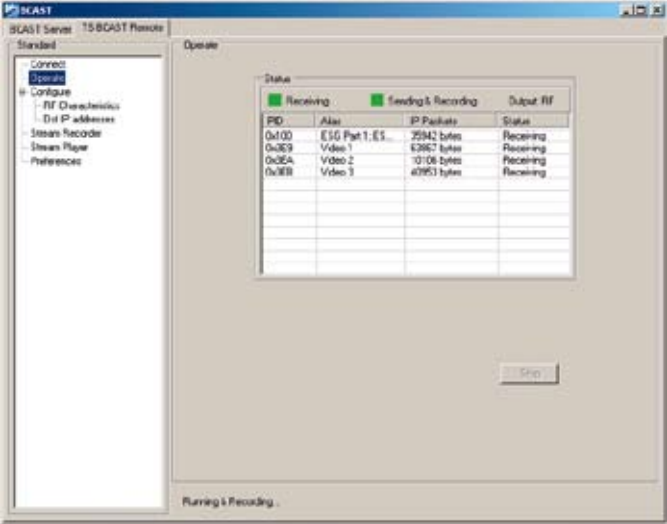
Since the R&S®TS-BCAST system can be used as a pure IP packet inserter, it can generate the required DVB-H transport stream and make it available to the R&S®SFU via the ASI interface.

Rear view of the R&S®TS-BCAST.

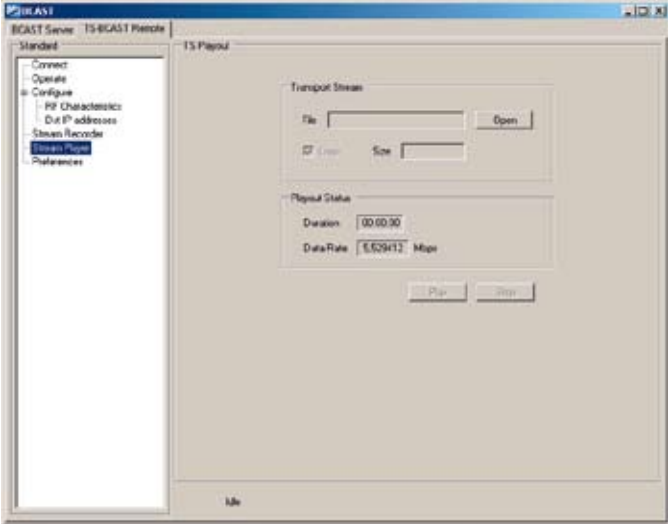


# System configuration

Remote control interface.

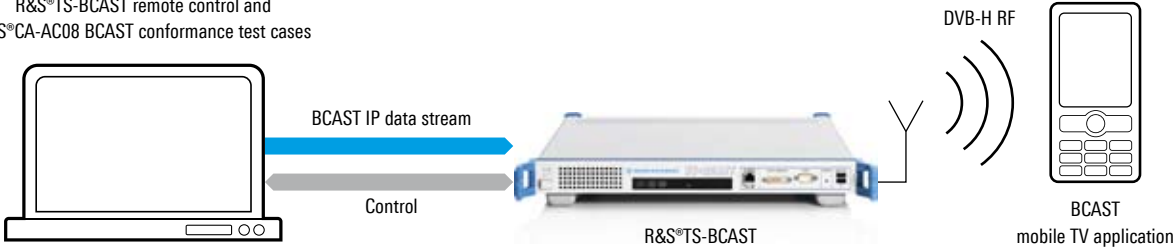


Transport stream player.

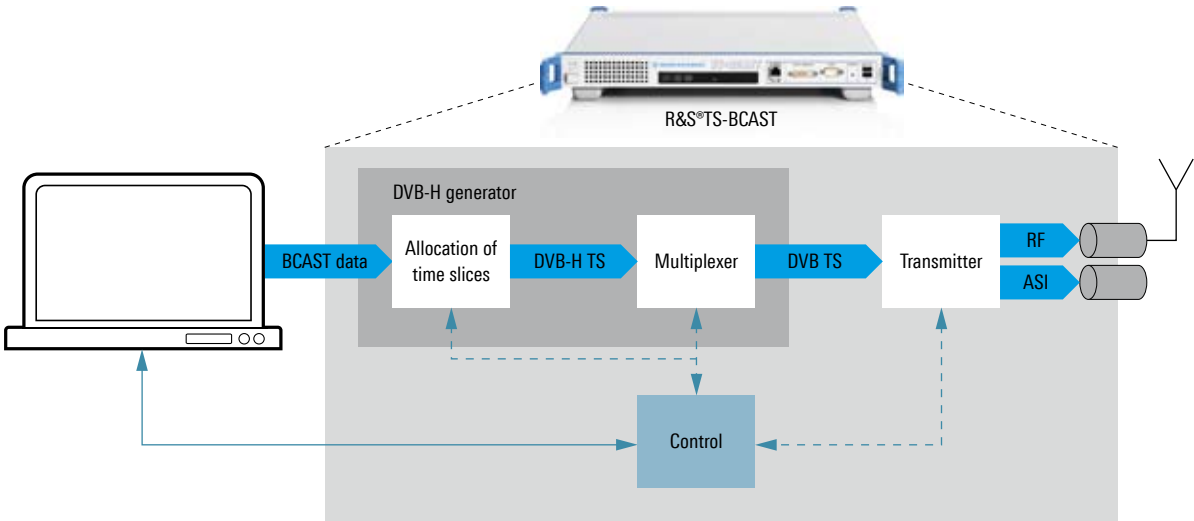


## R&S®TS-BCAST system architecture

Running software components:  
R&S®TS-BCAST remote control and  
R&S®CA-AC08 BCAST conformance test cases



## R&S®TS-BCAST internal system components



# Specifications in brief (see R&S®PSL1 specifications for more details)

Hardware	
CPU	Intel Celeron M processor 370 "Dothan", 1.5 GHz or faster
2nd level cache	1 Mbyte
RAM	1 Gbyte
Drives	
Hard disk	40 Gbyte or larger
CD/DVD combo drive	
CD	up to 700 Mbyte, CD-R read/write 24x/24x or faster CD-RW read/write 24x/10x or faster
DVD	up to 8.5 Gbyte or larger DVD read 8x or faster, DVD write 8x or faster
CD-R read/write 24x/24x or faster	
External interfaces (selection)	
Display	
DVI	max. resolution 1280 × 1024
VGA	max. resolution 1600 × 1200
USB	1 × USB 1.1 (rear), 3 × USB 2.0 (2 × front/1 × rear)
Ethernet	1 × 10/100/1000 Mbit/s, RJ-45 (rear), 1 × 10/100 Mbit/s, RJ-45 (front)

Software	
BIOS	AWARD
Operating system	Linux Embedded

General data	
Operating temperature range	+5 °C to +45 °C, in line with EN 60068-2-1 or -2
Storage temperature range	-25 °C to +60 °C, in line with EN 60068-2-1 or -2
Permissible humidity (+40 °C, non-condensing)	80 % relative humidity, in line with EN 60068-2-30
Electromagnetic compatibility	in line with EMC Directive 2004/108/EC, applied standard: EN 61326 (compatibility in industrial environments; class B)
Electrical safety	in line with IEC 61010-1: 2001 (ed. 2), EN 61010-1: 2001 (ed. 2), UL61010-1 (ed. 2), CAN C22.2 No. 61010-1-04
Power supply	100 V to 240 V (AC) ±10 %, 1.2 A to 0.15 A, 50 Hz to 60 Hz
Power consumption (base unit)	approx. 35 W
Dimensions (W × H × D)	465.1 mm × 59.6 mm × 517 mm (19", 1 height unit) (18.31 in × 2.35 in × 20.35 in)
Weight (base unit)	approx. 5 kg (11.02 lb)

DVB-H output signal	
Main characteristics	
Frequency bandwidth	47 MHz to 862 MHz ± 1 ppm
Channel bandwidth	5 MHz, 6 MHz, 7 MHz, 8 MHz
MER	~ 40 dB
RF step width	100 kHz
Signal-to-noise ratio (S/N)	typ. 44 dB at 474 MHz
RF output	
Return loss	> 15 dB (47 MHz to 862 MHz)
Output power (QAM)	-31.5 dBm to 0 dBm ± 1 dB
Output power (OFDM)	-34.5 dBm to -3 dBm ± 1 dB
Phase noise	< -90 dBc at 10 kHz
Spectral purity	> 50 dB (47 MHz to 862 MHz)
DVB ASI output	
Return loss	> 15 dB (5 MHz to 270 MHz)

## Recommended features of the remote control PC

Operating system	Windows XP
CPU	at least Intel Pentium 4 (or comparable CPU)
CPU capacity	min. 1 Gbyte
Hard drive capacity	min. 200 Mbyte
Remote control interface	fast Ethernet (100 Mbit/s)

# Ordering information

Designation	Type	Order No.
DVB-H IP Packet Inserter	R&S®TS-BCAST	1510.8192.02
BCAST Test Scenarios	R&S®CA-AC08	1204.5457.02

The data sheet containing R&S®PSL1 specifications is available under PD 0758.2219.22 and at [www.rohde-schwarz.com](http://www.rohde-schwarz.com).

Your local Rohde&Schwarz sales partner will be glad to help you find the optimum configuration for your requirements.

You will find your local contact at  
[www.sales.rohde-schwarz.com](http://www.sales.rohde-schwarz.com)

## Service you can rely on

- In 70 countries
- Person-to-person
- Customized and flexible
- Quality with a warranty
- No hidden terms

## About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

## Environmental commitment

- Energy-efficient products
- Continuous improvement in environmental sustainability
- ISO 14001-certified environmental management system

Certified Quality System  
**ISO 9001**

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