

Keysight Technologies

Digital Video and Broadcast Audio Measurement Solutions

Meet the test challenges of digital broadcasting

With the transition from analog to digital broadcasting, testing transmitter and receiver devices has become more complex than ever. Digital broadcasting includes many layers—from the application layer with raw audio/video data compression (MPEG-2, MPEG-4, H.264, AAC, AAC-HE), to the transport layer with streaming and multiplexing (MPEG2-TS), to the physical layer with new standards such as DVB-T/H/T2, DVB-C/C2, ATSC, ISDB-T, and CMMB. To keep pace with this rapidly evolving market, you need a test and measurement solution that is at the forefront of broadcast technology.

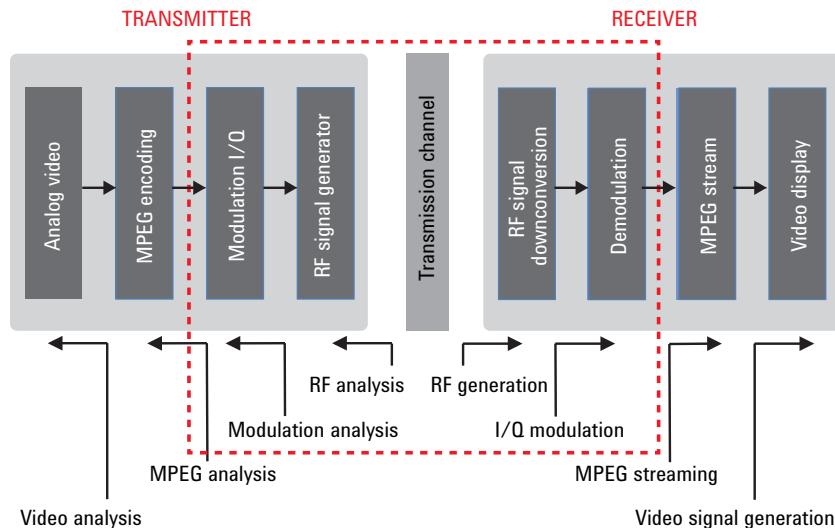


Figure 1. Digital video solution by test segment

Keysight provides comprehensive solution in digital video and broadcast audio test

Keysight Technologies, Inc. is continuously tracking the broadcasting market as a member of DVB Consortium, WorldDMB Forum, and CMMB Work Group. Whether you are working with terrestrial TV, mobile TV, cable TV, satellite TV, or broadcast audio standards, Keysight has a measurement solution for you. From high-performance to cost-effective signal generation and analysis tools and applications, Keysight supports your transmitter and receiver test needs with:

- Easy-to-configure reference signal source for receiver test
- Full conformance test including C/N performance test, fading test, interference test, impulse noise test, and more
- One-button, standard-based power and modulation analysis capabilities to help you design, evaluate, and manufacture modulators, transmitters, amplifiers, tuners, and repeaters
- Support for single frequency network (SFN) simulation and network assurance test

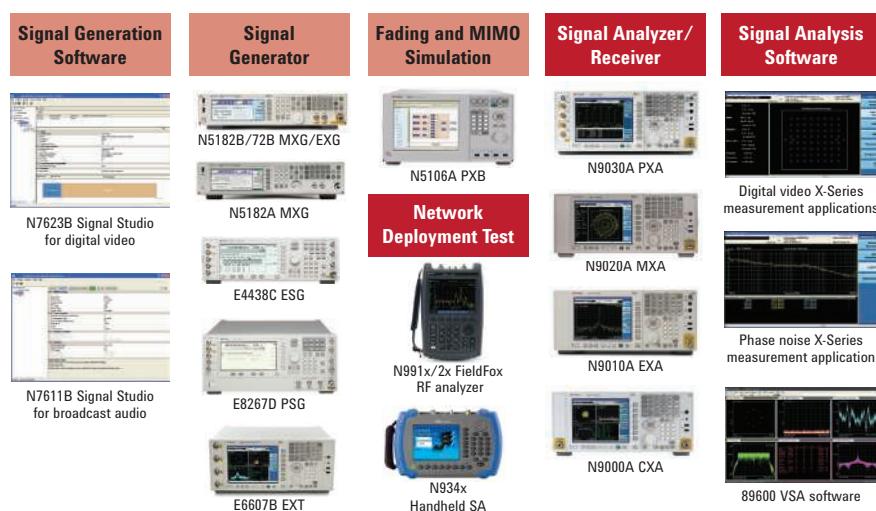


Figure 2. Keysight digital video solution portfolio

Signal Generation Solutions

Signal generators with industry-leading RF performance

- MXG and EXG X-Series signal generators provide industry-leading performance, low cost of ownership, and support for real-time baseband generation
- The PXB baseband generator and channel emulator delivers full performance test including real-time fading, AWGN, MIMO, and interference tests

Multiple audio, video, and wireless formats on one platform

- Digital video real-time signal generation supports DVB-T/H/T2/C/S/S2, ISDB-T/T_B/T_{SB}
- Digital video waveform supports DVB-T/H/T2/C/S/S2, ATSC, ATSC-M/H, DTMB (CTTB), CMMB, J.83 Annex A/B/C, DOCSIS DS, ISDB-T/T_B/T_{SB}/Tmm, T-DMB, and S-DMB
- Broadcast radio supports AM/FM, FM stereo/RDS/RBDS, DAB/DAB+, and DMB-audio
- Wireless communications supports GSM, W-CDMA, cdma2000®, LTE, WLAN, *Bluetooth*®, and more

Flexible waveform creation with multiple payload types

- Digital video supports MPEG-TS as input for subjective evaluation
- Broadcast audio supports WAV, MP2, or AAC+ audio file, as well as ETI or STI stream file for subjective evaluation
- Provides ColorBar demo files, audio sample files, and ETI demo stream files for subjective tests
- Performs BER tests with fixed data (All 0s, All 1s, PN9/15/23) or user-defined data patterns

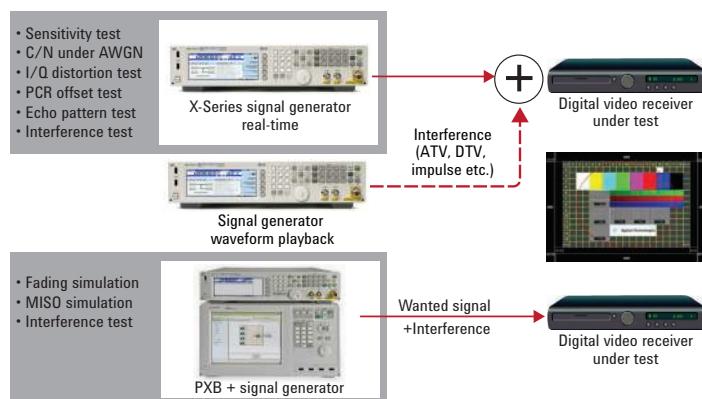


Figure 3. Keysight digital video signal generation solution

Signal Analysis Solutions

X-Series signal analyzers evolve with your test needs

- Keysight X-Series signal analyzers—PXA, MXA, EXA, and CXA—offer a range of performance to satisfy your business and technical requirements across multiple products and programs, now and in the future
- X-Series signal analyzers feature an upgradeable processor, memory, connectivity, and more, so you can keep your test assets current and extend instrument longevity
- Each X-Series instrument offers identical operation—user interface, programming code, test results—so you'll achieve measurement integrity across your organization and drive more productivity

X-Series measurement applications

- All RF transmitter measurements as defined by the standard, as well as a wide range of additional measurements and analysis tools, are available with a press of a button
- Simplify system test with RF power measurements, spectrum emission mask, digital demodulation, and general spectrum analysis in one analyzer
- Applications offered in fixed and transportable licenses (PXA, MXA, and EXA)
- Measurements are fully remote controllable via the IEC/IEEE bus or LAN, using SCPI commands

Multiple audio, video, and general purpose measurement applications on one platform

- X-Series digital video measurement applications supports
- DVB-T/H/T2, ISDB-T/T_B/T_{SB}/Tmm, CMMB, DTMB (CTTB), Digital Cable TV (DVB-C and J.83/B)
- Flexible demodulation supports DVB-S/S2, ATSC, ATSC-M/H (support with N/W9064A-2FP or 89601B-AYA)
- Custom OFDM supports DAB/DAB+/T-DMB (support with 89601B-BHF)
- Performs phase noise, noise figure, EMC, flexible digital demodulation, analog demodulation measurements

To learn more, contact your Keysight sales representative at www.keysight.com/find/contactus or (800) 829-4444

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