



# **Guide to DVB-H @ IBC 2006**

**Compiled by the DVB Project Office**

DVB-H is the leading global technology standard for digital mobile TV. The unparalleled broad industry support for this non-proprietary, open standard has hastened the commercial launch of DVB-H Mobile TV services around the world. Services are now on air in Italy with launches to follow in Finland, Germany, the Russian Federation, Spain and the USA.

DVB-H is live on-air throughout the RAI for IBC 2006. The DVB Project Office, with the support of SIDSA, National Grid Wireless and Meir Comunicaciones, is transmitting a live, unencrypted DVB-H service on UHF channel 24 using the DVB-IPDC specifications. The transmissions are being received by many companies around the exhibition and a range of receivers can be seen on the DVB Pavilion (1.481). Many other exhibitors are also delivering live DVB-H transmissions - see the table below for details.

Company	Stand	Description of Demonstration
<b>Advanced Broadcast Components Ltd.</b>	5.311	SAM-Suite to analyse TS, FLUTE/ALC, ESG, and to measure the distribution chain with terrestrial, satellite, and ASI adaptors.
<b>Alcatel</b>	4.246 M331	Alcatel's Unlimited Mobile TV: a hybrid terrestrial and satellite broadcast delivery solution using DVB-H in S-Band and reusing cellular networks.
<b>Anritsu Corporation</b>	12.200	For DVB-T/H, the MS8911A is suitable for installation and maintenance and the MG3700A is a signal generator for manufacturers.
<b>Audemat-Aztec</b>	8.388	NAVIGATOR and GOLDENEAGLE enable mobile measurement campaigns for DVB-H/T as well as quality and continuity monitoring of a DVB transmission.
<b>Axcera</b>	M236	Integrated DVB-H transmission systems including Axcera transmitters and site controllers, along with IP encapsulators.
<b>Axel Technologies</b>	1.130	A mobile TV software provider, Axel demonstrates DVB-H/DVB-IPDC compliant middleware "Salmonstream Mobile" on two platforms.
<b>BenQ Mobile</b>	M331 9.240	Live Mobile TV demonstration with DVB-H / IPDC compliant concept device. Focus on interoperability, enhanced user interface, media management, time shift, podcasting and interactive TV services.
<b>Cardinal Systems</b>	8.504	Complete DVB-H Broadcast and Service System, DVB-H Middleware as well as live 18Crypt Service Protection.
<b>CellMetric</b>	1.481	Modus 3 Mobile Video RF Network Emulator; Radius 4 DVB-H Micro Base Station; both use software defined radio for flexibility and upgradeability.
<b>DiBcom</b>	3.320	New DVB-T/H demodulator chip family with integrated tuner; DVB-H demos; highly integrated low cost diversity solutions for deep indoor reception of Mobile TV on PCs .
<b>Digital TV Centre of Ramon Llull University, La Salle</b>	6.004	Multimedia content delivery over DVB-H/-T/IP using MPEG-21 Digital Item Streaming (ISO/IEC 21000-18), allowing the implementation of multichannel interactive TV and DRM.
<b>DMT System</b>	8.341	DMT's transmitters and repeaters are specially suited to DVB-H and can be integrated in complete turnkey systems. At IBC DMT is broadcasting a multiplex in which DVB-T and DVB-H contents are combined.
<b>DTVinteractive</b>	M231/3	DVB-H Signal Generator and DVB-H Signal Analyser with various DVB-H receivers. In particular, FLUTE, ESG, Container and Error Detail analysis.
<b>ECRESO</b>	8.365	EMAA DVB-T/DVB-H transmitters and repeaters from 0,5 to 200W and including an embedded website as well as SNMP functions.
<b>ELTI</b>	4.250	Broadcast RF solutions and equipment for analog and digital networks including the HALO SFN gap-filler.

<b>ENENSYS Technologies</b>	3.430c M 323/4	Live, end-to-end DVB-H Content Delivery: DVB-H IP Encapsulation, SFN Adaptation, all-IP Primary Distribution to DVB-H Mini-Transmitters (IP input, 1W output power).
<b>Envivio Inc.</b>	1.550	Envivio demonstrates the 4Caster M2 MPEG-4 AVC/H.264 encoder as part of a complete DVB-H system, featuring a live DVB-H transmission of complex content compressed live and displayed on a DVB-H handset.
<b>Expway</b>	M323 M324	FastESG, the first ESG broadcast over a commercial DVB-H network. Convergence between DVB-H and 3G networks. Expway's interactivity solutions for DVB-H.
<b>Fraunhofer Institute for Integrated Circuits (IIS)</b>	M230 8.380	DVB-H player SDK for Windows CE and embedded Linux based devices offering an integration of ISMACryp and operating with DVB-H receivers via IP-interface.
<b>Frontier Silicon Limited</b>	M216	Demonstration of Frontier Silicon's "Paradiso" multi-standard receiver decoding DVB-H live off-air from IBC transmissions.
<b>Harmonic Inc.</b>	1.361	New DiviCom Electra HD and SD H.264 multi-service encoders deliver superior quality video at ultra-low bit-rates for applications including mobile video using DVB-H.
<b>Harris</b>	7.621 M225	Active demonstration of the Atlas DVB-T/DVB-H platform, using Atlas liquid-cooled transmitters, delivering HD, and H.264 mobile content received on a handheld device.
<b>IBM</b>	2.120	Converged Broadband & Cellular Mobile TV - integrating broadcast DVB-H TV with contextual search and interactive services.
<b>Icareus Ltd</b>	1.130	Interactive MobileTV platform especially targeted at local DVB-H networks and interactive services; also for the testing of MobileTV services.
<b>InterVideo Inc.</b>	M255	iMobiä DVB-H software solutions for handheld devices and PC - includes tuner integration, multimedia codec, DVB-H middleware, ESG parser, and reference DVB-H application.
<b>Irdeto</b>	1.459 M244	Plsys for mobile, a Service & Content protection solution for mobile broadcasting networks such as DVB-H; also showing a range of mobile devices.
<b>Iwedia</b>	4.358	Already widely deployed in terrestrial iTVs and set-top boxes, Comedia for DVB-H is aimed at DVB-H-enabled handheld devices, for which it provides a DVB-IPDC-compliant system layer.
<b>MAINDATA</b>	M223	DVB-H Platform; DVB-H IP Encapsulator with TS Player and Video Streaming Server; AV Encoder H.264, ASI to IP Adapter Pro-MPEG FEC included.
<b>MAYAH Communications</b>	1.231	IO [io] 8000/8001 Audio Video MPEG-4 En/Decoder deployed during DVB-H trials in Germany as AVC/H.264 encoder.
<b>Motorola, Inc.</b>	1.558	Experience mobile TV, live at IBC. Motorola provides and services end-to-end DVB-H solutions, tailored for broadcast and cellular operators alike.
<b>Nagravision - Kudelski Group</b>	1.469 M240	Mobile TV and Mobile Media security solutions and featuring a live demonstration of 3 Italia world first DVB-H commercial services.
<b>NDS</b>	1.171 M322	Content protection (DRM) and service protection (CA) for mobile TV on DVB-H, featuring NDS's mobile VideoGuard and EPG capabilities
<b>NEC Corporation</b>	8.291	DTV transmitter family supporting both DVB-T and DVB-H. Demonstration of remote monitoring and N+1 resilience.
<b>NEC Electronics</b>	1.554 M331	Mobile phone processor, MP211, running an H.264/AVC decoder for DVB-H. An NEC transmitter supports the Siemens' DVB-H transmission at the bmco-Forum stand.
<b>Newport Media Inc.</b>	M221	Live demonstrations of Newport Media's DVB-H IC solution in a variety of portable products including a dual band GSM handset.
<b>Nokia</b>	4.241 M224	Nokia Mobile Broadcast Solution enabling live end-to-end DVB-H Mobile TV and filecast services with interactivity. DVB-IPDC and OMA BCAST (pre-standard) ESGs in parallel.
<b>PacketVideo</b>	M234	PacketVideo's pvTV mobile broadcast video DVB-H solution featuring time shifting and picture in picture capabilities, based on TI's Hollywood chip and OMAP processor.

<b>Penthera Technologies, Inc.</b>	3.320 M225/ 236/255	With partners, Penthera Viewer, a mobile client application that supports multiple DVB-H IPDC implementations, including H.264, VC-1 and Windows DRM over UHF and L-Band.
<b>ProTelevision Technologies</b>	4.240	Live DVB-H transmission to several DVB-H receivers/phones - using ProTelevision's DVB-H modulator.
<b>Quantum spa</b>	1.683 3.320 M323/4	Live DVB-H reception on the QTM 1000, a handheld Pocket TV specifically designed for DVB-H services - high resolution WQVGA 4.3" 16/9 display and PayTV access (USIM/UICC reader and NagravisioN KDA).
<b>Rohde &amp; Schwarz</b>	8.250 M132	Live DVB-H playout with statistical multiplex: generation, transmission and real-time analysis of the DVB-H signal in detail, and decoding with a mobile receiver.
<b>RRD</b>	5.141 8.215 8.301	Along with partners ScreenService, IRTE and Accenture, RRD demonstrates its DVB-H mobile TV solution (DVB-H gap filler) with live reception of DVB-H services.
<b>Samsung Semiconductor Europe GmbH</b>	M121	DVB-H receiver chip set with live demonstration of several 3rd-party DVB-H platform and software solutions.
<b>Scientific Atlanta, a Cisco Company</b>	1.471	Integrated DVB-T and DVB-H transport solutions.
<b>Siano Mobile Silicon</b>	M255	Multi-band multi-standard mobile TV receiver, the SMS1000 - the basis for a variety of devices and platforms demonstrated.
<b>SIDSA</b>	12.311 M133	End to End solution for DVB- H services - headend and terminal reference design including the demodulator chip, LOREN.
<b>Siemens</b>	9.240 M331	Live DVB-H broadcast solution focusing on interoperability with devices from major manufacturer,s based on the DVB-IPDC standard; with advanced interactivity services.
<b>Silicon &amp; Software Systems</b>	M331	Showcasing interoperability and interactivity enabled with the onHandTV DVB-H client stack deployed on multiple mobile and portable devices.
<b>Sofia Digital</b>	2.101	Mobile Digitext, Starter Kit for Mobile TV, on-demand services, channel management and interactive game channel.
<b>Sony Corporation</b>	M331 9.410	Complete DVB-H solution featuring an ultra small, low power semiconductor receiver with Application Processors and Software from partners.
<b>Tata Elxsi Limited</b>	3.108	HandyDVR - mobile TV on laptop featuring basic PVR and recording on-the-go, powered by Tata Elxsi's DVB-IPDC stack with full ESG support.
<b>TeamCast</b>	3.430e M311/13	Complete OEM transmission technology range for mobile TV, including GFX-3000, an engine for building advanced gap-fillers and repeaters; demonstrating live DVB-H transmissions.
<b>Tektronix</b>	9.429	Monitoring and analysis of DVB-H signalling, tables and descriptors extracted from DVB-T multiplex transport transmissions.
<b>Texas Instruments</b>	M234	TI's Hollywood chip and OMAP processor featuring time shifting and picture in picture capabilities with PacketVideo's pvTV.
<b>Thomson</b>	11.551	End-to-end mobile TV solutions - including the new Elite TV Transmitter; live DVB-H demonstration of video delivery, push VOD & interactive services on mobiles.
<b>UDcast</b>	1.493 M238	World premiere of the DVB-H iSplicer: flexible mobile TV satellite backhaul, DVB-H Analyzer broadcast monitoring, and IP Encapsulators.
<b>Viaccess</b>	1.151	purple-TV, a mobile TV content protection solution based on DVB Open Security Framework, is showcased with a DVB-H handset

The DVB Pavilion at IBC 2006 is in Hall 1 at 1.481. Alongside live DVB-H reception and demonstrations from a number of companies, specifications and other documentation are available and DVB experts are on hand to answer questions concerning DVB technology.