

## KEY ADVANTAGES

MediaFLO technology offers unique advantages for a compelling mobile TV service without compromise.

**Channel Capacity:** Enhanced time and frequency diversity, statistical multiplexing and variable bit rates result in extra capacity for additional programming options

**Fast Channel Switching:** Approximately 2 seconds between channels

**Video Quality:** QVGA live streaming video, up to 30 frames per second

**Power Optimization:** ~4 hours viewing time with a standard 850 mAh battery

## ADDITIONAL FEATURES

**Value Added Services:** Includes IP Data Services, Clipcasting and integration of interactive applications

**User Interactivity:** Live viewer feedback, music and video offerings, ringtones, games, browser-based content and SMS can be integrated

**Usage Tracking:** Analysis of viewing habits or demographics of user community

**Local and Wide Area Support:** Subscription-based national and local or regional services supported simultaneously in a single frequency network

**Content Security:** Secured through authentication, authorization and conditional access procedures



[www.mediaflo.com](http://www.mediaflo.com)  
[mediaflo@qualcomm.com](mailto:mediaflo@qualcomm.com)

Qualcomm Incorporated  
5775 Morehouse Drive  
San Diego, CA 92121 U.S.A.

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MediaFLO™

## Quick Facts

## MEDIAFLO™ TECHNOLOGIES

MediaFLO Technologies, a division of Qualcomm Incorporated, is responsible for the engineering and development, as well as the international marketing and deployment of the MediaFLO system.

## THE MEDIAFLO SYSTEM

The MediaFLO system is a mobile broadcast platform designed for the delivery of high-quality entertainment and information services.

Purpose-built for mobility, the MediaFLO system provides increased capacity and coverage, as well as reduced costs for the mass market delivery of multimedia content to an unlimited number of mobile devices.



## FLO™ AIR INTERFACE— A GLOBAL, OPEN STANDARD

**FLO Forum:** A global, multi-company initiative that promotes the standardization of FLO technology. Published standards include:

### TIA:

- TIA-1099 FLO Air Interface
- TIA-1102 FLO Minimum Performance Specification for Devices
- TIA-1103 FLO Minimum Performance Specification for Transmitters
- TIA-1104 FLO Test Application Protocols
- TIA-1120 FLO Transport Specification
- TIA-1130 FLO Media Adaptation Layer Specification
- TIA-1132 FLO Repeater Minimum Performance Specification
- TIA-1146 FLO Open Conditional Access (Open CA) Specification

**ETSI:** Published TS 102 589, “Forward Link Only Air Interface; Specification for Terrestrial Mobile; Multimedia Multicast”

**ITU:** ITU Recommendation BT.1833 on “Broadcast of multimedia and data applications for mobile reception by handheld receivers” is under final approval

## GLOBAL SUCCESS— DEPLOYMENTS AND TRIALS

### USA

- Verizon Wireless (CDMA carrier)  
Deployed mobile TV service in 2007
- AT&T (GSM/UMTS carrier)  
Deployed mobile TV service in 2008

### United Kingdom

- Two trials completed with BSkyB (Cambridge and Manchester)
- Physical layer field performance measured ~4.5 dB better than other technologies for non-layered modes with comparable bit per second per hertz capacity

### Japan

- Joint venture with KDDI (CDMA carrier) — MediaFLO Japan Planning Inc.
- Drive test conducted with Toyota Motor Corporation

### Taiwan

- Completed technical trial with CNS and TTV
- Completed friendly user trial with both WCDMA and C2K operators

### Hong Kong

- Trial conducted in Hong Kong with PCCW

### Malaysia

- Trial completed in Kuala Lumpur with Astro and Maxis

## TECHNOLOGY CHARACTERISTICS

<b>Frequency</b>	UHF and L-bands (other bands such as VHF may be supported)
<b>Range</b>	470-862 MHz / 1452-1492 MHz
<b>Channels</b>	At 9.9 dB C/N: 17-19 channels in 5 MHz 21-23 channels in 6 MHz 25-28 channels in 7 MHz 28-32 channels in 8 MHz
<b>Transmission</b>	Orthogonal Frequency Division Multiplexing (OFDM)
<b>Constellation</b>	QPSK, 16-QAM and layered modulation
<b>Data rate</b>	~250 kbps average bit rate per channel (video + audio)
<b>Network</b>	Supports Single Frequency Network (SFN) and Multi-Frequency Network (MFN) configurations
<b>Delivery</b>	Mobile broadcast
<b>Formats</b>	Multimedia
<b>Video</b>	QVGA up to 30 fps based on AVC/H.264
<b>Audio</b>	AAC+/HE-AAC
<b>Data</b>	Text, image, graphics, rich media
<b>Transcoding</b>	H.264 QVGA resolution
<b>Resolution</b>	320 x 240 (QVGA video)

## ADDITIONAL ONLINE RESOURCES



### MediaFLO Overview Brochure

Introduction to MediaFLO broadcast technology and how it delivers video, audio and data to mobile devices



### MediaFLO Product Brochure

Key elements of the MediaFLO system along with features and benefits



### MediaFLO Technology Interactivity Datasheet

Personalized interactive services and content for a unique and compelling end-user experience



### MediaFLO Technology Accessories Datasheet

Non-cellular MediaFLO-compatible devices (proof-of-concept only)



### FLO Technology White Paper

Detailed and technical description of FLO technology and how it works

[www.mediaflo.com](http://www.mediaflo.com)

