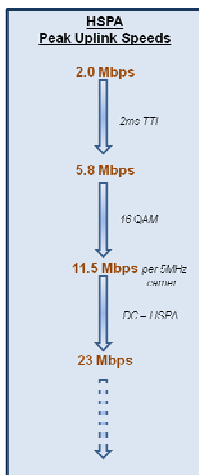
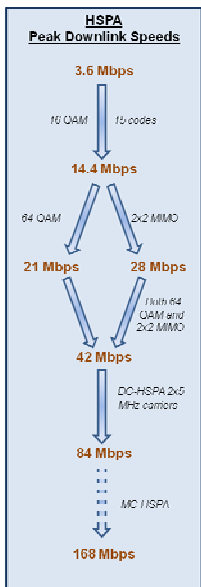


GSA confirms 241 operators in 106 countries have committed to HSPA+ network deployments

Albania, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Barbados, Belarus, Belgium, Bermuda, Bolivia, Br. Virgin Islands, Brazil, Bulgaria, Cambodia, Canada, Cayman Islands, Chile, China, Colombia, Congo (Rep of the), Costa Rica, Croatia, Czech Republic, Denmark, Dominica, Ecuador, Egypt, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Ghana, Greece, Guam, Guatemala, Hong Kong SAR, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Jersey, Jordan, Kazakhstan, Kenya, Kuwait, Laos, Latvia, Lebanon, Lithuania, Luxembourg, Macau SAR, Malawi, Malaysia, Mexico, Moldova, Mongolia, Montenegro, Namibia, Netherlands, New Zealand, Nigeria, Norway, Palau, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovak Republic, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Togo, Tunisia, Turkey, Turkmenistan, UAE, UK, Uruguay, USA, Uzbekistan, Vietnam, Zambia

187 HSPA+ systems are commercially launched in 96 countries

**Over 41% of HSPA operators have commercially launched HSPA+
62 operators have commercially launched 42 Mbps DC-HSPA+**



Widespread market acceptance of dongles, HSPA-enabled netbooks and notebooks, and the rapidly developing smartphone segment have pushed data consumption to unprecedented levels. Operators across the world are deploying HSPA Evolution (HSPA+) systems to meet this demand. GSA confirms that 187 HSPA+ systems are now commercially launched in 96 countries. A further 54 HSPA+ networks are in deployment or planned. This report lists all known HSPA+ network deployments and launches, based on GSA's research to date.

HSPA+ is a mainstream technology, supported by a rapidly establishing devices ecosystem. HSPA+ has a strong evolution path (see chart left). Many operators have confirmed their plans for evolution. 62 operators have commercially launched 42 Mbps DC-HSPA+ technology on their networks, with a further 26 commitments to deploy. 42 Mbps is currently achieved by combining 64QAM with two carriers (2 x 5 MHz = 10 MHz); this is known as DC-HSPA+. This capability was introduced in 3GPP Release 8, which also standardized 42 Mbps capability by combining 2 x 2 MIMO and 64QAM in a single 5 MHz carrier.

For the uplink, using 16 QAM instead of QPSK modulation makes it possible to double the peak rate to 11.5 Mbps. Dual carrier extends the uplink performance up to 23 Mbps peak. 3GPP Release 9 combines multicarrier and MIMO technologies

in 10 MHz bandwidth to reach 84 Mbps peak downlink. Using multicarrier on the uplink doubles the peak data rate to 23 Mbps. Standardization beyond Release 9 extends multicarrier to 20 MHz bandwidth, and combinations of multicarrier and MIMO enable downlink data speeds exceeding 100 Mbps to be reached. 3GPP has initiated new standardization work on Long Term HSPA Evolution, which would significantly boost capabilities further by using 8 channel multicarrier aggregation, coordination of multiple antennas, dual antenna beamforming, and MIMO in the uplink.

The world's first HSPA+ system was launched by Telstra in Australia on February 23rd, 2009. Using 64 QAM modulation, the Telstra NextG™ mobile broadband system supported a peak downlink data rate of 21 Mbps and a peak uplink rate of 5.8 Mbps. Telstra subsequently launched an upgrade to 42 Mbps DC-HSPA+ peak downlink capability in June 2010. A1 (Austria) launched the first commercial HSPA+ system in Europe on March 23rd, 2009. The network supported a peak downlink data rate of 21 Mbps and has subsequently been upgraded to 42 Mbps DC-HSPA+. Starhub, Singapore launched Asia's first HSPA+ system on March 27th, 2009.

Over 43% of HSPA operators have launched HSUPA (high speed uplink) including 129 networks supporting 5.8 Mbps peak uplink data speed including 12 networks supporting 11.5 Mbps peak.

187 HSPA+ systems are in commercial service in 96 countries, as detailed in the following pages.

- ❖ 117 commercial networks support a peak downlink data speed of 21 Mbps using 64QAM
- ❖ 8 commercial networks support 28 Mbps peak downlink data speed. TIM Italy launched the world's first 28 Mbps peak downlink HSPA+ system utilizing MIMO technology on July 17, 2009
- ❖ 62 commercial networks support 42 Mbps DC-HSPA+ plus another 26 firm operator commitments to deploy

187 commercial HSPA+ networks, 96 countries

Country	Operator	Launch	Peak DL	Upgrade launched	Planned evolution
Albania	AMC	13.01.12	42 Mbps		
Argentina	Claro	Nov 2011	21 Mbps		
Armenia	Vivacell-MTS	02.11.10	21 Mbps		
Armenia	Orange	24.01.12	42 Mbps		
Australia	Telstra	23.02.09	21 Mbps	42 Mbps: June 2010	84 Mbps
Austria	A1	23.03.09	21 Mbps	42 Mbps: 15.12.10	
Austria	Orange	Mar 2010	42 Mbps		84 Mbps
Austria	T-Mobile	19.01.11	21 Mbps		42 Mbps
Austria	Hutchison 3	Mar 2010	42 Mbps		
Azerbaijan	Azercell	18.11.11	21 Mbps		
Azerbaijan	BakCell	23.11.11	28 Mbps		42 Mbps
Bahamas	BTC	05.12.11	21 Mbps		
Bahrain	Viva	03.03.10	21 Mbps	42 Mbps: 22.05.11	
Bahrain	Batelco	Apr 2010	21 Mbps		
Barbados	Lime	16.11.11	21 Mbps		
Barbados	Digicel	07.12.11	21 Mbps		
Belarus	Life (BeST)	Feb 2010	21 Mbps		
Belarus	Velcom	18.03.10	21 Mbps	42 Mbps: 2011	
Belarus	MTS	26.05.10	21 Mbps		
Belgium	Mobistar	Dec 2010	28 Mbps		
Bermuda	Digicel	22.07.10	21 Mbps		
Bermuda	Cellular One	25.01.11	21 Mbps		
Bolivia	Entel	April 2011	21 Mbps		
Brazil	Algar Telecom	28.11.11	21 Mbps		
Brazil	Vivo	22.11.11	21 Mbps		
Brazil	Claro	Dec 2011	21 Mbps		
Bulgaria	M-Tel/Mobitel	17.09.09	21 Mbps	42 Mbps: 22.03.11	
Cambodia	Smart	01.08.11	21 Mbps		
Canada	Rogers Wireless	14.09.09	21 Mbps		
Canada	Bell	04.11.09	21 Mbps	42 Mbps: 23.11.10	
Canada	MTS Allstream	31.03.11	21 Mbps		
Canada	TBay Tel	17.11.10	21 Mbps		42 Mbps
Canada	Telus	05.11.09	21 Mbps	42 Mbps: March 2011	
Canada	Sasktel	16.08.10	21 Mbps		42 Mbps
Canada	Videotron	09.09.10	21 Mbps	42 Mbps: 25.08.11	
Cayman Islands	Lime	17.08.11	21 Mbps		
Chile	Entel PCS	04.12.09	21 Mbps	42 Mbps: 18.04.11	
Chile	Movistar	2010	21 Mbps	42 Mbps: Q4 2011	
China	China Unicom	17.05.11	21 Mbps		
Colombia	Tigo	13.10.11	21 Mbps		
Colombia	Comcel	23.11.11	21 Mbps		
Congo (Rep of the)	Bharti Airtel	Oct 2011	21 Mbps		
Costa Rica	Claro	05.11.11	21 Mbps		
Croatia	VipNet	Q2 2009	21 Mbps	42 Mbps: Dec 2010	
Croatia	Tele2	Dec 2010	21 Mbps		
Czech Republic	T-Mobile	09.11.10	21 Mbps		42 Mbps by Q2 2012
Czech Republic	Vodafone	05.10.11	21 Mbps		42 Mbps
Denmark	3 Denmark	Jun 2009	21 Mbps		42 Mbps, 84 Mbps
Denmark	TDC Mobil	25.05.10	21 Mbps	42 Mbps: 23.03.11	
Denmark	TeleNor	11.10.10	21 Mbps		
Ecuador	Claro	April 2011	21 Mbps		
Ecuador	Movistar	14.07.11	21 Mbps		
Egypt	Etisalat Misr	June 2009	21 Mbps	42 Mbps: May 2010	
Estonia	EMT	Nov 2009	21 Mbps		
Estonia	Elisa	09.04.10	21 Mbps		
Faroe Islands	Faroese Telecom	03.11.09	21 Mbps		
Finland	Elisa	07.04.10	21 Mbps	42 Mbps: 18.08.11	
Finland	DNA	16.10.09	21 Mbps	42 Mbps: 24.05.11	
France	SFR	Sep 2010	21 Mbps		42 Mbps
France	Free	10.01.12	42 Mbps		
Germany	O2	03.11.09	28 Mbps		
Germany	Deutsche Telekom	21.04.10	21 Mbps		42 Mbps
Ghana	Airtel	Jan 2012	21 Mbps		
Greece	Cosmote	20.05.09	21 Mbps	42 Mbps: 14.02.11	
Greece	Vodafone	13.07.09	21 Mbps	42 Mbps: Jan 2011	
Guam	GTA	21.07.11	21 Mbps		
Guatemala	Tigo	05.01.12	21 Mbps		
Hong Kong SAR	CSL Limited	30.03.09	21 Mbps	42 Mbps: 25.11.10	
Hong Kong SAR	PCCW Mobile	Jun 2009	21 Mbps	42 Mbps: 11.08.10	
Hong Kong SAR	3 HK	Jul 2009	21 Mbps		42 Mbps
Hong Kong SAR	Smartone-Vodafone	05.11.09	21 Mbps	28 Mbps: 19.04.10	42 Mbps, 84 Mbps
Hungary	Telenor	16.08.11	42 Mbps		

Hungary	Vodafone	04.02.10	21 Mbps		
Hungary	T-Mobile/Magyar Telecom	31.05.11	21 Mbps		
India	Aircell	22.02.11	21 Mbps		
India	Bharti Airtel	24.01.11	21 Mbps		
India	Idea Cellular	28.03.11	21 Mbps		
India	Reliance	13.12.10	21 Mbps		
India	Tata DoCoMo	05.11.10	21 Mbps		
India	Vodafone	01.03.11	21 Mbps		
Indonesia	PT Telkomsel	Nov 2009	21 Mbps		
Indonesia	PT Indosat-Satelindo	2009	21 Mbps	42 Mbps: 26.04.10	
Ireland	O2	2010	21 Mbps		
Ireland	Vodafone	Feb 2010	21 Mbps	42 Mbps: 20.09.11	
Israel	Pelephone	25.05.10	21 Mbps	42 Mbps: December 2011	
Italy	TIM	17.07.09	28 Mbps		42 Mbps
Italy	Vodafone	2010	21 Mbps	42 Mbps: Mar 2011	
Japan	eMobile	24.07.09	21 Mbps		42 Mbps soft launched
Japan	Softbank	Feb 2011	42 Mbps		
Jordan	Orange	Q1 2011	21 Mbps		
Jordan	Zain	05.03.11	21 Mbps		
Kazakhstan	Kcell	01.12.10	21 Mbps		
Kazakhstan	Tele2	24.04.11	21 Mbps		
Kenya	Orange	07.09.11	21 Mbps		
Kuwait	Zain	19.08.09	21 Mbps		
Kuwait	Viva	Feb 2010	21 Mbps	42 Mbps: 03.07.11	
Laos	Beeline	Jan 2012	21 Mbps		
Latvia	Bite	Sep 2010	21 Mbps		42 Mbps
Lebanon	Alfa	25.10.11	21 Mbps		
Lebanon	MTC Touch	01.11.11	21 Mbps		
Lithuania	Bite	Sep 2010	21 Mbps		42 Mbps
Macau SAR	Smartone Macau	Jul 2010	21 Mbps		
Malaysia	Maxis	Jul 2010	21 Mbps		
Malaysia	U Mobile	27.09.10	42 Mbps		
Mexico	Iusacell	15.11.10	21 Mbps		
Moldova	Orange Moldova	21.12.09	21 Mbps		
Mongolia	Skytel	Jan 2010	21 Mbps		
Montenegro	Promonte	08.09.10	21 Mbps		
Montenegro	T Mobile	Nov 2011	42 Mbps		
Netherlands	Vodafone	10.07.10	28 Mbps		
New Zealand	Telecom NZ	Aug 2010	21 Mbps		
New Zealand	Vodafone NZ	Jul 2010	21 Mbps		42 Mbps
Nigeria	Etisalat	26.09.11	42 Mbps		
Norway	NetCom	16.12.10	21 Mbps		
Panama	Claro	July 2011	21 Mbps		
Panama	Movil (Cable and Wireless)	Sept 2011	21 Mbps		
Panama	Digicel	22.11.11	21 Mbps		
Paraguay	Claro	Nov 2011	21 Mbps		
Peru	Claro	15.11.11	21 Mbps		
Peru	Movistar	18.11.11	21 Mbps		
Philippines	Globe Telecom	16.04.11	21 Mbps		
Philippines	U Mobile	Q1 2011	42 Mbps		
Poland	P4 (Play)	24.01.11	21 Mbps		
Poland	Polkomtel	Jun 2009	21 Mbps		
Poland	PTC/Era	15.09.09	21 Mbps		
Poland	Orange/PTK Centertel	10.10.10	42 Mbps		
Poland	Aero2 (900 MHz)	16.11.09	21 Mbps	28 Mbps: 22.10.10	
Portugal	Vodafone	26.06.09	21 Mbps	42 Mbps: 11.10.10	
Portugal	TMN	29.06.09	21 Mbps		42 Mbps
Portugal	Optimus/Sonaecom	03.08.09	21 Mbps		42 Mbps
Puerto Rico	AT&T	15.02.11	21 Mbps		
Puerto Rico	Claro	16.02.11	21 Mbps		
Puerto Rico	T-Mobile USA	Oct 2010	21 Mbps		
Qatar	Q-Tel	08.08.10	21 Mbps		42 Mbps
Romania	Cosmote (incorporating Zapp)	02.09.09	21 Mbps		
Romania	Orange	06.10.11	42 Mbps		
Romania	Vodafone	03.09.09	21 Mbps		42 Mbps
Russia	MegaFon	27.08.10	21 Mbps		
Russia	MTS	Dec 2010	21 Mbps		
Saudi Arabia	STC Al Jawal	14.09.09	21 Mbps	42 Mbps: Dec 2010	
Saudi Arabia	Mobily	10.01.10	21 Mbps		42 Mbps
Serbia	Telenor	29.07.11	21 Mbps		
Serbia	VIP Mobile	16.02.11	42 Mbps		
Singapore	StarHub	27.03.09	21 Mbps		42 Mbps
Singapore	M1	03.10.09	28 Mbps		
Singapore	SingTel	2009	21 Mbps		42 Mbps
Slovak Republic	T-Mobile	23.03.11	21 Mbps	42 Mbps: 19.10.11	Trial 84 Mbps

Slovenia	Mobitel	07.04.10	21 Mbps	42 Mbps: May 2011	
Slovenia	Si.Mobil-Vodafone	02.12.10	21 Mbps	42 Mbps: 2H 2011	
Slovenia	Tusmobil	Nov 2010	21 Mbps		
South Africa	MTN	May 2010	21 Mbps	42 Mbps: 10.01.11	
South Africa	Vodacom	May 2010	21 Mbps	42 Mbps: 16.04.11	
South Africa	Cell C	05.09.10	21 Mbps	42 Mbps: 19.04.11	
South Africa	8ta	26.06.11	21 Mbps		
South Korea	SK Telecom	July 2010	21 Mbps		
Spain	Telefonica Movistar	10.11.09	21 Mbps	42 Mbps: Oct 2010	
Spain	Vodafone	10.11.09	21 Mbps	42 Mbps: Feb 2011	
Sri Lanka	Etisalat	21.01.11	28 Mbps	42 Mbps: May 2011	
Sri Lanka	Dialog Axiata	Apr 2011	42 Mbps		
Sweden	3 Sweden	01.06.09	21 Mbps	42 Mbps: May 2011	84 Mbps
Sweden	TeleNor Sverige	May 2010	21 Mbps	42 Mbps: May 2011	
Sweden	TeliaSonera	2010	21 Mbps		
Sweden	Tele2	2010	21 Mbps		
Switzerland	Swisscom	05.10.09	28 Mbps	42 Mbps: 21.06.11	
Taiwan	Chunghwa Telecom	2011	21 Mbps		42 Mbps
Taiwan	Taiwan Mobile	1H 2011	21 Mbps		
Thailand	DTAC	16.08.11	42 Mbps		
Thailand	True Move	30.08.11	42 Mbps		
Tunisia	Orange Tunisie	Aug 2010	21 Mbps		42 Mbps
Tunisia	Tunisie Telecom	Aug 2011	42 Mbps		
Turkey	Turkcell	29.07.09	21 Mbps	42 Mbps: 02.12.10	
Turkey	Avea	30.07.09	21 Mbps	42 Mbps: 15.12.10	
Turkey	Vodafone	30.07.09	21 Mbps		42 Mbps
Turkmenistan	MTS	02.11.10	21 Mbps		
UAE	Etisalat	04.01.10	21 Mbps	42 Mbps: 21.09.11	
UAE	Du	Q1 2010	21 Mbps	42 Mbps: 23.09.10	
UK	3 UK	April 2011	21 Mbps		
Uruguay	Claro	Nov 2011	21 Mbps		
USA	AT&T	Nov 2010	21 Mbps		
USA	Cincinnati Bell	05.07.11	21 Mbps		
USA	GCI	12.09.11	21 Mbps		
USA	T-Mobile	18.09.09	21 Mbps	42 Mbps: April 2011	
USA	BendBroadband	15.12.09	21 Mbps		
Uzbekistan	Ucell	Feb 2011	42 Mbps		
Vietnam	Viettel	25.03.10	21 Mbps		
Vietnam	Vietnamobile	01.12.11	21 Mbps		
Zambia	Airtel	17.01.12	21 Mbps		

117 21 Mbps networks

8 28 Mbps networks

62 42 Mbps networks

54 HSPA+ network deployments

Country	Operator	Status	Expected launch
Australia	Optus	21 Mbps in deployment	TBA
Bahrain	Zain	In deployment	2012
Belgium	Base	21 Mbps in deployment	2012
Belgium	Proximus	21 Mbps in deployment (then 42 Mbps)	2012
Brazil	TIM	21 Mbps in deployment	2012
Br. Virgin Islands	Lime	21 Mbps in deployment	2012
Bulgaria	GloBul	In deployment	2012
Bulgaria	Vivacom	Trialling 42 Mbps	TBA
Canada	Eastlink	In deployment	2012
Canada	Mobilicity	In deployment	2012
Costa Rica	ICE	21 Mbps in deployment	TBA
Dominica	Lime	21 Mbps in deployment	2012
Ecuador	Alegro PCS	21 Mbps in deployment	TBA
France	FT/Orange	In deployment	TBA
France	Bouygues Telecom	42 Mbps in deployment	2012
Georgia	Magticom	In deployment	TBA
Germany	E Plus	21 Mbps in deployment	2012
Greece	WIND Hellas	42 Mbps in deployment	2012
Indonesia	Axis	42 Mbps in deployment	TBA
Ireland	Meteor	21 Mbps trial phase	TBA
Ireland	3 Ireland	21 Mbps in deployment, then 42 Mbps	2012
Israel	Partner/Orange	21 Mbps in deployment, then 42 Mbps	2012
Italy	Wind	42 Mbps in deployment	2012
Italy	3 Italia	42 Mbps in deployment	TBA

Jersey	JT Global	42 Mbps in deployment	2012
Luxembourg	Orange	28 Mbps in deployment	2012
Macau SAR	CTM	21 Mbps in deployment	2012
Macau SAR	3 Macau	21 Mbps in deployment, then 42 Mbps	2012
Malawi	Airtel (ex-Zain)	21 Mbps in deployment	TBA
Malaysia	Celcom	42 Mbps in deployment	TBA
Mexico	Telcel	21 Mbps in deployment	2012
Mexico	Movistar	21 Mbps in deployment	2012
Moldova	Moldtelecom	21 Mbps in deployment	TBA
Namibia	MTC	21 Mbps in deployment	TBA
Netherlands	T-Mobile	21 Mbps in deployment	2012
Netherlands	KPN Mobile	21 Mbps in deployment	TBA
New Zealand	2degrees	21 Mbps in deployment	2012
Norway	TeleNor	In deployment	2012
Palau	Palau Mobile	In deployment	2012
Philippines	Smart	21 Mbps in deployment	2012
Saudi Arabia	Zain	In deployment	TBA
Slovak Republic	Orange	42 Mbps in deployment	2012
Slovenia	T-2	42 Mbps DL / 11 Mbps UL in deployment	2012
South Korea	KT	In deployment	2012
Spain	Orange	42 Mbps in deployment	2012
Spain	Yoigo	21 Mbps in deployment	2012
Sri Lanka	Mobitel M3	28 Mbps in deployment	2012
Switzerland	Orange	42 Mbps in deployment	2012
Taiwan	VIBO	21 Mbps in deployment	2012
Taiwan	FarEasTone	21 Mbps in deployment, in trial service	2012
Tanzania	Airtel (ex-Zain)	21 Mbps in deployment	TBA
Togo	Togo Cellulaire	In deployment	TBA
UK	O2	42 Mbps in deployment	2012
Uzbekistan	Unitel (Beeline)	21 Mbps in deployment	TBA

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