National System of Satellite Communication and Broadcast in the Republic of Belarus

System

The system is built on the basis of Belintersat-1 communication satellite to provide a wide range of telecommunication and information services (satellite TV broadcast, satellite radio broadcast, Broadband Internet access). The launch is set at the mid of 2015 from Sinchan launching site (PRC).

The satellite service life is 15 years.

The satellite shall be placed in 51.5° orbital position e.l.; it shall perform full range of satellite services in Europe, Africa, Asia and other coverage zones. The satellite is based on a contemporary strong platform and has transponders operating in C- and Ku-bands. We shall provide our clients with following satellite services: Direct – to - home broadcast (DTH), cable network video content delivery, VSAT and broadband Internet connection.

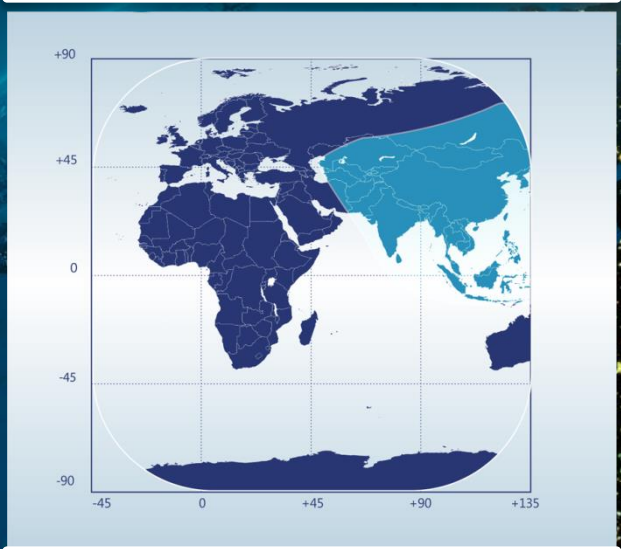
Considering properties of orbital-frequency resource of the satellite networks in 51.5° orbital position e.l., power of the selected satellite platform, market and resource consumers' requirements and significant restrictions on coordination zones' services, the satellite shall carry 38 transponders; 34 of them are 36MHz- bandwidth and 4 of them are 54MHz- bandwidth.

Characteristics of Belintersat-1 satellite beams

Beam name	Number of transponders	Frequency band	Width
Eastern	0-8*	C	36 MHz
African	8-16*	C	36 MHz
Eastern European	4**	Ku	54 MHz
Central African	12	Ku	36 MHz
Global	6	C	36 MHz

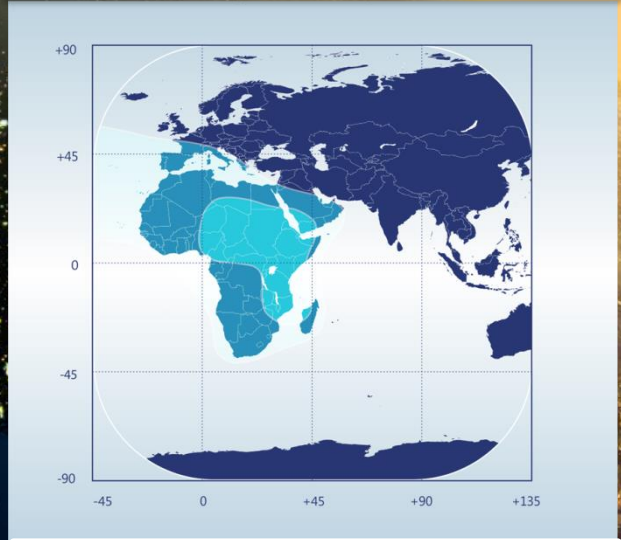
*Transponders can be switched between Eastern and African beams
** Cross-switch of the transponders for horizontal polarization between African and European beams

C-Band. Eastern beam



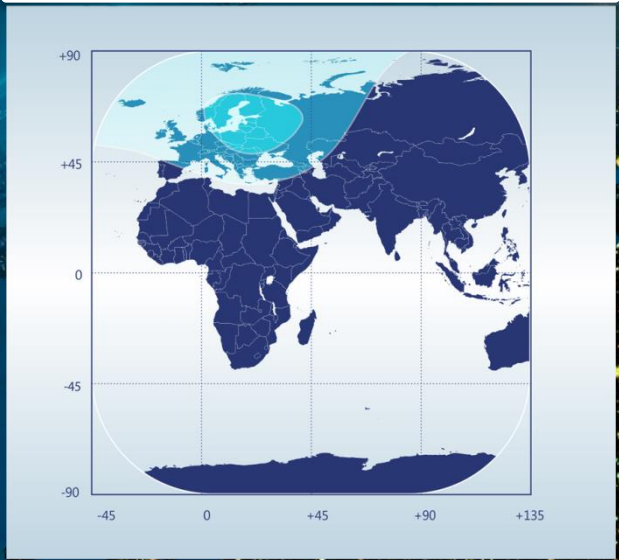
C-Band, Eastern beam
Available bandw idth is:
up to 8* x 36 MHz
circular polarization
Uplink: 5 725 - 6 725 MHz
Dow nlink: 3 400 – 4 200 MHz

C-Band. African beam



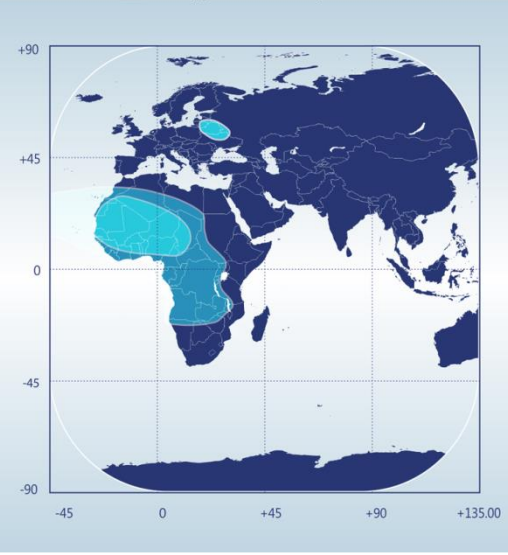
C-Band, African beam
Available bandw idth is:
up to (8+8*) x 36 MHz
circular polarization
Uplink: 5 725 – 6 725 MHz
Dow nlink: 3 400 – 4 200 MHz

Ku-Band. European beam



Ku-Band European beam
Available bandw idth is:
up to 4 x 54 MHz
linear polarization
Uplink: 12.75 – 13.0 GHz
Dow nlink: 10.7 – 10.95 GHz

Ku-Band. African beam



Ku-Band African beam
Available bandw idth is:
up to 12 x 36 MHz
linear polarization
Uplink: 14.00 – 14.50 GHz
Dow nlink: 10.95 – 11.20 GHz
11.45 – 11.70 GHz

beam	EIRP, dbW	Countries
C-band African	40	Nigeria, Cameroon, Niger, Chad, Sudan, South Sudan, Uganda, Rwanda, Burundi, Central African Republic, Eritrea, Ethiopia, Kenya, Tanzania, Malawi, Mozambique, Djibouti, Benin, Equatorial Guinea, Sao Tome and Principe, Gabon, Republic of Congo, Democratic Republic of Congo, Zambia, Zimbabwe, Somalia, Libya, Yemen
	38	Span, Sicily, Italy, Portugal, Morocco, Alger, Tunis, Mauritania, Egypt, Mali, Senegal, Guinea, Sierra-Leone, Burkina Faso, Republic of Cote d'Ivoire, Liberia, Ghana, Togo, Angola, Namibia, Botswana, South African Republic, Madagascar, Oman, Saudi Arabia
C-band Eastern	38	Mongolia, China, Kazakhstan, Kirgizia, Tajikistan, Nepal, Bhutan, North Korea, India, Bangladesh, Burma, Laos, South Korea, Thailand, Vietnam, Pakistan, Afghanistan, Uzbekistan
Ku-band Eastern-European	51	Belarus, Lithuania, Latvia, Estonia, Poland, Ukraine, Moldova, Hungary, Romania, Czech Republic, Slovakia, Austria
	49	Germany, Eastern part of Russia, Norway, Finland, Sweden, Serbia, Bulgaria, Croatia
	47	Italy, France, Great Britain, Turkey, Ireland
Ku-band Central African	50	Mauritania, Mali, Burkina Faso, Niger, Nigeria, Benin, Ghana, Guinea, Senegal, Togo, Gambia, Guinea-Bissau
	47	Liberia, Cameroon, Gabon, Republic of Congo, Democratic Republic of Congo, Angola, Zimbabwe, Alger, Burundi, Central African Republic, Cameroon, Canary Islands, Cape Verde, Cote d'Ivoire, Equatorial Guinea, Morocco, Chad, Uganda, Malawi, Rwanda, Sierra-Leone, Sao Tome and Principe
Global beam	28	Eastern Hemisphere countries

Main GCC

Nowadays we develop the design and construction task for the Ground Control Center (GCC) for the National system of satellite communication and broadcast in the Republic of Belarus.

There are following requirements:

- High liability of all the GCC objects;
- Full performance of all technical capability of the equipment installed;
- Up to day architectural and building solutions;
- Safe working environment;
- Minimal maintenance expenditures after commissioning.

Backup GCC

Belintersat satellite ground control center is available in order to ensure required operational reliability of the National System of Satellite Communication and Broadcast of the Republic of Belarus, (further – the BGCC).

Providers of services for the satellite flight control (SFC) and the SFC functions' reservation is to be taken as the BGCC under the following requirements:

- High level of satellite control quality ;
- Guaranteed high level of control continuity.

VSAT Hub

VSAT communication satellite interactive networks (Very Small Aperture Terminal) allow establishing data transfer networks according to the “star” topology practically in any spot of satellite coverage zone.

Speed of the data transfer is up to 10Mb/sec towards the subscriber terminal and about 1 Mb/sec from the subscriber terminal.

For this purpose we foresee installation of the Satellite Access Center equipment in the GCS and acquisition of interactive terminals supporting modern DVB-RCS standard.

UHF receive/transmit equipment is available for the satellite control along with C-band 13-meter-antenna system.

Central stations (HUB) are available for satellite communication channels’ forming with the following antenna systems:

- in C-Band – one 13-meter- antenna;
- in Ku-Band – three-9-meter- antennas and one antenna of 4.6m.

Services

- Satellite resource
- Communication channels
- Satellite access to Internet
- Communication networks
- TV networks
- Satellite telephony

Contacts

Belintersat

220013, the Republic of Belarus,

Minsk city, Kulman Street, 2, 238

Email - info@belintersat.com

+37517-292 35 31

www.belintersat.com