Capacity

As fixed polarization can be used in any cell sector, the sector capacity is 72*6 = 432 TV channels or 72*45 = 3240 Mbps. The capacity of 12-sector cell is more than 5000 TV-channels or 40.000 Mbps. The total capacity of the system depends on cell quantity.

Transmitter

City-1 Transmitter is a low-noise up-converter from 1500 MHz to 40.5–43.5 GHz band.

Transmitter can transmit up to 4 DVB-S streams. But it should be mentioned that increasing carrier number leads to decreasing of cell radius (due to decreasing of power / carrier ratio and a crosstalk). So if you need to maximize the cell radius, it is better to use separate transmitter for each DVB-S stream.

Transmitter is supplied with horn antenna of 30, 45, 60 or 90 degrees beam width. Transmitter powered with 48–60 VDC, 2A.

Multi-channel transmitter

Multi-channel transmitter is to provide the maximum cell radius transmitting multiple DVB-S streams. It consists of multiple single-channel transmitters mounted in single case.

Receiver

City-1 Receiver is a down-converter from 40.5–43.5 GHz band to L-band (950–2150 MHz). It has completely the same interface as Satellite converter (except it operates in fixed polarization). Receiver can be connected to any standard Satellite STB or receiver card with a coax cable. It consumes 18 VDC over a coax.

Receiver is supplied with 30, 45 or 60 cm reflector-type antenna.

IP-broadcasting

DVB-S standard is used in City-1 for IP broadcasting.

To create DVB/IP stream, IP encapsulator and DVB-S modulator should be used at the base station.

To receive DVB/IP stream, any satellite data receiver can be used. For example, DVB-router, that has Lband input and Fast Ethernet output. It can be connected to LAN directly. A return channel to Internet in City-1 can be organized in any alternative manner.