

SCPC EARTH STATION

UHP-1000 SATELLITE ROUTER



SCPC

TDM/TDMA

TDMA FULL MESH

DEDICATED SATELLITE CHANNELS

UHP-1000 satellite router is universal VSAT platform supporting all popular modes of operations. One of such modes is SCPC - a dedicated channel mode when two or more Earth Stations interact with each other via fixed dedicated satellite bandwidth with a guaranteed physical level capacity. The throughput of the channel in every direction is independent allowing to implement any asymmetry. SCPC channel can also be used to broadcast information to unlimited number of recipients.

UHP SCPC technology supports DVB-S and DVB-S2 industry standard modulation and coding, providing highly efficient satellite capacity utilization. Built-in IP router simplifies IP networking and allows transporting various data with different QoS in a single channel. Intelligent Transmit Level Control (TLC) ensures unprecedented service availability regardless of whether conditions.

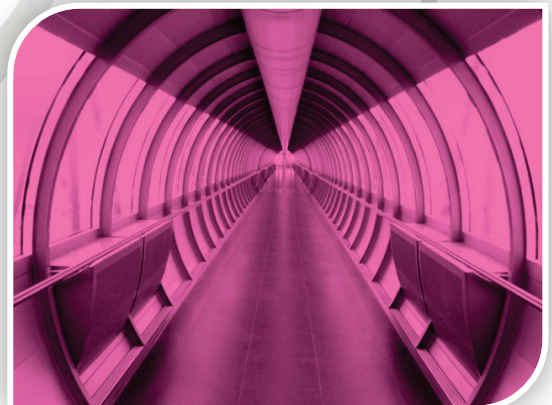


CONTROLLED SCPC

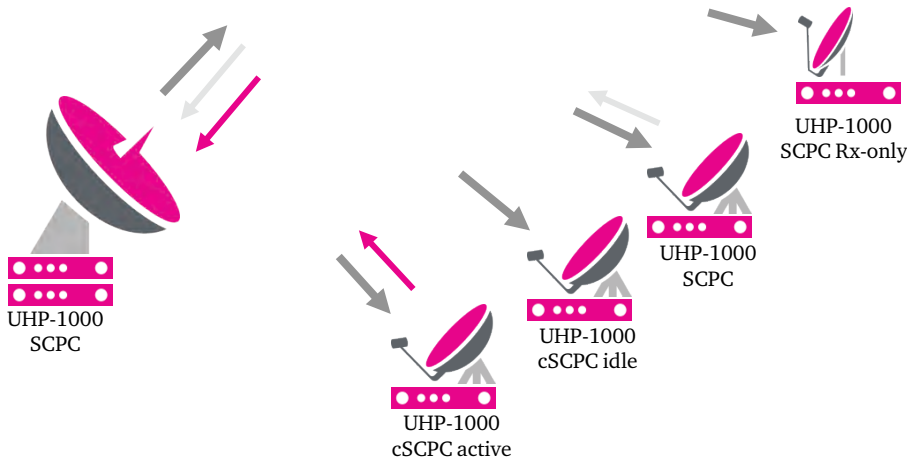
Controlled SCPC (cSCPC) mode allows to create “star” topology SCPC network with dynamic on-demand carrier allocation. Central station of such network broadcasts a carrier towards peripheral stations. Central station may allow any station in the network to start transmitting the carrier with specified bandwidth and level. Such mode of operation is useful in networks where remote terminals time-to-time require sufficient bandwidth to transmit, e.g. DSNG, Videoconferencing, redundancy networks, etc.

UHP SCPC is low cost solution with great ability to be upgraded just with software key to support any advanced mode of operations. Such unique advantage allows to follow the evolution of customer’s demand.

- Various modes of operation and topologies: SCPC, TDM/SCPC, TDM/TDMA, Half Mesh, Full Mesh
- First DVB-S2 VSAT technology with bandwidth-efficient LDPC coding in TDMA channel
- Innovative TDMA protocol with proven efficiency of 96% in comparison with SCPC channels
- Ultra-low latency VSAT system with round-trip delay about 570 ms for TDMA mode of operations
- Fully operational network in minimal configuration requires just 120 kHz of satellite bandwidth
- Support of VLAN, multi-level QoS, codec-independent handling of real-time traffic, TCP acceleration
- Built-in adaptive 500-channel traffic manager specially designed for VSAT applications
- Satellite router is capable of receiving signals from two satellites simultaneously
- Web-based Network Management System allowing operating the network from everywhere
- Fast network startup — network is ready for use in just a minute upon power-up
- Low power consumption allows using satellite terminals with various alternative power sources
- Compatible with majority of C, Ku and Ka-band RF Systems, supplies power and reference signals
- Easy to install and operate hardware, user-friendly software configuration



Typical Network Diagram of UHP SCPC and cSCPC network



UHP-1000 SCPC SATELLITE ROUTER SPECIFICATIONS

SCPC CHANNEL

| | | | | | | | | | | |
|-------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Data Rate | from 250 kbps (250kSps @ QPSK 1/2) up to 86 Mbps (32MSps @ 8PSK 9/10) | | | | | | | | | |
| Modulation / Coding | FEC | 1/2 | 3/5 | 2/3 | 3/4 | 4/5 | 5/6 | 7/8 | 8/9 | |
| Demodulator Performance | DVB-S (QPSK) | 3.7 | - | 4.0 | 4.6 | - | 5.1 | 5.8 | - | |
| Eb/N0 | DVB-S2 (QPSK) | 1.0 | 1.6 | 2.0 | 2.4 | 2.8 | 2.9 | - | 3,8 | |
| BER <10-8 | DVB-S2 (8PSK) | - | 3.2 | 4.0 | 4.7 | - | 5.8 | - | 6.9 | |
| QoS | 3-level traffic prioritization, adaptive 500-channels-Traffic Shaper | | | | | | | | | |

ROUTER

| | |
|-------------|---|
| Performance | 96 Mbps or 28000 pps |
| Support | DSCP, end-to-end VLAN, RIP, L2 Bridging, CRTP, IGMP, TCP Acceleration |
| Management | WWW, Telnet, SNMP, NMS Configuration Manager |

INTERFACES

| | |
|---------------------|--|
| User LAN port | Ethernet 10/100Base-T, RJ-45 |
| Maintenance console | USB, B female |
| IF Rx | 950-2050 MHz (LNB DC – 13.5V/18V 0.75A), F type |
| IF Tx | 950-1550 MHz, –30...- 5 dBm, (LO 10 MHz / +5 dBm, BUC DC – 24V / 2A), F type |

MECHANICAL / ENVIRONMENTAL (IDU)

| | |
|-----------------------|--------------------------------|
| Power | 176-283 VAC, 10 W |
| Operating temperature | 0°...+40°C, humidity up to 90% |
| Size / Weight | 147x144x29 mm / 530 g |

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