

SCPC EARTH STATION

UHP-1000 SATELLITE ROUTER

SCPC

TDM/TDMA

Hubless TDMA

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 ACM 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) in combination with Adaptive Coding and Modulation (ACM) ensures unprecedented service availability regardless of weather conditions.

- Various modes of operation and topologies: SCPC point-to-point, MCPC/SCPC star, SCPC DAMA
- Bandwidth-efficient DVB-S2 SCPC modem with advanced networking options and L2 bridge
- Interactive Transmit Level Control (TLC) and Adaptive Coding and Modulation (ACM)
- Ultra-low latency VSAT system with round-trip delay about 570 ms
- Support of VLAN, multi-level QoS, codec-independent handling of real-time traffic, TCP acceleration
- Built-in adaptive hierarchic traffic shaper specially designed for VSAT applications
- Satellite router is capable of receiving signals from two satellites simultaneously
- Web-based Network Management System allows to operate the network from everywhere
- Fast network startup — network is ready for use in less than a minute upon power-up
- Low power consumption allows using satellite terminals with alternative power sources
- Compact-size, highly-reliable SCPC solution with easy to install 1:1 redundancy option
- Compatible with majority of C, Ku and Ka-band RF Systems, supplies power and reference signals
- Upgradable by just a software key to support other modes of operations: TDM/TDMA, Hubless TDMA

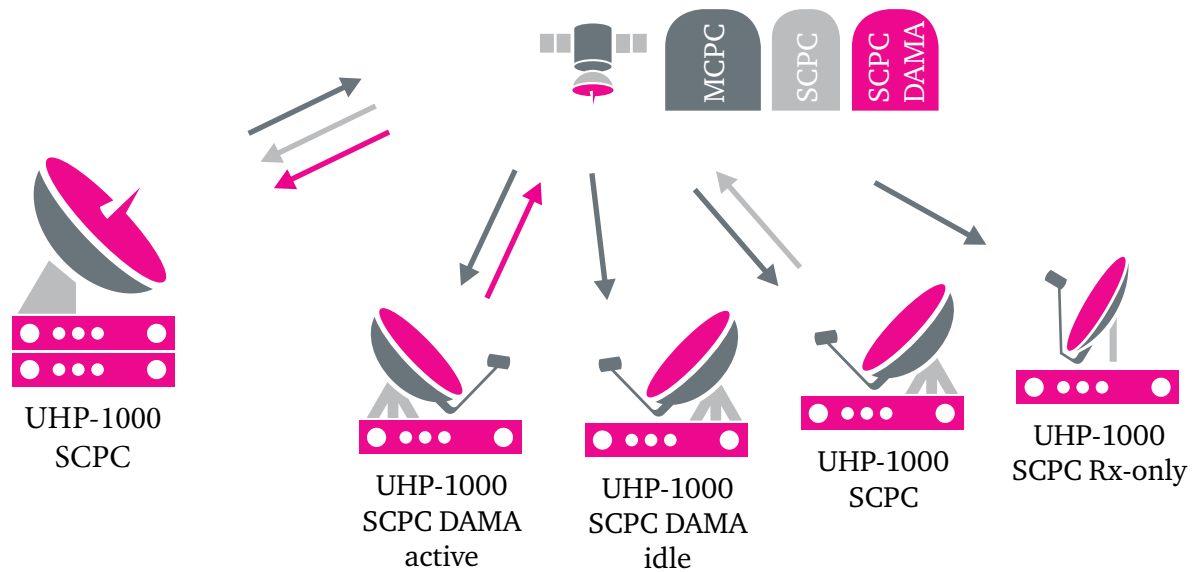


SCPC DAMA

SCPC DAMA mode allows creation of star-topology MCPC/SCPC networks with dynamic carrier allocation on schedule or on demand. Central station in such a network broadcasts a MCPC carrier received by all the remote stations. Central station assigns station for a certain period of time to one of the remotes an SCPC carrier with specified bandwidth and level. Such solution is well-suited for applications like DSNG, video-conferencing, business continuity among others. UHP-based SCPC is a low-cost solution, which can be easily upgraded by entering a software license key to a more advanced mode of UHP operation such as TDM/TDMA. The unique scalability ensures that the network configuration and performance follow evolution of the customer's demand.



Typical Network Diagram of UHP SCPC and SCPC DAMA 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	1/3	2/5	1/2	3/5	2/3	3/4	4/5	5/6	7/8	8/9	9/10
Demodulator Performance C/N, BER <10 ⁻⁸	DVB-S (QPSK)	-	-	3.4	-	4.9	6.0	-	7.0	7.8	-	-
	DVB-S2 (QPSK ACM-Long)	-	-	0.9	2.4	3.2	4.1	4.8	5.1	-	6.3	6.5
	DVB-S2 (8PSK ACM-Long)	-	-	-	5.7	6.9	8.2	-	9.7	-	11.1	11.3
	DVB-S2 (16APSK ACM-Long)	-	-	-	-	10.0	10.8	11.4	11.9	-	13.3	13.5
	DVB-S2 (QPSK ACM-Short)	-0.9	-0.0	0.9	2.6	3.3	4.2	5.0	5.5	-	6.4	-
	DVB-S2 (8PSK ACM-Short)	-	-	-	7.6	7.5	8.6	-	9.9	-	11.3	-
	DVB-S2 (16APSK ACM-Short)	-	-	-	-	10.3	11.0	11.8	12.2	-	13.4	-
QoS	3-level prioritization, traffic policies, hierarchic 680-channel traffic shaper											

ROUTER

Performance	Up to 60'000 pps
Support	DSCP, end-to-end VLAN, RIP, L2 Bridging, CRTP, DHCP, IGMP, proxy ARP, TCP Acceleration
Management	HTTP user interface, SNMP, Service Monitoring

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	950-1750 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 ⁰ ...+50 ⁰ C, humidity up to 90%
Size / Weight	147x144x29 mm / 530 g

ORDER CODE / MODIFICATIONS

UHP-1R1-STAR	UHP-1000 basic DVB-S SCPC router
UHP-1R1-SCPC	UHP-1000 standard DVB-S / DVB-S2 (QPSK, 8PSK) SCPC router
UHP-1R1-SCPA	UHP-1000 advanced DVB-S / DVB-S2 ACM (QPSK, 8PSK, 16APSK) SCPC router



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