UHP-120

OUTDOOR SATELLITE ROUTER

TDM/TDMA | SCPC Rx-only | OUTDOOR | DUAL GATEWAY | BEAM SWITCHING

High-Throughput Satellites (HTS) open unprecedented opportunities for networking over satellite. UHP-120 is a high-performance router designed specifically for large-scale deployment in broadband VSAT networks operating over HTS. This product combines the Universal Hardware Platform (UHP) architecture, which was developed in the previous generation of the award-winning UHP product line, with the state-of-the-art semiconductor technology. The result is its unique performance. Not only UHP-120 can process 150 000 IP packets per second, 220 Mbps of traffic and two carriers up to 500 Msps, it can do this in a super-compact size, with low power consumption (less than 8W) and with best utilization of the precious satellite resource, as evidenced by up to 256APSK modulation, 5% spectral roll-off, adaptive modulation and coding, adaptive power control and 96% efficient TDMA protocol.

UHP-120 is equipped with two high-speed demodulators. The dual demodulator in conjunction with a built-in advanced beam switching algorithm facilitates seamless roaming of mobile satellite terminals between distinct beams of HTS satellites.

Rugged weatherproof satellite router UHP-120 is designed for outdoor installation, for example, directly on the antenna. IP67 compliant enclosure guarantees quick start and operating performance over a wide range of temperatures and a harsh environment. Possible customization of the LAN and power supply connectors in accordance with specific customer's requirements.

- High-performance Satellite Router for TDM/TDMA networks with aggregate throughput up to 220 Mbps
- Two independent DVB demodulators with separate IF inputs and rate up to 500 Msps
- Efficient DVB-S2/S2X ACM modulations with 5% or 20% roll-off and support for wideband HTS transponders
- MF-TDMA modulator with innovative protocol and proven efficiency of 96% compared to SCPC
- Adaptive coding and modulation and transmission power control in forward and return channels
- Dual satellite or dual band operations with dynamic traffic balancing and automatic beam switching
- Superior IP router productivity up to 150 000 PPS, rich set of supported protocols
- Layer 3 routing architecture and Layer 2 bridging mode with IPv6 transport
- Support of VLAN, multilevel QoS, codec independent handling of RT traffic, TCP acceleration, AES encryption
- Built-in adaptive hierarchic traffic shaper specially designed for VSAT applications
- Ultra-low latency VSAT system with round-trip delay about 570 ms for TDMA mode of operations
- Low power consumption allows using satellite terminals with alternative power sources
- Compatible with majority of C, Ku and Ka-band RF Systems, supplies power and reference signals

UHP-120 OUTDOOR SATELLITE ROUTER SPECIFICATIONS

NETWORK	
Topology	Point-to-Point, Star, Dual-Gateway
Modes of operation	SCPC Rx-only, TDM/TDMA Star
Network role	SCPC Receiver, TDM/TDMA Terminal
Frequency bands	C, X, Ku, Ka, including multi-beam HTS satellites
TDM (SCPC) CHANNEL - DEMODULATOR	
Standard	DVB-S2 / DVB-S2X with Adaptive Coding and Modulation
Channels	Two demodulators with selectable IF inputs Rx1 and Rx2
Modulation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK
FEC	All DVB-S2 & DVB-S2X MODCODs
Symbol Rate	300 ksps - 500 Msps
Data Rate	150 kbps - 225 Mbps
QoS	8-level prioritization, traffic policies, CIR, MIR, group QoS, hierarchic traffic shaper, FAP
TDMA CHANNEL - MODULATOR	
Standard	LDPC TDMA with Adaptive Coding and Modulation
Channels	One MF-TDMA modulator
Modulation	QPSK, 8PSK, 16APSK; Roll-off: 5%, 20%
FEC	1/2, 2/3, 3/4, 5/6
Symbol Rate	100 ksps - 8 Msps; step 1 ksps
Data Rate	100 kbps - 26.7 Mbps
TDMA Protocol	Frame 50 -1000 ms, 14 slot sizes, manageable minimal bandwidth; slot-to-slot fast MF-TDMA hopping
QoS	8-level prioritization, traffic policies, CIR, MIR, group QoS, hierarchic traffic shaper, FAP
ROUTER	
Performance	Up to 150 000 packets per second
Support	DSCP, multiple IP/VLANs, NAT*, proxy ARP, L2 Bridging, TCP Acceleration, Jumbo frames, AES-256
Protocols	IPv4/IPv6*, IGMP, cRTP, SNMP, RIP, SNTP, TFTP, PPP, DHCP, DHCP Relay
Management	HTTP interface, SNMP, Telnet, NMS with VNO support
INTERFACES	
User LAN	Fast Ethernet 10/100 Base-T
Maintenance console	miniUSB, B female
IF Rx (two inputs)	950-2150 MHz; 13.5/18 VDC 0.75A; F type
IF Tx	950-2150 MHz, -1…-46 dBm; Ref. 10 MHz/+5 dBm; 24V/3A; F type
MECHANICAL / ENVIRONMENTAL (IDU)	
Power	24 VDC; 8 W
Operating temperature	-40^0…$+50^0$ C, humidity up to 90%
Size / Weight	155x70x316 mm / 2.3 kg

These specifications are subject to change without notice

** Available in a future SW release*

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