



S5620 A-bis Optimizer VSAT Terminal



Features

- DVB-S2X (ACM) receiver with Roll-off from 5%
- DVB- S2/S2X (CCM,VCM, ACM) receive up to 200 Mbps (hub to remote) with Ethernet throughput up to 40 Mbps
- Combined A-bis Optimizer with Multi-waveform A-SAT™ Modem, supporting in Return Link MF-TDMA DVB-RCS(2) and SCPC, both BM and CM DVB-S2
- 64Kbps-13.12Mbps return data rates (remote to hub)
- A-bis WAN supported by modem with up to 4 G.703, G.704 E1/T1 ports; one Ethernet port
- On-board TCP & HTTP acceleration and compression
- Voice, data support
- GUI-based web interface (optional active front panel)
- Easy-to-configure Ethernet connectivity to your PC, LAN or Router
- Application QoS
- VPN and accelerated VPN support (optional)
- VLAN support
- Simple one box installation
- 19 inch 1U rack mountable

Applications

- Voice/Data bandwidth minimization
- GSM backhaul optimization
- BTS direct interfacing
- Internet/Intranet Access
- Video Streaming
- Backup Services
- Private Networking
- Inflight Entertainment
- Oil & Gas

Overview

Advantech Wireless S5620 A-bis Optimizer VSAT Terminals are compliant to all A-bis requirements and to DVB-RCS and DVB-S2 specifications. They are optimizing the GSM and 3G/4G traffic to achieve high-performance bandwidth optimization, low jitter and latency and quick response time for cellular backhaul and governmental applications.

The S5620 satellite router was designed and built to specifically address the GSM E1 A-bis/A-tier and 3G/4G IP traffic for backhaul via high latency satellite link. It delivers industry leading bandwidth savings because it can be deployed across all locations in a network between the BTS and BSC or node B. The optimizer eliminates any unused timeslots, redundant and unnecessary data, suppresses silence to further minimize bandwidth consumption and packetizes all traffic into UDP stream for transport by the satellite router (modem). Stratum 2 clock, built-in the unit, improves the jitter and wander on the entire system.

The terminal has been designed with all key IP features to fulfill the needs of an enterprise application. The 19-inch rack mountable form factor makes it ideal for high end use. S5620 VSAT terminals can populate a satellite network managed via a DVB-RCS compliant hub in a teleport, or could be used as point-to-point SCPC modem.

The S5620 offers powerful connectivity directly to the LAN/WAN environment. A truly telco and corporate solution, it is an out-of-the-box, ready-to-go, cost-effective broadband solution. The modem element supports traffic up to 200 Mbps on the forward link with the choice of standardized DVB-S2 (CCM, VCM, ACM) or DVB-S2X transmissions, and up to 13.12 Mbps transmission on the return link (remote terminal/BTS to Hub/BSC).

Technical Specifications – Optimizer Element

E1/T1 Ports	1-4
TRXs	12 for 1xE1 up to 48 for 4xE1
Ethernet Ports	10BT/100BT/1GBT, RJ45
Internal Clock Reference	Stratum 2
GSM A-bis Optimization Features	<ul style="list-style-type: none"> • Voice: FR, EFR, HR, AMR 16K, AMR 8K • Data: GPRS, EDGE • Signaling: 16K, 32K, 64K • SMS & MMS • Auto-detection of timeslot assignments
Optimization Ratio	A-Bis up to 3:1 (equivalent to 3:1 data/bandwidth compression)
WAN link to Modem element	Ethernet IP
E1/T1 Interface	<ul style="list-style-type: none"> • Connector: RJ48C for balanced and BNC for unbalanced • Support 120/100 ohm balanced, or 75 ohm unbalanced • Physical layer/Link layer protocol: G.703, G.704 • Line codes: HDB3/AMI/B8ZS • Drop/Insert
Network Management	<ul style="list-style-type: none"> • Remote Telnet access • Open SNMP with MIB • TFTP/SCP upload and download of software and configuration

Technical Specifications – Modem Element

Network Architectures	Star or P2P
Quality of Service	Multiple Queues, Filtering on IP Header, QoS Groups, CRA, RBDC, VBDC, FCA
Air Interface	<p>Receive (hub to remote): DVB-S2 CCM, ACM (QPSK, 8PSK, 16APSK, 32APSK), DVB-S2X CCM, ACM (QPSK, 8PSK, 16APSK, 32APSK, 64APSK), all coding rates - Encapsulation: IP over MPEG with section packing (MPE) or GSE</p> <p>Transmit (remote to hub): - QPSK, 8PSK, 16APSK - Encapsulation: IP over ATM, IP over MPEG with section packing, RLE</p>
Receive Coding	LDPC concatenated with BCH on the receive (all DVB-S2 MODCODs supported)
Transmit Coding Rates	QPSK 1/2, 2/3, 3/4, 4/5, 6/7 8PSK 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 6/7, 8/9, 9/10 16APSK 2/3, 3/4, 4/5, 5/6, 8/9
Roll-Off	5%, 10%, 11%, 12%, 13%, 14%, 15%, 20%, 25%, 30%, 35%
Spacing	Same as Roll-off
Data Rates	Can receive the entire DVB-S2 200 Mbps carrier with a maximum Ethernet throughput of 40 Mbps. Can transmit up to 13.120 Mbps
Transmit Burst Rates	64 kbps – 13.120 Mbps in 16 kbps increments

NORTH AMERICA
USA
 Tel: +1 703 659 9796
 Fax: +1 703 635 2212
 info.usa@advantechwireless.com

CANADA
 Tel: +1 514 420 0045
 Fax: +1 514 420 0073
 info.canada@advantechwireless.com

EUROPE
UNITED KINGDOM
 Tel: +44 1480 357 600
 Fax: +44 1480 357 601
 info.uk@advantechwireless.com

RUSSIA & CIS
 Tel: +7 495 971 59 18
 info.russia@advantechwireless.com

INDIA
 Tel: +91 33 2415 5922
 info.india@advantechwireless.com

SOUTH AMERICA
 Tel: +1 514 420 0045
 Fax: +1 514 420 0073
 info.latam@advantechwireless.com

BRAZIL
 Tel: +55 11 3054 5701
 Fax: +55 11 3054 5701
 info.brazil@advantechwireless.com

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Technical Specifications – Modem Element

Receive Rates	1 Msymb/s — 45 Msymb/s
ODU Interface	TX:950-1750 MHz F-Type connector RX: 950-2150 MHz F-Type connector
TCP Acceleration	Included
Security	Optional IPSec (3DES or AES 256)
Network Management	SNMP-based and GUI-based management, dual software loads, downloadable software upgrade over the air
BUC Size	Up to 8W Ku (Advantech BUC) for up to 500' using internal 100W power supply; higher wattage available with optional external power supply
Frequency Combinations	Support of ODUs in C, Ku, Ka and X-Band

Technical Specifications – Physical Characteristics

Supply Voltage	100-240 VAC; 50Hz / 60 Hz
Power Consumption	37W (excluding BUC)
IDU Operating Temperature	0°C to +55°C, 5% to 90% humidity, non-condensing
IDU Storage Temperature	-20° C to +70 °C, 5% to 90% humidity
Operating Altitude	Up to 3000 m
Weight & Dimensions	4.0 kg, D31.5 cm x W43.5 cm x H4.5 cm (1RU high)
Regulatory/Compliance	<ul style="list-style-type: none">• CE, FCC, RoHs, UL, CSA• EMC EN55022 :2006, EN55024• Safety : EN60950• Telecom : TBR12, TBR13

NORTH AMERICA USA

Tel: +1 703 659 9796
Fax: +1 703 635 2212
info.usa@advantechwireless.com

CANADA

Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.canada@advantechwireless.com

EUROPE UNITED KINGDOM

Tel: +44 1480 357 600
Fax: +44 1480 357 601
info.uk@advantechwireless.com

RUSSIA & CIS

Tel: +7 495 971 59 18
info.russia@advantechwireless.com

INDIA

Tel: +91 33 2415 5922
info.india@advantechwireless.com

SOUTH AMERICA

Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.latam@advantechwireless.com

BRAZIL

Tel: +55 11 3054 5701
Fax: +55 11 3054 5701
info.brazil@advantechwireless.com

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