Advantech Wireless

S5220 series

DVB S2 DVB RCS DVB S

S5220 Mesh / DVB-RCS Terminal
DVB-RCS / DVB-S2

Features

- Ideal for remote-to-remote real time applications such as VoIP and Videoconferencing
- VSAT Modem with DVB-RCS standard Mesh and Star network topology support
- DVB-S/S2 (CCM,VCM,ACM) receive up to 155 Mbps (hub to remote) with Ethernet throughput up to 40 Mbps
- Up to 8 Mbps transmit (remote to hub) or 4 Mbps (remote mesh terminal to remote mesh terminal)
- VPN and accelerated VPN support (optional)
- VLAN support
- GPS input port
- Automatic BUC disable for low power applications
- GUI-based control panel
- Easy-to-configure Ethernet connectivity to your PC, LAN or Router
- VPN and accelerated VPN support (optional)
- VLAN support
- Simple installation
- 19 inch 1U rack mountable

Applications

Remote-to-remote VoIP and Videoconferencing, Emergency Networks, Internet/Intranet Access, Email, File Transfer, Video Streaming, Private Networking, Video-On-Demand and Distance Learning.
Enterprise and government markets.

Overview

Advantech Wireless' S5220 Star-and-Mesh VSAT terminals are DVB-RCS compliant. The S5220 design adds Mesh functionality to the S5120 feature set. Mesh operation delivers 50% reductions in latency and bandwidth costs associated with terminal-to-terminal communications. The S5220 VSAT modems are optimized to deliver high-performance and quick response time for enterprise and governmental applications.

The terminal has been designed with all key IP features to fulfill all the needs of an enterprise or government user. The 19-inch rack mountable form factor makes it ideal for high end use. S5220 Star-and-Mesh VSAT terminals can be combined with Star-only VSAT terminals to populate a satellite network managed via a DVB-RCS compliant hub in a teleport. The DVB-RCS compliance allows for other vendors' terminals to interoperate with the DVB-RCS terminals in the same network or for Advantech terminals to operate with other vendors' DVB-RCS hubs.

The S5220 offers powerful connectivity directly to the LAN/WAN environment or directly to a host computer. A truly corporate and government solution, it is an out-of-the-box, ready-to-go, cost-effective broadband solution for applications where terminal-to-terminal latency as well as bandwidth costs must be reduced.

For high end government and enterprise use, the S5220 allows the optimized use of satellite bandwidth. Designed to support unicast or broadcast traffic up to 155 Mbps on the forward link (hub to remote terminal), with the choice of standardized DVB-S or DVB-S2 (CCM, VCM, ACM) transmissions, and up to 8 Mbps transmission on the return link (remote terminal to hub), or up to 4 Mbps transmission on the mesh link (remote terminal to remote terminal). The S5220 is ideally suited for all needs.

S5220 Mesh DVB-RCS Terminal

Technical Specifications

Network Architectures	Star and Mesh
Sample Services	DVB-RCS, TCP/IP, UDP/TCP, Unicast, Multicast, Broadcast Protocols, FTP, HTTP, SNMP, ICMP, IGMP, RIP, RTP, VLAN, VPN
Quality of Service	Multiple Queues, Filtering on IP Header, QoS Groups, CRA, RBDC, VBDC, FCA
Air Interface & Rates	Receive (Star hub to remote):
	- DVB-S, DVB-S2 CCM, VCM, ACM (QPSK, 8PSK, 16APSK, 32APSK)
	- Encapsulation: IP over MPEG with section packing
	- Coding: RS/Convolutional (DVB-S) or LDPC on the receive (all DVB-S2 MODCODs supported)
	- Can receive entire DVB-S2 155 Mbps carrier with a maximum Ethernet throughput of 40 Mbps
	- Receive Rates: 1 Msymb/s — 45 Msymb/s
	Receive (Mesh remote to remote):
	- DVB-RCS QPSK
	- Encapsulation: IP over ATM, IP over MPEG with section packing
	- Coding: QPSK Turbo Code rates 1/2, 2/3, 3/4, 4/5, 6/7
	- Receive Rates: 512 Kbps — 4 Mbps
	Transmit (Star remote to hub, Mesh remote to remote):
	- DVB-RCS QPSK, 8PSK
	- Encapsulation: IP over ATM, IP over MPEG with section packing
	- Coding: Turbo Code rates QPSK 1/2, 2/3, 3/4, 4/5, 6/7; 8PSK 1/2, 2/3, 3/4, 4/5, 6/7
	- Transmit Burst Rates (Star) : 128 Kbps – 8 Mbps in 16 Kbps increments
	- Transmit Burst Rates (Mesh) : 512 Kbps – 4 Mbps in 16 Kbps increments
Network Interface	Ethernet 10/100 BaseT, RJ45 connector
ODU Interface	TX:950-1450 MHz F-Type connector RX: 950-2150 MHz F-Type connector
GPS Interface	RS-232 NMEA GPS input port (ideal for auto-deployable antenna solutions)
TCP/HTTP Acceleration	Included
Data Compression	Included
Security	Optional IPSec (3DES or AES 256)
Network Management	SNMP-based and GUI-based management. Dual software loads. Upgrades may be downloaded over the air
BUC Size	Up to 8W Ku (Advantech BUC) with internal power supply. Higher wattage available via optional external power supply
Supply Voltage	100-240 VAC; 50Hz / 60 Hz
IDU Power Consumption	15W
IDU Operating Temperature	0C to +55C, 5% to 90% humidity, non-condensing
IDU Storage Temperature	-20C to +70C, 5% to 90% humidity
Operating Altitude	Up to 3000 m
Weight & Dimensions	6.5 kg, D31.5 cm x W43.5 cm x H4.5 cm (1RU high)
Certifications	CE, FCC, RoHs, UL, CSA
Frequency Combinations	Support of ODUs in C, Ku, Ka and X-Band

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