Advantech Wireless

S4920 Terminal

DVB S2 DVB RCS DVB S

S4920 DVB-RCS SCADA VSAT Terminal

Features

- Ruggedized, Fanless, operates -40ºC to +65ºC
- DVB-S/S2 (CCM,VCM,ACM) receive up to 135 Mbps (hub to remote) with the Ethernet throughput up to 36 Mbps
- Up to 512 Kbps transmit (remote to hub)
- GUI-based control interface
- Easy-to-configure Ethernet connectivity to your PC, LAN or Router
- On-board TCP and HTTP acceleration, and compression
- Application QoS
- VoIP support
- VPN and accelerated VPN support (optional)
- VLAN support
- Easy and simple installation
- Automatic BUC/LNB disable for low power application
- Complete unit mounted outdoors in weather proof enclosure.
- Wide temperature range (up to +65^{o} C).
- AC or DC operation.

Applications

SCADA, Internet/Intranet Access, Email, File Transfer, Video Conferencing, VoIP, Rural Telephony, Video Streaming, Backup Services, Private Networking, Video-On-Demand, Distance Learning.

Overview

Advantech Wireless' S4920 is a complete DVB-RCS modem that is designed to be installed as an outdoor modem. It can be used in very harsh climates as encountered in SCADA pipeline operations in the desert or in the Arctic. Advantech Wireless' S4920 SCADA VSAT terminals are DVB-RCS compliant with the capability to transfer this information over the air via UDP. They are optimized to achieve excellent SCADA performance and quick response time for professional, enterprise and governmental applications in an economical fashion. The terminal has been designed with all key IP features to fulfill all the needs of a SCADA application. The attractive design and form factor make it ideal for outdoor SCADA use.

Thousands of the S4920 VSAT terminals can populate a DVB-RCS compliant network. The DVB-RCS compliance allows for other vendor's terminals to interoperate with the DVB-RCS terminals in the same network or with other vendor's hubs.

The S4920 offers IP connectivity to SCADA RTUs for remote monitoring of data. A truly professional solution, it is an out-of-the-box, ready-to-go, cost-effective solution for SCADA applications such as pipeline monitoring.

As a replacement for a cable or DSL connection, as a backup solution to provide continuity of operations or to provide connectivity to harsh remote regions, the Satnet S4920 performance provides bandwidth-on-demand.

For SCADA operations the modem includes a sleep mode of operation to minimize power consumption when it is not needed. From sleep mode, the modem can start transmitting data within seconds. The wakeup criteria can be as simple as a request from the hub to transmit information (hub polling) or data being received from monitor points such as motion detectors.

Designed to support unicast or broadcast traffic up to 36 Mbps on the forward link (hub to remote terminal), with the choice of standardized DVB-S2 (CCM, VCM, ACM) or DVB-S transmissions, and up to 512 Kbps transmission on the return link (remote terminal to hub) the S4920 is ideally suited for all business needs.

Technical Specifications

Network Architectures	Star
Sample Services	DVB-RCS, TCP/IP, UDP/TCP, Unicast, Multicast, Broadcast Protocols, FTP, HTTP, SNMP, ICMP, IGMP, DHCP, RIP, RTP, VLAN
Quality of Service	Multiple Queues, Filtering on IP Header, QoS Groups, CRA, RBDC, VBDC, FCA
Air Interface	Receive (hub to remote): DVB-S (QPSK), DVB-S2 CCM, VCM, ACM (QPSK, 8PSK, 16APSK, 32APSK) Encapsulation: IP over MPEG with section packing Transmit (remote to hub): Encapsulation: IP over ATM, IP over MPEG with section packing
Receive Coding	RS/Convolutional or LDPC (all DVB-S2 MODCODs supported)
Transmit Coding	Turbocoding QPSK 1/2, 2/3, 3/4, 4/5, 6/7 8PSK 1/2, 2/3, 3/4, 4/5, 6/7
Data Rates	Can receive the entire DVB-S2 135 Mbps carrier with a maximum Ethernet throughput of 36 Mbps. Can transmit up to 512 Kbps
Transmit Carrier Burst Rates	128 kbps – 512 Kbps (Tx data as small as 48 bytes)
Receive Rates	1 Msymb/s — 45 Msymb/s
Network Interface	Ethernet 10/100 BaseT, RJ45 connector
ODU Interface	Tx: 950-1450MHz; F-type connector RX:950-2150MHz; F-type connector
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 with Advantech BUC with internal power supply
Supply Voltage	100-240 VAC; 50 Hz / 60 Hz (with included PSU); +24VDC
Power Consumption	IDU in low power mode: 10W IDU+ODU in operational state: 50W typical with 2W BUC
IDU Operating Temperature	-40°C to +65°C, Humidity 100% condensing
IDU Storage Temperature	-40°C to +70C, Humidity 100% condensing
Operating Altitude	5,000m AMSL, adiabatically de-rated by 1°C/200m from AMSL
Weight & Dimensions	6.8 kg. 15” x 9” x 3.5” (35.6 cm x 22.9cm x 8.9 cm)
Certifications	CE, FCC, RoHs, UL, CSA, Satlabs (DVB-S2 pending)
Frequency Combinations	Support of ODUs in C, Ku, Ka and X-Band

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