

**Source Document:
Technical and Environmental Specifications**

<u>Product name</u>	<u>HNS-9201</u>
<u>Manufacturer</u>	<u>Hughes Network Systems</u>

Physical Characteristics

Weight	2.8 kgs
Dimensions	Length: 345 mm Width: 275 mm Depth: 50 mm
Interfaces <ul style="list-style-type: none"> • Data • Voice 	USB Interface: USB 1.1 (client) Ethernet Interface : IEEE 802.3 10BaseT WLAN Access Point: <ul style="list-style-type: none"> • Standard: IEEE 802.11b • Encryption Capabilities: <ul style="list-style-type: none"> ○ WEP • DHCP and other capabilities • MAC Filtering Euro ISDN S0 Interface (64Kbps channel) <ul style="list-style-type: none"> • 3.1KHz Audio • RDI & UDI • Voice (4kbps codec)
User access	Activated via 3G compatible USIM/SIM card. Also supports legacy GSM cards.
User interfaces	Software based interface Terminal control buttons & LEDs
ISDN Power	2.8 Watts with current overload protection

Power

Power supply	AC or DC
External Power	110 – 240 Volts AC
Battery life	Transmit: 162 MB via Ethernet Receive: 864 MB via Ethernet Stand-by Time: 36 hours
Battery type	Lithium-Ion Rechargeable
Battery voltage	11 Volts DC

Tolerances

Ambient Operating temperature	Device: -25°C to +60°C (-13°F to 140°F) Battery: -5°C to +55°C (23°F to 131°F)
Charging Temperature	0°C to +40°C (32°F to 104°F)
Storage Temperature	Including battery: -20°C to +60°C (-4°F to 140°F) Without battery: -25°C to +80°C (-13°F to 176°F)
Operating humidity	Device: 95% Relative Humidity at 40°C (Non-condensing)
Solar radiation	1120W/m ² MIL Spec 810E Method 505.3
Water and Dust (Ingress protection)	IP 55 (both with and without cables fitted)

Ice	25mm ice non-operational per MIL Spec 810E Method 521.1.
Winding Loading	Operational 40kph (25mph), stand secured to ground Survival 160kph (100mph), mounted with fixed installation kit

Radio Specifications

<u>Operating Spectrum</u>	L-Band 1.5 to 1.6 GHz Transmit: 1626.5 MHz – 1660.5 MHz Receive: 1525 MHz – 1559 MHz
Bearer Bandwidth	10.5 KHz to 189 KHz
Maximum Radiated Power (EIRP)	+20 dBW
Maximum Bearer Data Rate	Transmit: Up to 492Kbps Receive: Up to 492Kbps
Antenna	Gain: 15dB (Tx), 14.4dB (Rx) Pointing Loss: 0.5dB Receive Sensitivity: -143dBW/m ³
The antenna beam width	3dB or 20 degrees with a .3 dB or 7 degrees (+/-3 degrees either way) mispointing allowed

Supported Operating Systems

Operating System	Windows <ul style="list-style-type: none"> • 2000 • XP MAC <ul style="list-style-type: none"> • OS 10.1 or later
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Data Capabilities

IP Data: <ul style="list-style-type: none"> • Standard IP • Streaming IP 	Standard class of service (background class) Forward: Up to 492Kbps over a shared channel Return: Up to 492Kbps over a shared channel Guaranteed quality of service (QoS) Forward: All QoS offered up to 492kbps Return: All QoS offered up to 492kbps Up to 10 simultaneous IP streaming sessions
ISDN Data	UDI/RDI (64 kbps)
SMS	160 Characters

Voice Capabilities

<u>Voice</u>	4 kbps Voice 3.1 kHz Audio via ISDN channel
Supplementary Services	Voice Mail, Call Waiting, Call Hold, Call Forwarding, Call Barring, Call Transfer, Closed User Group, Call Line Identification, Connected Line Identification Multi Party

Accessories Standard/Optional Extra?

Cabling	USB (3m) Ethernet (3m) ISDN (3m)	Standard Standard Standard
Compatible Voice Handsets	<ul style="list-style-type: none"> • ASCOM Eurit 33 plus deskphone • SwissVoice Eurit 25 and 35 deskphone • NERA ISDN handset • Siemens Gigaset SX255 cordless DECT ISDN basestation & S1 handset (basestation includes an ISDN Terminal Tdaptor) • Any RJ-11 analog handset with any ISDN Terminal Adaptor • VoIP Handsets 	Optional extras
AC/DC Adaptor	110/240 Volts (4m length)	Standard
Plug Adaptor	2 Pin US type plus Universal Adapter Kit for most other countries	Standard
DC/DC Adaptor (In-Car Charger)	SM Power part-number SMP119-05 (TBD), 10-32VDC input, 20VDC output, 55W.	Optional extra
Compatible Solar Chargers	<ul style="list-style-type: none"> • IDG Europe IDG T-60 (3-panel) max 60W, 3.3A • Powerline Suncatcher F0002 (2-panel) max 25.1W) 	Optional extra
External Antenna	N/A	
External GPS Antenna	N/A	
Batteries	Types available <ul style="list-style-type: none"> • Standard (36 hrs stand-by) • Extended (54 hrs stand-by) 	Standard Optional extra
Battery Charger	N/A	
Fixed Installation Kit	Includes <ul style="list-style-type: none"> • Pole mounting bracket & security hardware • 30m DC extension cable to be used with standard AC/DC Adapter • 30m Ethernet/ISDN cable • Lightning protection strap 	Optional extra