Personal Earth Station

Cost-effective wide area network (WAN) solution for the enterprise

HUGHES
NETWORK SYSTEMS

PES 5000™

The PES™ 5000 is a high-performance, flexible very small aperture terminal (VSAT) that supports highly reliable two-way data, voice, multimedia and one-way video communications. Organizations looking to establish efficient, reliable and cost-effective LAN/WAN connectivity between multiple, geographically dispersed locations should look no further than the PES.

Designed modularly, the PES family of VSATs can be seamlessly customized at each remote location providing the most scalable VSAT solution in the industry.

As the most widely used VSAT in the world with over 250,000 in operation, the PES provides:
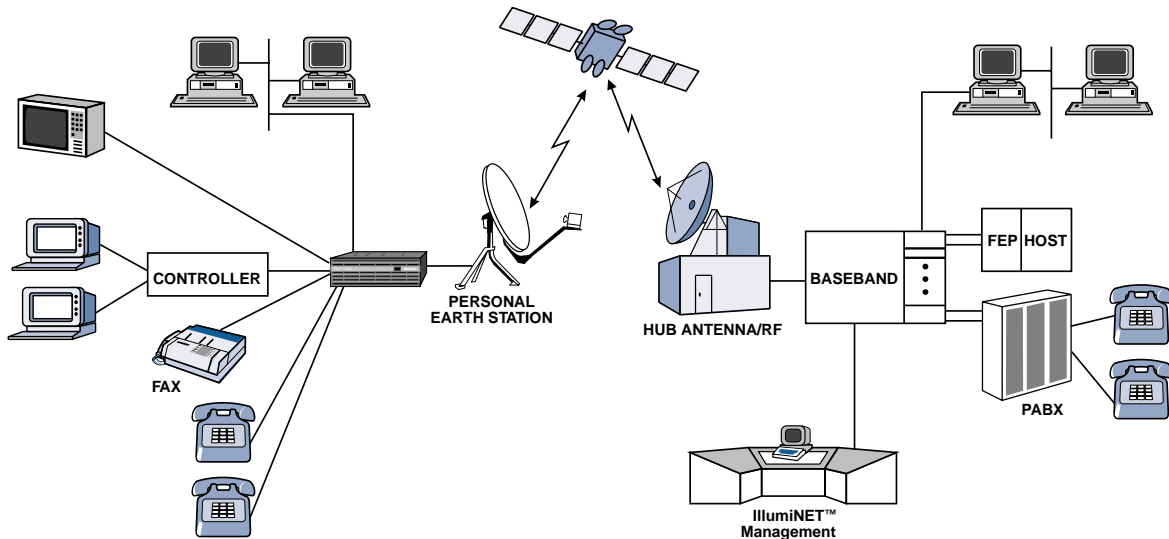
- Built-in IP router functionality eliminating the need for external routers
- Concurrent multi-protocol support, capable of simultaneously carrying SDLC, X.25, TCP/IP with IP routing, SLIP, PPP and several other LAN protocols in bridged mode, and voice
- Seamlessly coexisting with and complementing the broadband HNS DIRECWAY™ platforms
- Integrated Voice over IP (VoIP) capability using ITU-T G.729 (8 Kbps) voice compression and ITU-T H.323 recommendations for multimedia communications over the Internet
- Efficient use of space segment employing the unique TDMA Flexroute™ satellite access technique and efficient LAN/WAN data compression

- Consistent response times and throughput using protocol and application prioritization
- Ease of implementation and rapid deployment
- Unparalleled reliability with field proven MTBF of over 100,000 hours.

The PES 5000 is optimized to support numerous applications across a wide cross section of vertical industry segments such as Banking and Financial, Retail, Automotive, Retail Petroleum/Convenience Stores, Lottery, Internet Service Providers (ISPs) and more.

Applications
- LAN internetworking
- Point of sale (POS) transactions
- Distance education and training
- Multimedia (video, audio) delivery
- Voice
- SCADA
- Batch file transfer
- Inventory control
- Automatic teller machine (ATM)
- Internet/intranet access
- Lottery transactions
- Fax and image transfer

Technical Specifications

Frequency
Ku-band, C-band

Data Rates
Asynchronous:	Up to 19.2 Kbps
Synchronous:	1.2-64 kbps (Standard rates)

Ports
- Standard: Up to 4 serial ports with LAN Video IF port, 950-1700 MHz
- Optional: 2 voice ports

Interfaces
- Data: RS-232, RS-422, or V.35
- LAN: Ethernet: 10BaseT Token-Ring: Type 1, Type 3
- Voice: RJ-11 two-wire loop start

Antenna
- Ku-band: 0.98, 1.2, 1.8, and 2.4 meters
- C-band: 1.8 and 2.4 meters
- RF Power: 0.5, 1.0 and 2 watt (Ku-band) 2 watt (C-band)

Outroute
512, 128 Kbps

Inroute
256, 128, 64 Kbps

Protocol Support
Ethernet (10 Mbps)
Token-Ring:	4/16 Mbps (optional)
Transparent Bridging:	SDLC (PU4-PU2, PU4-PU4)

SDLC to Token Ring
X.25
BSC 3270
Bit and Byte Transparent
HASP
Frame Transparent
X.3/X.28/X.29 PAD
Broadcast
Telnet
SLIP/PPP
TCP/IP
Specialized Protocols

Bit Error Rate
- 1×10^{-7}– at threshold
- 1×10^{-9}– typical

Operating Temperature
Outdoor Equipment	-30°C to +55°C
Indoor Equipment	+10°C to +40°C

Power
90-264 VAC, 47-63 Hz
-24 VDC

Customized protocols and configurations may be available. Please contact your local HNS representative for details.

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™