Hughes HX260 Mesh/Star Broadband Indoor Unit (IDU)

High-performance IP satellite IDU

Part No: 1501744-0013
Description: KIT, HX-260

The HX260 is a high performance satellite IDU designed to support dynamically assigned high-bandwidth IP connectivity in simultaneous mesh and star operation. The HX260 satellite router provides high QoS (Qualify of Service) features including Adaptive Constant Bit Rate (CBR) bandwidth assignment that delivers high-quality low jitter bandwidth for real-time traffic such as VoIP (Voice over IP) or videoconferencing. With integrated IP features including RIPv1, RIPv2, BGP, DHCP, NAT/PAT, and DNS Server/ Relay functionality, together with a high-performance satellite router, the HX260 is the ideal platform for supporting mesh and star broadband IP connectivity. In addition, with the ability to support simultaneous mesh and star operation, the HX260 is ideal for applications such as VoIP services where simultaneous mesh connections are required on a per call basis and, at the same time, continuous Internet access is demanded.

Target Markets

- Star/mesh voice/data broadband IP connections
- GSM backhaul, SCPC/MCPC replacement links
- MPLS extension services
- Embassy and government networks
- Air traffic control
- Private, leased-line services

HX260 Benefits

- Simultaneous star/mesh capability
- Single-hop telephony or videoconferencing
- Support for distributed star networks

HX System Architecture

The HX System is a DVB-S2 ACM/IPoS with Adaptive Coding Modulation (ACM) system consisting of a central Gateway connecting to multiple HX routers. The outbound channel from the central Gateway, which utilizes DVB-S2/ACM, is continuously received by every HX router in the system—this reception is independent of mesh connections between routers. The TDMA channels of the HX System are highly efficient and are based on the industry standard leading IPoS. The connectivity from a router to either the HX Gateway or other HX260 routers is through the TDMA channels.

Efficiency and flexibility in utilizing satellite bandwidth are at the core of the HX260 design. Each TDMA link, whether in star or mesh mode, can be configured to provide QoS tailored for the requirements of each link. This includes such capabilities as defining a minimum, guaranteed and maximum Committed Information Rate (CIR), CBR (Adaptive and On-Demand) and Best Effort, thereby allowing service providers to develop a service tailored to its customers' specific requirements. In addition, the HX System bandwidth allocation scheme uses an Aloha channel for initial traffic requests (and only the initial traffic request), which means that routers are able to release all TDMA channel assignments when they are idle. This frees up unused bandwidth and allows an operator to make more efficient use of space segment resources.

The HX System from Hughes, the world leader in broadband satellite networks and services, is designed and optimized for smaller and mobile networks, including maritime and airborne applications, where the provision of high-quality and high-bandwidth links is paramount. Capable of simultaneous mesh, star, and multi-star configurations, the HX System builds upon the capabilities and global success of the high-performance HN System, incorporating many advanced features pioneered by Hughes, including integrated TCP acceleration and advanced IP networking. Its broadband satellite products are based on global standards approved by TIA, ETSI, and ITU, including IPoS/DVB-S2, RSM-A, and GMR-1. To date, Hughes has shipped more than 1.9 million broadband satellite terminals to customers in over 100 countries.