

Application-based feature for voice, video and latency sensitive data traffic

On-Demand Streaming is a powerful QoS/TOS-based, performance-enhancing feature on the HN and HX Systems from Hughes, the leader in broadband satellite networks and services. Included as a standard feature in both HN software release 5.6 and above, as well as HX software release 2.0 and above, On-Demand Streaming gives operators the option to deliver an enhanced range of high Quality of Service (QoS) offerings by dynamically allocating Constant Bit Rate (CBR) transport services per application session. On-Demand Streaming enhances the performance of VoIP and video applications that are based on Session Initiated Protocol (SIP) and H.323 standards, as well as latency sensitive data traffic, and is supported on the HN7000S series of routers, as well as the HN9200 and HN9400 and the entire range of HX routers.

Key Benefits

- Enables high QoS VoIP and video services per site or groups of sites
- Enhances performance of latency sensitive applications
- Non-priority applications operate normally in parallel

Session Initiated Protocol (SIP)

With the Hughes On-Demand Streaming feature, a satellite router can be configured to automatically recognize any incoming or outgoing VoIP or videoconference call using the SIP and assign a predefined bandwidth per session. This enables a high-quality, low-

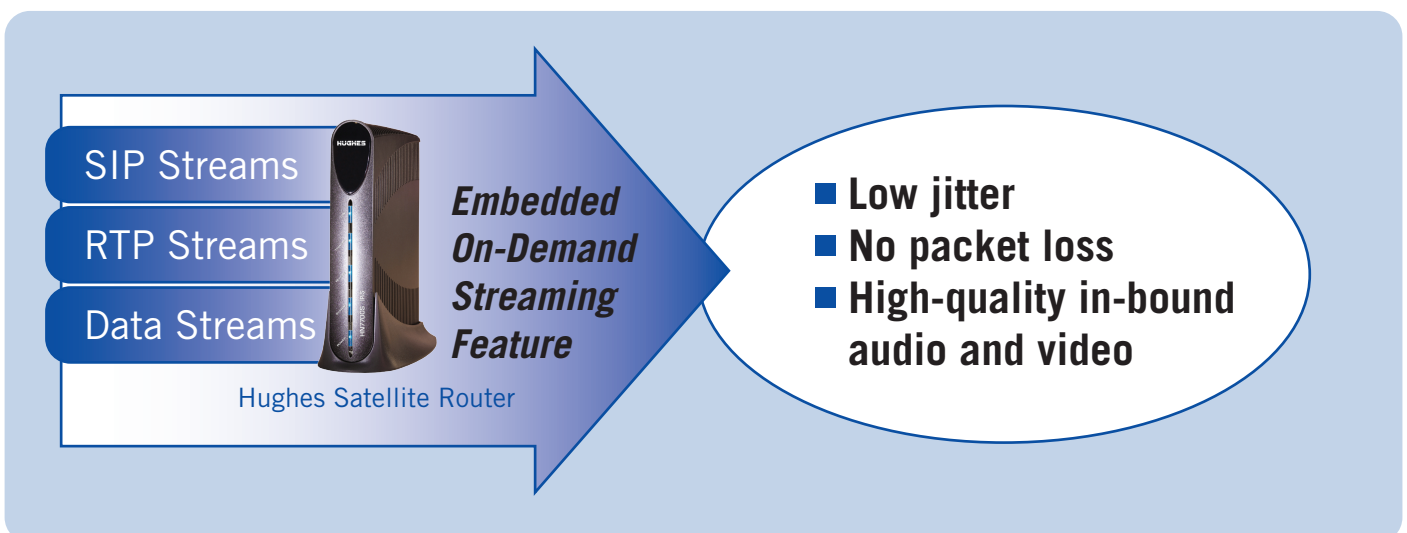
jitter, low-latency connection for each SIP call. For each additional call, the HN/HX routers will automatically detect and provide additional bandwidth as required. The HN/HX routers can optionally be configured to limit calls on a network or per remote basis. This allows for efficient bandwidth utilization over the TDMA inbound channel while continuing to provide end users with a high-quality satellite SIP connection.

Real-Time Streams

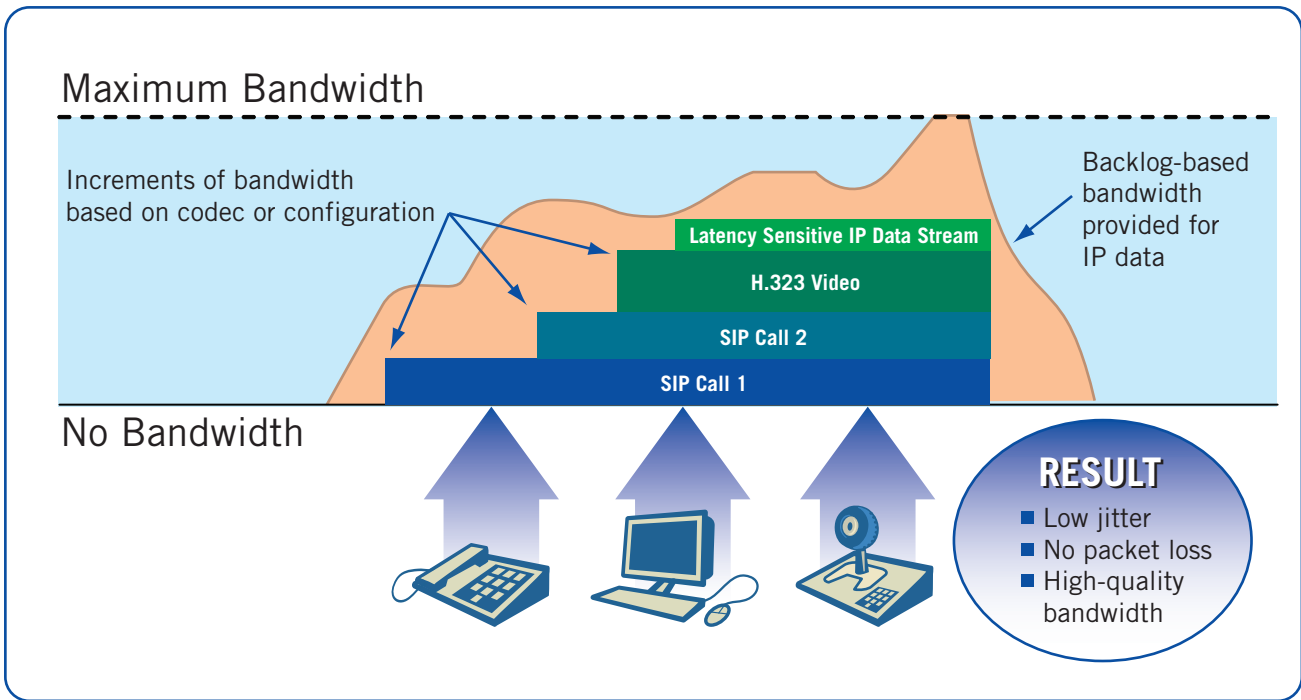
For real-time applications using protocols such as H.323, the On-Demand Streaming feature allows operators to configure inbound CBR bandwidth on a per remote basis, as well as on a network basis. The assignment can be made based on the port range, DSCP tags or the even IP address, and thus can be used to support a wide range of voice and video applications.

Low-Latency Data Applications

In addition to providing high QoS links for VoIP and video applications, the On-Demand Streaming feature can also be used by service operators to improve the performance of latency-sensitive data applications. Applications such as Citrix® and Remoteware® can be assured of a Constant Bit Rate QoS based on ports, which reduces latency over the satellite network and thereby improves the end user experience.



Hughes Network Systems, LLC (Hughes) is the world's leading provider of satellite broadband for home and office, delivering innovative network technologies, managed services, and solutions for enterprises and governments globally. HughesNet® is the #1 high-speed satellite Internet service in the marketplace, with offerings to suit every budget. To date, Hughes has shipped more than 2.5 million systems to customers in over 100 countries, representing over 50 percent market share. Its products employ global standards approved by the TIA, ETSI, and ITU organizations, including IPoS/DVB-S2, RSM-A, and GMR-1. Headquartered outside Washington, D.C., in Germantown, Maryland, USA, Hughes operates sales and support offices worldwide, and is a wholly owned subsidiary of EchoStar Corporation (NASDAQ: SATS), a premier global provider of satellite operations and digital TV solutions. For additional information about Hughes, please visit www.hughes.com.



| On-Demand Streaming Feature | Benefits |
|-----------------------------|---|
| Embedded software | <ul style="list-style-type: none"> ■ Detects latency-sensitive traffic |
| SIP streams | <ul style="list-style-type: none"> ■ Recognizes SIP traffic ■ Automatically requests bandwidth based on codec ■ Limits number of SIP calls per remote/network |
| Other RTP streams | <ul style="list-style-type: none"> ■ Detects traffic based on matching rules ■ Rules based on port range, IP address or DSCP tag ■ Automatically requests bandwidth based on stream configuration ■ Limits number of calls per remote/network |
| Data streams | <ul style="list-style-type: none"> ■ Detects traffic based on matching rules ■ Rules based on port range, IP address or DSCP tag ■ Limits number of streams per remote/network |

For additional information, please contact us at globalsales@hughes.com or visit our Website at www.hughes.com.