

High-performance demodulator for HN and HX Systems

The Wideband Configurable Demodulator Subsystem (CDS) is a high-performance demodulator featuring a very compact design and the capability to demodulate multiple FDMA/TDMA (Frequency Division Multiple Access/Time Division Multiple Access) channels. Designed to operate in both the Hughes HN and HX Systems, the Wideband CDS is housed in a standalone server occupying one Rack Unit (RU). The Wideband CDS interfaces are backward compatible with the prior generation Return Channel Demodulator (RCD) subsystem. The Wideband CDS is completely field upgradeable and can coexist in a current HN Network Operations Center (NOC) or HX Gateway (GW).



Adaptive Coding

The Wideband CDS supports the Hughes Adaptive Inroute Selection (AIS) which offers several features to both optimize the utilization of satellite capacity, as well as mitigate against any rain fade. A key element of AIS is the capability of the Wideband CDS to demodulate and decode FDMA/TDMA bursts of different symbol rates within the same FDMA/TDMA frame. This enables remote terminals to transmit FDMA/TDMA bursts using code rates which are optimal for their individual link conditions.

Multiple Channels at Different Rates

Each Wideband CDS module is capable of processing up to 2.5 Msps of FDMA/TDMA traffic. This 2.5 Msps can be distributed across as many as nine (9) different channels as long as the aggregate symbol rate over all the channels does not exceed 2.5 Msps.

Combined with the adaptive coding feature, a single Wideband CDS can support virtually any combination of inbound channels including:

- 9 x 256 ksps channels
- 4 x 512 ksps channels
- 2 x 1024 ksps channels
- 1 x 2046 ksps channels

Network Management

The Wideband CDS is fully integrated into the Hughes Vision® Network Management System thus allowing easy configuration and equally easy monitoring of the CDS.

Technical Specifications

Inbound Channel:	IPoS(FDMA/TDMA)
Modulation:	OQPSK
Coding:	Rate 1/2, 2/3, 4/5 Turboencode with Adaptive Coding
Symbol Rates:	256, 512, 1024 and 2048 ksps
Bit Error Rate (Receive)	10 ⁻¹⁰ or better
Bit Error Rate (Transmit)	10 ⁻⁷ or better
Weight (IDU):	15.0 lbs (6.8 kg)
Dimensions (IDU):	19"W x 1.75"H x 13"D (48.26cm W x 4.45cm H x 33.0cm D)
1U enclosure for 19" rack	
Operating Temperature:	+10° C to +35° C
Relative Humidity:	10% to 80% noncondensing
Power:	90 – 240 Volts AC
Agency Certification:	UL, FCC Part 15 and CE Mark RoHS Compliant

The HX System from Hughes, the world leader in satellite networking, is designed and optimized for small and mobile networks where the provision of high-quality and high-bandwidth links are the most important criteria. Building upon the heritage and capabilities of the more than 1.5 million broadband satellite terminals shipped by Hughes, the HX System incorporates many of the advanced features pioneered by Hughes including integrated TCP acceleration and advanced IP networking features. Hughes' broadband satellite products are based on global standards approved by TIA, ETSI, and ITU, including IPoS/DVB-S2, RSM-A, and GMR-1.

For additional information, please contact us at globalsales@hns.com.