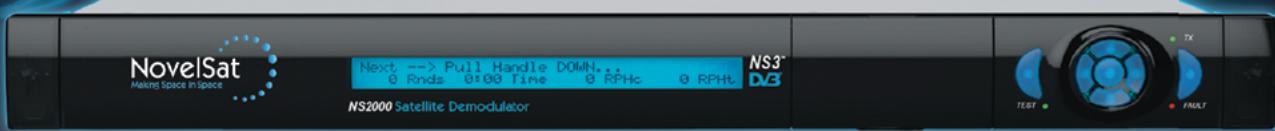


NovelSat

NS2000 Satellite Demodulator



A New Standard for Satellite Broadcast

The NovelSat NS2000 is a state-of-the-art demodulator designed for high demand satellite reception. The NS2000 is the only system on the market that incorporates superior NovelSat NS3™ technology, delivering significantly higher spectral efficiency compared with DVB-S2.

Lower Satellite Bandwidth: Savings of typically 30% to 60% satellite bandwidth (over available DVB-S2 equipment in the market)

Higher Data Rate: Increases transmitted data rate by over 100% (compared with DVB-S2 equipment)

Smaller Dish: Achieves the same data rate using a smaller dish.

The NS2000 supports high data rates of up to 365Mbps using 70Msps, which enables transmission of one carrier over a 72MHz transponder.

The NS2000 dual-channel option can divert a stream to one of the two interfaces on the board. The interfaces can be a combination of any two interfaces. This enables transmission quality that is dependent upon the interface content.

Dual-channel operation also enables the combination of Ethernet streaming and the ASI interface, easing migration to IP streaming while controlling the QoS of each stream.

The NS2000 has groundbreaking signal processing methods such as an adaptive equalizer and error correction techniques that enable the receiver to be more resilient to impairments.



Key Features:

- Compatible with the innovative NovelSat NS3 protocol
- DVB-S2 (EN302-307) compliant
- Data rate up to 365Mbps
- NovelSat DDCTM - Dynamic Distortion Compensator, highly effective in non-linear channels
- Dual-channel mode
- Extended L-Band 950MHz-2150MHz
- IF output mode 50MHz-180MHz
- 10MHz reference In/Out
- Dual ASI output interface
- Dual Ethernet 1Gb output interface
- ACM mode

NovelSat NS2000 Satellite Demodulator – Specifications

Baseband

DVB-S2		NovelSat NS3	
Inner code	BCH	Inner code	BCH
Outer code	LDPC	Outer code	LDPC
Code rates and modulation:		QPSK	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
QPSK	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10	8PSK	2/5, 13/30, 7/15, 1/2, 8/15, 17/30, 3/5, 19/30, 2/3, 32/45, 3/4, 4/5, 5/6, 8/9, 9/10
8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10	16APSK	2/5, 13/30, 7/15, 1/2, 8/15, 17/30, 3/5, 19/30, 2/3, 32/45, 3/4, 4/5, 5/6, 8/9, 9/10
16APSK	2/3, 3/4, 4/5, 5/6, 8/9, 9/10	32APSK	2/5, 13/30, 7/15, 1/2, 8/15, 17/30, 3/5, 19/30, 2/3, 32/45, 3/4, 4/5, 5/6, 8/9, 9/10
32APSK	3/4, 4/5, 5/6, 8/9, 9/10	Frame length	64800, 16200
Frame length	64800, 16200	Baseband ROF	"SRRC like" 5%, 10%, 15%, 20%, 25%, 35%
Baseband ROF	SRRC 20%, 25%, 35%		

Input Interfaces

L-Band Input		IF-Band Input	
Connector	F-Type (F) 75 ohm	Connector	BNC (F) 75 Ohm
Frequency range	950-2150MHz in 1Hz steps	Frequency range	70MHz±20MHz, 140MHz±40MHz in 1Hz steps
Level	-70+10log(F)-20 dBm (F in MBAUD)	Signal level	-70+10log(F)-20 dBm (F in MBAUD)
Composite power	<-20dBm	Composite power	<-20dBm
Max. input level	0 dBm	Max. input level	0 dBm
Return loss	>10 dB	Return loss	>10 dB
LNB Power Control		10MHz Reference Clock I/O (Optional)	
Voltage	11.5-14 V (Vert. Pol.), 16-19V (Horiz. Pol.)	Connector	BNC (F) 50 Ohm
Band select	22KHz ±4KHz	Ref. input power level	-3dBm up to +7dBm (Default)
Max. current	350mA	Ref. output power level	+7dBm
		Waveform	Sine wave

Output Interfaces

ASI Output	10 MHz Clock	10 MHz Clock – High Stability (Optional)	
2 ASI interfaces that can function in parallel Connector	BNC female with 75 Ohm coax	Stability Aging	Stability Aging

Additional Information

Monitor and Control Interfaces		Optional Interfaces	Physical		Environmental	
SW interfaces	Command line interface Web based graphic user interface SNMP V3 Front panel	Dual Ethernet 10/100/1G	Weight	3.5 Kg (7.7 pounds)	Prime power	100-240 VAC, 50-60Hz, 30 Watts Max.
			Size	19" W x 18" D x 1.75" 48.3 x 45.7 x 4.45 cm	Operating temp.	0 to 50°C
Serial RS232/RS485	Female 9-Pin D-Sub connector				Storage temp.	-40°C to 70°C
Ethernet 10/100	BaseT interface to monitor and control the modulator				Operating humidity	Up to 85% Non-Condensing
Alarm interface	Female 9-Pin D-Sub connector				Storage humidity	Up to 95% Non-Condensing

