



cnes



Dual high symbol-rate, octo legacy satellite demodulators with quad integrated full-band tuners

Designed for high-end satellite broadband and hybrid broadband-broadcast applications, the STiD135 implements two high-symbolrate (HSR) and up to eight narrow band demodulators, and provides full hardware support for network clock recovery (NCR).

The STiD135 optimizes the use of Ka-band and multi-spot beam technology carried by the latest high-throughput satellites (HTSs) by enabling single-carrier usage of these transponders providing a 30% increase in channel efficiency over multicarrier solutions.

KEY FEATURES & BENEFITS

- Two high-symbol-rate (HSR) demodulators:
- Maximum baud rate of 500 Msymbol/s
- Up to two slices each
- DVB-S2/S2X and Annex M compliant
- Up to 8 multi-standard demodulators (S/S2/S2X)
- Quad integrated full-band tuners and ADCs
- High-speed digital multiplexer to connect any tuner to any demodulator
- Single LDPC/BCH decoder with multiplexed input 720 Mbit/s
- NCR PLL support
- Flexible transport stream processor:
- PID filtering, PCR re-stamping and re-labelling, GSE label filtering
- TS merger (multiplex)
- Data throughput > 500 Mbit/s
- Low power consumption

KEY APPLICATIONS

- Multi-play broadband, broadcast multimedia servers
- Small Home Office VSAT applications
- Consumer broadband satellite modems
- Feeder and back-haul satellite infrastructure solutions
- Very high throughput for professional applications
- Avionics, mobile, etc.
- Outdoor 'Smart LNBs'



STID135 BLOCK DIAGRAM

		Oxford S	TiD135			
Interface		System			Transport processing	
DiSEqC		Temperature Sensor			STFE PID/GSE Filter	
LNB ctrl		NCR recovery I ² C			TS Mux 8 to 1	
5 bank PIO		Regulator SMPS PIO Mu			Mux	
Analog Front end	Multi channel Demodulator					
- Tuner \ ADC 0101	_			Ll 2x		LDPC
$- Tuner \land ADC 010101 \\ - Tuner \land ADC 010101$		Matrix 4x8	8x Base- band Filter	High Symbol Rate Demodulators 8x Narrow Band		x8 Viterbi RS
PwrFreqXtaMgmtSynthost				Demotulators		Slice Manager

Supplies, power	 Single power supply with internal SMPS Consumption ≤ 3.5 W Temperature range: -40 to 85 °C 	
IC & package	164 pin VQFP multi-row, 13 x 13 x 1 mm 3 package, RoHS compliant	

REFERENCE DESIGN

- Schematic Layout
- Evaluation board
- Compact NIM format

SOFTWARE DEVELOPMENT KIT

- Graphical User Interface (GUI)
- Low-level application driver (C)



Eval board



NIM board

HARDWARE AND SOFTWARE RESOURCES

Order code	Description		
STiD135-WB	Samples		
STID135-61B15WB	B2261B-STID135 Oxford cut2 fuse WB soldered validation board spacer stand alone		
VPFE3R-49B135B	STNIM3R B2249B NIM front-end DVB-S/S2 x 8 STiD135 cut2 (Oxford) with 2 RF inputs		

Available through ST sales under NDA





