Challenge Series
Satellite High Speed DVB-S2 IP Demodulator
SDD-IP

CCM, VCM, ACM Functionality

The satellite high speed DVB-S2 IP demodulator SDD-IP provides a platform for receiving IP/Ethernet data over DVB-S2 satellite connections. The device is the corresponding demodulator unit to the DVB-S2 IP modem SK-IP and supports low overhead Generic Stream Encapsulation. In combination with the integrated OptiACM controller the demodulator provides adaptive or variable FEC- and modulation setting for point-to-point or point-to-multipoint applications.

The demodulator accepts an L-Band signal in the range from 950 to 2150 MHz on two inputs or alternatively an IF signal in the range from 50 to 180 MHz on a single input. On L-Band devices LNBs can be powered directly over the inputs.

QPSK, 8PSK, 16APSK, 32APSK modulation is supported, which allows a lot of flexibility in the satellite link design.

Operating and control – easy integration into your system

The configuration of the demodulator can be controlled via the front panel keys or remotely via RS232, RS422/485 and TCP/IP (over Ethernet). For the remote control either addressable packet based commands, a HTTP web browser interface or SNMP can be used. Detailed monitoring of system parameters is possible.

Key features

- DVB-S2 demodulator for IP/Ethernet data reception
- DVB-S2 compliant (EN 302 307)
- QPSK / 8PSK / 16APSK / 32APSK modulation
- Normal and short FEC frames, pilots on or off
- Physical layer framing (PL descrambling with codes 0 to 262141) according to DVB-S2 standard
- Symbol rates from 60 ksps to 60 Msps
- OptiACM system (programmable or automatic) for optimized bandwidth usage
- Gigabit Ethernet data interface
- Generic Stream Encapsulation (GSE)
- Network layer 2 or layer 3 operation
- Remote control through RS232, RS422/485 (2-wire or 4-wire) interfaces, TCP/IP over Ethernet, Web browser interface, SNMP (MIBs are provided)
- Summary alarm output (dual change over switch contacts)
- Operating temperature range 0°C to 50°C (32°F to122°F)
- CE compliant
- **3 years warranty**

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Demodulator Type:	SDD-IP-V50 or SDD-IP-V75	SDD-IP-L75	SDD-IP-Vx/L75
IF-Input Frequency:	50 … 180 MHz	950 … 2150 MHz	50 … 180 MHz and 950 … 2150 MHz (2 inputs, can be alternatively enabled)
IF-Input Characteristics:	Impedance: 50 Ω or 75 Ω Return Loss: >18 dB Input Power: -60 dBm -15 dBm (total aggregate power) IF-Connector: BNC female	Impedance: 75 Ω Return Loss: >13 dB Input Power: -70 dBm … -20 dBm (total aggregate power) IF-Connector: 2x F female, input selectable LNB DC-Feed: 13.5V or 18 VA (450mA) switchable, 22 kHz tone on/off, short circuit protected	see SDD-IP-Vx and SDD-IP-L75 one 50 … 180 MHz and one L-Band input
Symbol Rate:	Max. Range: 60 ksps … 60 Msps (QPSK, 8PSK) 60 ksps … 45 Msps (16APSK) 60 ksps … 40 Msps (32APSK) Step size: 1 sps		
Demodulation / Decoding DVB-S2:	Outer BCH Code: FEC-Frames nldpc = 64800 (normal FEC Frame) nldpc = 16200 (short FEC Frame) Inner LDPC Code: QPSK 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK 3/4, 4/5, 5/6, 8/9, 9/10 Demodulator auto detection: Modulation- and FEC-type, pilots on/off are automatically detected Physical Layer Scrambling: N = 0 … 262141 all according EN 302307		
OptiACM:	CCM / VCM / ACM functionality for point-to-point and point-to-multipoint links		
Signal Spectrum Mask:	α = 0.35, 0.25, 0.20 according EN 302307		
Data Interface:	Ethernet (1xRJ-45, 10/100/1000 Mbps auto sensing)		
Data Rate:	up to 160 Mbps		
Network Operation:	Layer 2 (Ethernet frame reception) or Layer 3 (IP packet reception) IPv4, IPv6		
Data Encapsulation:	Generic Stream Encapsulation (GSE) according TS 102606		
Monitoring and Control Interface:	Protocol: SNMP Connection: UDP over Ethernet (10/100 Mbps, auto sensing),IPv4, IPv6, connector RJ-45		
	Protocol: HTTP (web browser interface) Connection: TCP/IP over Ethernet (10/100 Mbps, auto sensing), IPv4, IPv6,connector RJ-45		
	Protocol: Multipoint Connection: RS232 or RS422/RS485 (configurable), connector DSUB09 female or TCP/IP over Ethernet (10/100 Mbps, auto sensing), IPv4, IPv6,connector RJ-45		
Alarm Interface: Mute Input:	Alarm: two potential free contacts (DPDT), Mute Input: TTL logic input with internal pull up Connector DSUB09		
Temperature Range:	0°C ... 50°C operating -30°C ... 80°C storage		
Relative Humidity:	<95% non condensing		
User Interface:	LCD-Display 2 x 40 characters, 4 cursor keys, 2 function keys		
Mains Power Input:	100 … 240 V AC nominal, 90…264 V AC max, 50…60 Hz		
Mains Power Consumption:	Typ: 35 VA / 25 W		
Mains Power Input Connector:	IEC C14		
Mains Fuse:	2 x 2 A time-lag fuse		
Dimension and Weight:	483 x 44 x 270 mm³ (WxHxD), 1 RU (19") approx. 4 kg		

Specifications are subject to change

Order Information: **SDD-IP-[Input Band Input Imp]**

Examples:

SDD-IP-L75 Demodulator with L-Band Input 75 Ω

SDD-IP-V75/L75 Demodulator with VHF-Band and L-Band Input

DVB Digital Video Broadcasting