

DRD 700 QUAD Multistream Processor

DRD 700 is able to receive, decrypt and multiplex 4 independent transport streams. The output signals are available at the 4x2 ASI or the 2 IP-GbE-SFP interfaces. For the reception different receiving options like DVB-S/S2, DVB-T/C, DVB-T/T2 or ISDB-T can be chosen. Furthermore, 2 ASI-Inputs and the redundant IP-GbE-SFP interface are also selectable for the reception of transport streams. For Multi-Service Decryption 4 DVB-CI interfaces for CAM modules can be routed as needed.

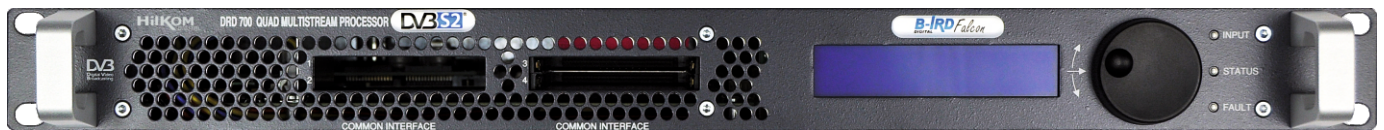
The multiplexer allows the multiplexing of up to 4 new DVB-compliant transport streams including EIT tables (MPTS). Additionally, more than 28 selected services can be streamed as single program transport streams (SPTS) for IPTV applications. Forward error correction Pro-MPEG is selectable for reception and streaming in non reliable IP networks. For the configuration a separate control port is available for the access of web server and SNMP agent. LCD display and a navigation wheel allows basic configuration at the device.

DRD 700 is ideally suited for receiving and streaming signals for IPTV applications.



- Different DVB frontends
- SPTS/MPTS
- IP streaming
- Pro-MPEG FEC
- Up to 4 DVB-T2 or ISDB-T inputs

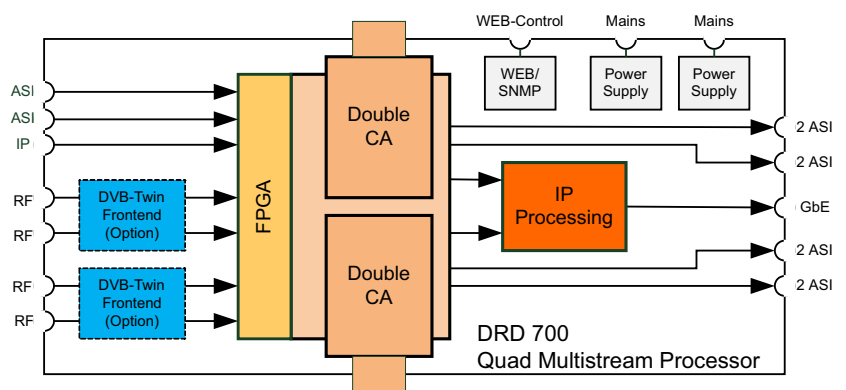
DVB IPTV
DVB S2
DVB T2
DVB T
DVB C
ISDB-T



Features

- 2x DVB-Twin-Frontends DVB-S/S2, DVB-T/C or DVB-T/T2
- 2x ASI Inputs
- 2x IP-GbE-SFP-Interfaces for IP-Input or IP-Output-Streaming (Option Redundancy)
- Service filtering and DVB-compliant
- 4 x Multiplexing including EIT
- Multistream Demultiplexing
- 4 x DVB-CI slots for CAM modules for Multi-Service-Decryption
- IP-Output-Streaming MPTS/SPTS
- 4 x 2 ASI Outputs
- Web/SNMP server (IP-Control port)
- Redundant power supply

Block Diagram



Rear View



DRD 700 QUAD Multistream Processor



Technical Details

ASI	
Input:	2x ASI (in conformance with EN 50083-9), 75 Ohm, BNC
Output	4x 2 ASI (in conformance with EN 50083-9), 75 Ohm, BNC
Reflection / return loss	> 18 dB
Format	188 Byte/ 204 Byte
IP Streaming Interface	
Connector	2x IP-GbE-SFP-Interfaces for IP-Input or IP-Output-Streaming SFP: electrical RJ45 or optical LC
Dataformat	UDP, Uni- und Multicast (RTP, FEC ProMPEG CoP#3)
IP-Input-Streaming	Max. 4 MPTS/SPTS IP-streaming inputs (Option)
IP-Output-Streaming	Max. 4 MPTS and >28 SPTS IP streaming output channels (2013), SAP/SDP support, EIT demultiplexing
IP-Redundancy	Switching criteria: link-loss, sync-loss for input streaming (Option), parallel output on 2nd SFP (Option)
Processing	
Filtering	PID- and Service filtering (Option)
Multiplexing transport streams	DVB-compliant Multiplexing of up to 4 transport streams (Option)
Input Data/rates	
	max. 200 Mbps total; max 100 Mbps per input port (Note: encrypted signals are limited to 72 Mbps by the CAM)
Multistreaming	
	DVB-S2 demultiplexing according to EN 302307 Annex H.2 (only with DVB-S2 frontend)
Multi-Service-Decryption	
Hardware CA systems	4x DVB-CI slot (CAM) DVB-CI compliant CA systems with CAM: Viaccess, Conax, Irdeto, Seca, Mediaguard, Nagravision, Sky, NDS (on request)
BISS	
by CAM	Mode 0, Mode 1, BISS-E (option) dependent of service, max. 8 PIDs
Control-Port	
Ethernet Format	IP control port, RJ45, LAN,10/100M TCP/IP, SNMP agent, TFTP, Web server, Software Download
Alarm	Potential-free relay contact
General	
Power consumption	2 x 100V _{AC} to 240 V _{AC}
Redundant Power Supply	100 V _{AC} to 240 V _{AC} 50/60 Hz
EMC	EN 50083-2, FCC Part 15, class A
Safety	EN 60950-1

TECHNICAL DATA DVB-S/S2 Frontends (Options)

	OPD135-09
	DVB-S/S2
	EN 300 421/ EN 302 307
Number of inputs (per frontend)	2
Modulation	QPSK, 8PSK; 16APSK, 32APSK (1 input only)
Input frequency	950 MHz to 2150 MHz
Lock-in range	± 5 MHz
Retaining range	±12 MHz
Input impedance, connector	75 Ω, F
LNB supply:	
Voltage (switchable)	13V / 18V
Current (short-circuit proof)	≤ 500 mA
Input level	44 to 84 dBμV
Bandwidth (MHz)	36
Symbol rate	1 to 50 MS/s (QPSK, 8PSK) 1 to 40 MS/s (16APSK) 1 to 30 MS/s (32APSK)
Lock in range	≤ ± 100 ksps
Roll off	20, 25, 35 %
FEC-Code rates (depending upon the type of modulation)	1/4; 1/3; 2/5; 1/2; 3/5; 2/3; 3/4; 4/5; 5/6; 8/9; 9/10
FEC-Frame	Normal (64800bits), Short (16200bits)

TECHNICAL DATA DVB-T/C & DVB-T/T2 Frontends (Options)

	OPD135-03		OPD135-04
	DVB-T EN 300 744	DVB-C EN 300 429	DVB-T2 EN 300 755
Number of inputs (per frontend)	2		
Modulation	COFDM, QPSK, 16-QAM, 64-QAM	16-, 32-, 64-, 128-, 256-QAM	COFDM, QPSK, 16-QAM, 64-QAM, 256 QAM
Input frequency	47 to 862 MHz		
Input impedance, connector	75 Ω, F		
Input level	-31 to +39 dBμV -80 dBm to -10 dBm	-11 to +39 dBμV -60 dBm to -10 dBm	-31 to +39 dBμV -80 dBm to -10 dBm
Bandwidth (MHz)	6/ 7/ 8	2/ 4/ 6/ 7/ 8	6/ 7/ 8
Symbol rate	All for 7 MHz and 8 MHz bandwidth	2 Msps ... 7 Msps	All for 7 MHz and 8 MHz bandwidth
FFT	2k, 8k		1k, 2k, 4k, 8k 16k, 32k
FEC-Code rates	1/2, 2/3, 3/4, 5/6, 7/8		1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Guard Intervall	1/4, 1/8, 1/16,		1/4, 1/8, 1/16,

Software Options

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IP-Input Streaming (APA135-51 - Type)

Reception of up to 4 MPEG2 transport streams encapsulated in UDP over IP interface

IP-GbE-Redundancy (Bundle with SFP-Modul ODP 135-30 - Type)

(SFP module required)
Redundancy for GbE-SFP-Interface (Switching criteria link-loss, sync-loss)

Processing (APA135-59 - Type)

Service- and PID filtering and multiplexing of up to 4 new transport streams out of the input signals according to DVB

NDS (APA135-56 - Type)

Due to the NDS Certification procedure NDS decryption is an option.

BISS decryption (Option DCA315) by CAM

BISS (Basic Interoperable Scrambling System) Descrambler, 8 Services, Mode 0, Mode 1, BISS-E