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DekTec Probes

PHASE®

FantASI USB-2 ASI/SDI Input+Output Adapter

DekTec DTU-245

- □ Portable streaming of DVB-ASI and SDI
- □ The essential tool for every DTV engineer
- □ No AC power adapter required

KEY FEATURES

- Convenient, compact USB adapter that can be used to capture and generate MPEG transport streams (DVB-ASI) or uncompressed serial digital video (SDI)
- Supports all video and audio codecs and formats that are supported by the MPEG transport stream and SDI standards
- USB powered - no power supply required
- Simultaneous input and output operation for transport streams
- Huffman compression of SDI signals for reducing the required USB bandwidth
- 16-Mbytes local RAM for sustained real-time streaming

APPLICATIONS

- General-purpose USB adapter for capturing, generating and processing of ASI and SDI streams
- On-site recording and analysis
- Portable demo set

BUNDLED SOFTWARE

- DtGrabber+ advanced capturing
- DtTV transport-stream television
- StreamXpress ASI / SDI player
- StreamXpert transport-stream analyser
- SdEye SDI waveform analyser
- Windows/Linux drivers and associated SDK for developing custom applications

KEY ATTRIBUTES

Parameter		Value
Connector		75-Ω BNC (2x)
ASI	Physical layer	EN50083-9
	Bit Rate Range	0 to 160 Mbit/s
	Packet Size in Bytes	188 or 204
SDI	Physical Layer	SMPTE 259M
	Bit Rate (half-duplex only)	270 Mbit/s
	#Bits	8 or 10 bit
Power (through USB-2)		5V, 400mA max
Dimensions in mm (LxWxH)		87 x 104 x 30

* USB-1 provides insufficient bandwidth and is not supported

ORDERING INFORMATION

Type	Description
DTU-245-SDP	USB-2 ASI/SDI input and output with DtGrabber+, DtTV and StreamXpress
DTU-245-SXP	DTU-245-SDP with StreamXpert
DTU-245-SY-SXP	DTU-245-SDP with SdEye and StreamXpert

FantASI USB-2
ASI/SDI Output Adapter

DekTec DTU-205 and DTU-205SP

- Portable ASI/SDI Stream Generation
- 0 to 214 Mbit/s ASI, 270 Mbit/s SDI
- No AC Power Adapter Required

KEY FEATURES

- Convenient, compact USB adapter that can be used to generate MPEG transport streams (DVB-ASI) or uncompressed serial digital video (SDI)
- Supports all video and audio codecs and formats that are supported by the MPEG transport stream and SDI standards
- Easily-installable replacement of PCI based ASI and/or SDI output card
- USB full and high speed operation
- USB powered, no separate power supply required
- 8Mbytes local buffer for sustained generation of digital video streams or for storage of SDI test patterns
- Support for continuous, burst and time stamped MPEG2 packet transmission
- Comes with free:
  - Windows-2000/XP/2003 driver and software Development kit for developing custom applications
  - Example source code for stream player
- DTU-205SP is a bundle of DTU-205 and StreamXpress (DTC-300) player software
- Connect multiple FantASI adapters to a single PC or Notebook, to create multiple ASI/SDI input and/or output channels

APPLICATIONS

- Universal USB adapter for Notebook and PC applications that have to generate an ASI or SDI digital video stream
- Ideal for demos and experiments

PC USB REQUIREMENTS

- Low speed ASI (<8 Mbit/s) or static SDI test-pattern generation: standard USB Port
- Standard ASI (<100 Mbit/s): USB-2 Port
- Full range ASI or SDI: USB-2 Port + suitable USB-2 host controller in the PC

KEY ATTRIBUTES

Parameter		Value
Connector		75Ω BNC (2x)
ASI	Physical layer	EN50083-9
	Bit rate	0 to 214 Mbit/s
	Bit rate resolution	<1 bit/s
	Transmit jitter	70ns p-p max*
	Packet size in bytes	188 or 204**
SDI	Physical layer	SMPTE 259M
	Bit rate	270 Mbit/s
	#Bits	8 or 10 bit

* In continuous mode
** Arbitrary packet size in raw mode

RELATED PRODUCTS

Type	Description
DTA-100	ASI Output Adapter for PCI Bus
DTA-140	ASI In+Output Adapter for PCI Bus
DTU-225	USB-2 ASI/SDI Input Adapter
DTC-300	StreamXpress Player Software

ORDERING INFORMATION

Type	Description
DTU-205	USB-2 ASI/SDI output adapter
DTU-205SP	DTU-205 with StreamXpress™

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605.978.4600
www.sencore.com

ASI/SDI Input USB Probe

DekTec DTU-225

- □ Portable ASI/SDI input adapter
- □ 0 to 214 Mbit/s ASI, 270 Mbit/s SDI
- □ No AC power adapter required

KEY FEATURES

- Convenient, compact USB adapter that can be used to capture or analyze MPEG transport streams (DVB-ASI) or uncompressed serial digital video (SDI)
- Supports all video and audio codecs and formats that are supported by the MPEG transport stream and SDI standards
- Easily installable replacement of PCI based ASI or SDI input card
- USB full and high speed operation
- USB powered, no separate power supply required
- 8 Mbytes local buffer for sustained realtime streaming of digital video streams
- Comes with free:
  - Windows 2000/XP/2003 driver and Software Development Kit for developing custom applications
  - Example source code for recorder
  - DTC-330 DtTV license
  - DtGrabber: Windows capture tool
- The DTU-225 is available in combination with the StreamXpert™ analyzer software as DTU-225SX
- Connect multiple FantASI adapters to a single PC or Notebook, to create multiple ASI/SDI input and/or output channels

APPLICATIONS

- Universal USB adapter for Notebook and PC applications that have to capture or process an ASI or SDI digital video stream
- Stream analysis / recording / monitoring

PC USB REQUIREMENTS

- Low speed ASI (<8 Mbit/s): standard USB port
- Standard ASI (<100 Mbit/s): USB-2 port
- Full range ASI or SDI: USB-2 port + suitable USB-2 host controller in the PC

KEY ATTRIBUTES

Parameter		Value
Connector		75Ω BNC (2x*)
Input return loss		>17 dB
ASI	Physical layer	EN50083-9
	Bit rate range	0 to 214 Mbit/s
	Packet size in bytes	188 or 204**
SDI	Physical layer	SMPTE 259M
	Bit rate	270 Mbit/s
	#Bits	8 or 10 bit
Dimensions in mm (LxWxH)		87 x 104 x 30

* Input and loop-through output
** Arbitrary packet size in raw mode

RELATED PRODUCTS

Type	Description
DTA-120	ASI Input Adapter for PCI Bus
DTU-205	USB-2 ASI/SDI Output Adapter
DTC-320	StreamXpert™ Analyzer Software
DTC-330	DtTV Television Software

ORDERING INFORMATION

Type	Description
DTU-225	USB-2 ASI/SDI Input Adapter
DTU-225SX	DTU-225 with StreamXpert™

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HD-SDI Input for USB-3

DekTec DTU-351

- □ HD-SDI input with full frame access
- □ Optional hardware scaling 1/4 or 1/16
- □ Support for SD-SDI

GENERAL DESCRIPTION

The DTU-351 is a versatile USB-3 device for getting HD-SDI signals into a laptop, tablet or PC. The unit is bus-powered, so no power supply is required.

KEY FEATURES

- All 10-bit data words from the full SDI frame can be read
- Separation of HANC, VANC and video
- All 16 audio channels can be read
- Scaling by 1/4 or 1/16 in hardware; scaling factor can be switched on-the-fly
- DirectShow filter available
- Free SDK for easy programmatic access to video, audio channels and auxiliary data

APPLICATIONS

- With SdEye: HD-SDI waveform analysis
- With DtGrabber+: HD-SDI recording
- Input for DirectShow-enabled applications that process uncompressed video
- HD-SDI input for your application

SYSTEM REQUIREMENTS

Parameter	Value
USB speed	USB-3*
OS	Windows 7, Windows 8/8.1

* The port has to be a real USB-3 port, the DTU-351 will not work with a USB-2 port.

KEY ATTRIBUTES

Parameter	Value
Physical layer	SD-SDI: SMPTE 259M HD-SDI: SMPTE 292M
SDI connector	75-Ω BNC
Return loss	≥12dB @ 0 .. 1.5GHz
SDK features (Matrix API)	8/10/16-bit conversion Audio/video/ANC extraction Hardware scaling by 1/4 or 1/16 Multiple unit synchronization
SDK	DTAPI, Matrix API

SUPPORTED FORMATS

Formats
525i59.94, 625i50
720p23.98, 720p24, 720p25, 720p29.97, 720p30, 720p50, 720p59.94, 720p60
1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080i50, 1080i59.94, 1080i60

ORDERING INFORMATION

Parameter	Value
DTU-351-DP	HD-SDI input for USB-3 with DtGrabber+ recording software
DTU-315-DP-SY	DTU-351-DP with SdEye wave-form monitoring and analysis
DTU-351	DTU-351 without software, for writing your own application that needs input of an HD-SDI signal

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DVB-T/T2, DVB-C/C2, ISDB-T, ASI USB Probe

DTU-238

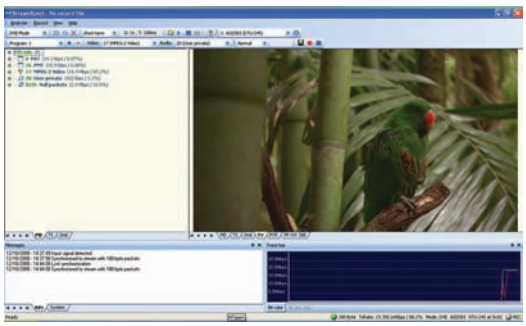
The DTU-238 RF Probe and RFXpert software are a comprehensive solution designed to provide real-time analysis and monitoring of terrestrial and cable signals (DVB-T/T2, DVB-C/C2 and ISDB-T RF channels). The RFXpert software is intended to be loaded by the end-user on a PC or laptop and work in conjunction with the DTU-238 RF Probe. RFXpert provides complete RF analysis and logging, along with transport stream recording.

RFXpert provides easy-to-read spectral displays, both constellation and eye diagram displays, and the ability to see rotated DVB-T2 constellations in their true orientation.

- True demodulated digital reading for MER, Pre-BER and Post BER.
- A proof-positive method of signal documentation or drop-point comparisons with programmable, user defined logging and auto-inspection capabilities

Adding StreamXpert 2.0 to a DTU-238 makes for a cost-effective and user-friendly MPEG2/H.264/HEVC transport stream analyzer. Signals can be analyzed from either the ASI or RF inputs of the DTU-238 and can be validated against industry standard ETR101-290 templates. Transport streams can also be captured in the field with StreamXpert 2.0 for later use.

- Real-time analysis, monitoring and recording of MPEG Transport Streams
- PCR Accuracy and ETR101-290 checking
- Integrated HEVC/H.264/MPEG2 video decoding with MPEG, AAC, AC3 and AC4 audio support



SPECIFICATIONS

DVB-T/T2, DVB-C/C2, ISDB-T, ASI USB Probe DTU-238

DTU-238 RF PROBE

RF INPUT

Connector:	75 Ω type 'F'
Frequency:	42-1002 MHz
Signal Level:	-40 to 50 dBmV
Modulation:	DVB-T/T2, DVB-C/C2, ISDB-T(b)

ASI INPUT

Connector:	75 Ω BNC
Receive Bitrate:	0.5-213 Mb/s

POWER

Source:	USB 2.0 port of host PC
Voltage:	+5 VDC
Current:	>500mA*

*dual USB connections to PC

DIMENSIONS

Physical:	7.1" x 4.2" x 1.4"
Weight:	< 1 lb.

RFXPERT

RF TESTS

Level Measurement:	-40 to 50 dBmV, 0.1 dB resolution +/- 1 dB accuracy, -10 to 10 dBmV +/- 2 dB accuracy, -30 to -10 dBmV and 10 to 50 dBmV
MER:	up to 40 dB (measured from constellation)
EVM:	down to 0.5% RMS
BER:	Pre/Post FEC, PER, Errored Seconds
Modulation Displays:	Constellation and Eye diagram
Spectrum Display:	Channel (6-8 MHz), Adjacent (18-24 MHz), Full (42-1002 MHz)
Impulse Response	

LOGGING

Type:	Interval and Alarms
Auto Inspect:	Automatic analysis and logging of a channel plan
File:	User-defined, limited by host hard drive space

MINIMUM PC / LAPTOP REQUIREMENTS

Operating System:	Windows XP/2003/Vista/7/8/10, 32/64 bit
USB:	USB 2.0 for communication/power
Processor:	Pentium 4 or better
RAM:	512 MB minimum

STREAMXPERT

STANDARDS

MPEG2, DVB, ATSC
DVB-SI, ATSC-PSIP, DVB-RCS

AUDIO

MPEG1/2, (HE-)AAC, AC3, AC4

VIDEO

MPEG2, H.264, HEVC

FEATURES

Audio/video decoding
Bitrate measurement
Elementary stream info
PCR analysis
PID grid
Recording
SI decoding with user Templates
TR 101 290 monitoring

MINIMUM PC / LAPTOP REQUIREMENTS

Windows XP/2003/Vista/7/8/10, 32/64 bit
P4 * and mid-class graphics card for software decoding of SD video
Corei5/i7* and high-end graphics card for software decoding of HD video

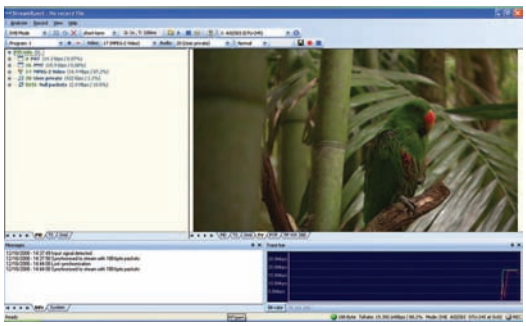
*or equivalent AMD processor

1GHz QAM/8VSB/ASI USB Probe

DTU-236A

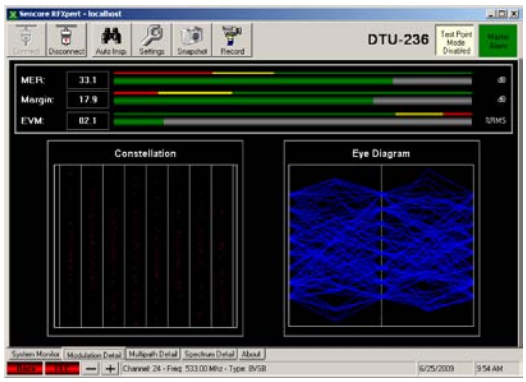
The DTU-236A RF Probe and RFXpert software are a comprehensive solution designed to provide real-time analysis and monitoring of terrestrial and cable signals (8VSB, QAM A/B/C and NTSC RF channels). The RFXpert software is intended to be loaded by the end-user on a PC or laptop and work in conjunction with the DTU-236A RF Probe. RFXpert provides complete RF analysis and logging, along with transport stream recording.

RFXpert provides easy-to-read spectral displaysv and both constellation and eye diagram displays for at-a-glance issue identification.



- True demodulated digital reading for MER, Pre-BER, Post BER and EVM
- A proof-positive method of signal documentation or drop-point comparisons with programmable, user defined logging and auto-inspection capabilities

Adding StreamXpert to a DTU-236A makes for a cost-effective and user-friendly MPEG2/H.264 transport stream analyzer. Signals can be analyzed from either the ASI or RF inputs of the DTU-236A and can be validated against industry standard ETR101-290 templates. Transport streams can also be captured in the field with StreamXpert for later use.



- Real-time analysis, monitoring and recording of MPEG Transport Streams
- PCR Accuracy and ETR101-290 checking
- Integrated MPEG2/H.264/VC-1 video decoding with MPEG, AAC and AC3 audio support

SPECIFICATIONS
1GHz QAM/8VSB/ASI USB Probe DTU-236A

DTU-236A RF PROBE

RF INPUT

Connector:	75 Ω type 'F'
Frequency:	44-1002 MHz
Signal Level:	-40 to 50 dBmV
Modulation:	8VSB, QAM A/B/C, NTSC
Band:	Broadcast, FCC Cable, IRC, HRC Cable, Manual Tuning

ASI INPUT

Connector:	75 Ω BNC
Receive Bitrate:	0-214 Mbp/s

POWER

Source:	USB 2.0 port of host PC
Voltage:	+5 VDC
Current:	>500mA*

*dual USB connections to PC

DIMENSIONS

Physical:	7.1" x 4.2" x 1.4"
Weight:	< 1 lb.

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RF TESTS

Level Measurement:	-40 to 50 dBmV, 0.1 dB resolution +/- 1 dB accuracy, -10 to 10 dBmV +/- 2 dB accuracy, -40 to -10 dBmV and 10 to 50 dBmV
MER:	15 to 38 dB (measured from constellation)
EVM:	2.3 to 16.5% RMS
BER:	Pre/Post FEC, PER, Errored Seconds
Modulation Displays:	Constellation and Eye diagram
Echo Profile:	-2.3 to +40 µS delay range, 0 to -30 dBc echo level
Spectrum Display:	Channel (6-8 MHz), Adjacent (18-24 MHz), Full (44-1002 MHz)

LOGGING

Type:	Interval and Alarms
Auto Inspect:	Automatic analysis and logging of a channel plan
File:	User-defined, limited by host hard drive space

MINIMUM PC / LAPTOP REQUIREMENTS

Operating System:	Windows XP/2003/Vista/7/8, 32/64 bit
USB:	USB 2.0 for communication/power
Processor:	Pentium 4 or better
RAM:	512 MB minimum

STREAMXPERT

STANDARDS
MPEG2, DVB, ATSC
DVB-SI, ATSC-PSIP, DVB-RCS

AUDIO
MPEG1/2, (HE-)AAC, AC3

VIDEO
MPEG2, H.264, VC-1

FEATURES
Audio/video decoding
Bitrate measurement
Elementary stream info
PCR analysis
PID grid
Recording
SI decoding with user
Templates
TR 101 290 monitoring

MINIMUM PC / LAPTOP REQUIREMENTS
Windows XP/2003/Vista/7/8, 32/64 bit
P4 * and mid-class graphics card for software decoding of SD video
Core2 or Corei5/i7* and high-end graphics card for software decoding of HD video

*or equivalent AMD processor

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