



MAX SX8



Description

The Digital Devices MAX SX8 is a tuner card with 8 HDTV tuners on a single card with PCIe connector. The high density of the design and the choice to select the operating mode as well as Unicable® and JESS® support and only 7 watts power consumption makes the card ideal and flexible for DVB-S/S2/S2X applications.

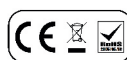
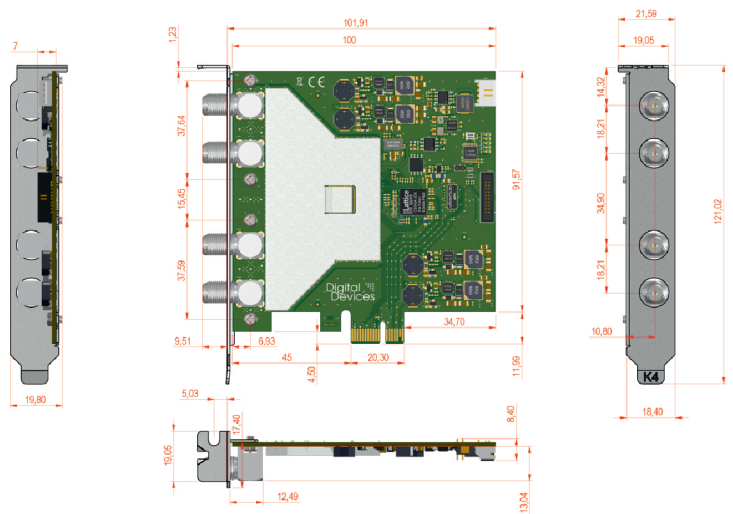
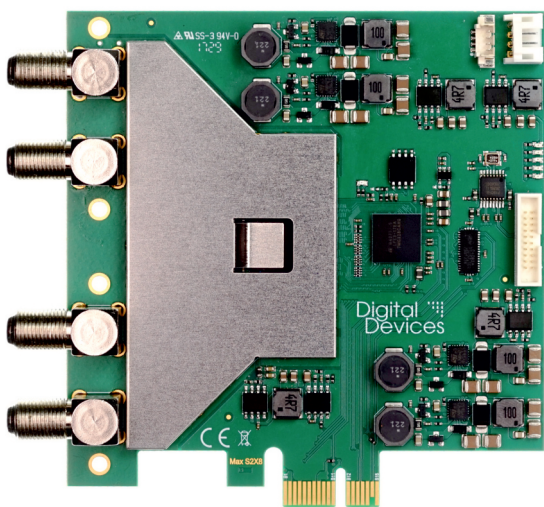
The card can be used with Windows XP, Windows Vista, Windows 7, 8, 10 and Linux operating systems.

The operating modes are „Quad“ or „Unicable / JESS“.

Using the “Quad” mode the card can either be connected to an LNB or a 4x multi switch. It supports one satellite.

In Unicable mode¹ it requires only one coax cable to support 8 tuners using Unicable®. Using JESS®² it can be connected to up to 32 tuners with just one coax cable.

- 1)
requires Unicable® / SCR / CENELEC En50494 compliant LNB or multi switch
- 2)
requires Jess® / CENELEC En50607 compliant LNB or multiswitch



MAX SX8

Technical Data

Satellite characteristics

Modulation
QPSK
8PSK/8APSK-L
16APSK/16APSK-L
32APSK/32APSK-L
64APSK/64APSK-L
128APSK
256APSK/256APSK-L

LNB Power:
4 * max. 19V, 1A pulse current,
500mA continuous current
overcurrent protection
short-circuit protection

L-Band: 950 Mhz to 2150 Mhz DVB
FEC: (Auto Spectral Detection)
DiSeqC support

Standard connectors

PClexpress
L-Band input connector supports any needed
power supply to the LNB
20-pin socket for flat-ribbon cable to connect to
Octopus NET

Security

produced und developed according to European
standards, DIN EN ISO 9001:2000

Unicable compliant

SCR / Cenelec EN 50494 (Unicable®)

Green IT

RoHS compliant
WEEE DE 99353762

Power consumption

PClexpress compliant
~ 7 watts without LNB current

Supported operating systems

Linux (Kernel 2.6.34 and higher)
Microsoft Windows® XP (Sp3)
Microsoft Windows® Vista
Microsoft Windows® 7 (32/64 Bit)
(incl. Windows® Media Center)
Microsoft Windows® 8 (32/64 Bit)
(incl. Windows® Media Center)
Microsoft Windows® 10 (32/64 Bit)

System requirements

Dual Core Intel® or AMD® CPU
512 MB RAM
1x PCIe slot (x1 up to x16)

Dimensions

H 104 mm, L 111 mm, D 15 mm

Features

DVB-S/S2/S2X tuner

4 satellite-inputs
up to 8 multi-standard demodulators

S2X Features

Short Frames
Long Frames
ACM (Adaptive Coding and Modulation)
VCM (Variable Coding and Modulation)
MIS (Multiple Input Streams)
Annex M 2)
Channel Bonding (S2X) 2)
Maximum baudrate of 500 Mbit/s
up to 2 slices
Maximum DVB-S2/S2X LDPC-baudrate for all
8 tuners: 720 Mbit/s.

Symbolrates

QPSK:	~ 95*	Msym
8PSK/8APSK:	86*	Msym
16APSK:	64.5	Msym
32APSK:	51.6	Msym
64APSK:	43	Msym
128APSK:	36.85	Msym
256APSK:	32.25	Msym
Annex M:	500	Msym

Sensitivity

@25Msym:		
QPSK 11/45:	-89 dBm	20 dBµV
QPSK 1/2:	-86 dBm	23 dBµV
8PSK 9/10:	-77 dBm	32 dBµV
256APSK 3/4:	-69 dBm	40 dBµV

Additional features

Strong signal immunity: > 106dBµV (-6dBm)
Isolation: 65dB – 80dB depending on signal strength

DiSEeqC 2.0 Support

Unicable® SCR / Cenelec En50494

Supports up to 8 tuners with just one antenna cable
using Unicable® / SCR / CENELEC En50494
compliant LNB or multi switch

JESS® / Cenelec En50607

Supports up to 32 tuners with just one antenna
cable using CENELEC En50607 compliant LNB
or multi switch

PClexpress

Connection via PCIe x1 up to x16 slot

GT-Link Port

To connect to Octopus NET (Datarate > 1Gbit)
Make use of PClexpress or GT-Link Port

Support of many TV applications

Microsoft Windows® Media Center 7/8, DVBViewer,
Media Portal, Gen2VDR, MythTV

Green IT

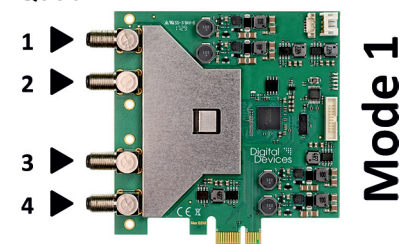
Power consumption of ~ 7 Watts
No tantal capacitors
No electrolyte capacitors

Supported operating systems

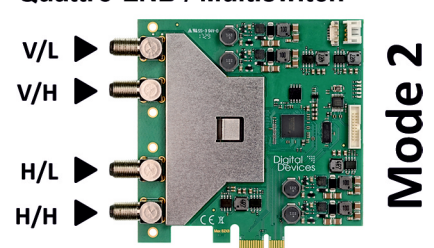
Microsoft Windows® XP/7/8(.1)/10
Linux (Kernel 2.6.34 and higher)

Modes

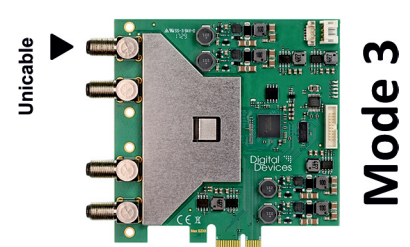
Quad-LNB



Quattro-LNB / Multiswitch



Unicable LNB / Multiswitch



Manual „Max S8“

vers.2.5 (05.05.2017)



ArtNr.: 820148

EAN: 4260217681560

Card features	Max SX8	Max S8	Cine S2 V7A	Max M4
Demodulators/Channels	8	8	2	4
Inputs	4	4	2	4
BBFrame Output	1	0	1	0
Maximum Symbolrates				
QPSK	~95 ^{1) 4)}	45	67.5	46
8PSK/8APSK	86 ^{1) 4)}	45	67.5/45 ⁵⁾	46
16APSK	64.5 ⁴⁾		67.5/33.75 ⁵⁾	34.5 ³⁾
32APSK	51.6 ⁴⁾		54/27 ⁵⁾	27.5 ³⁾
64APSK	43 ⁴⁾			
128APSK	36.85 ⁴⁾			
256APSK	32.25 ⁴⁾			
Annex M	500 ²⁾			
DVB-S2/S2X Features				
Short Frames	✓		✓	
Long Frames	✓	✓	✓	✓
ACM (Adaptive coding and modulation)	✓		✓	
MIS (Multiple Input Streams)	✓		✓	
Annex M	✓ ²⁾			
Channel Bonding (S2X)	✓ ²⁾			
QPSK 1/4, 1/3, 2/5	✓		✓	✓
QPSK 1/2, 3/5, 2/3, 3/4, 4/5, 8/9, 8/	✓	✓	✓	✓
QPSK 13/45, 9/20, 11/20	✓			
8PSK 3/5, 2/3, 3/4, 5/6, 8/9, 9/10	✓	✓	✓	
8PSK 23/36, 25/36, 13/18	✓			
8APSK-L 5/9, 26/45	✓			
16APSK 2/3, 3/4, 5/6, 8/9, 9/10			✓	✓ ³⁾
16APSK 26/45 3/5, 28/45, 23/36, 13/18, 7/9, 77/90	✓			
16APSK-L 5/9, 8/15, 1/2, 3/5, 2/3	✓			
32APSK 3/4, 4/5, 5/6, 8/9, 9/10	✓		✓	✓ ³⁾
32APSK 32/45, 11/15, 7/9	✓			
32APSK-L 2/3	✓			
64APSK 11/15, 7/9, 4/5, 5/6	✓			
64APSK-L 32/45	✓			
128APSK 3/4, 7/9	✓			
256APSK 32/45, 3/4	✓			
256APSK-L 29/45, 2/3, 31/45, 11/15	✓			
VL-SNR				
Maximum baudrate 500 Mbit/s	✓			
Up to 2 slices	✓			
Error correction: LDPC 720 Mbit/s	✓			
Maximum DVB-S2/S2X LDPC-bitrate for all 8 tuners is 720 Mbit/s.				
VCM (Variable coding and modulation)	✓			

1) Symbolrates have been tested up to 85 MSymbols/s

2) not implemented yet

3) 16APSK, 32APSK possible but 4dB loss of performance

4) Maximum DVB-S2/S2X LDPC bitrate is limited to 720 Mbit/s.

This Bitrate is defined as symbolrate * bits/symbol, i.e. 8PSK 30 Msymbols = 90 Mbit/s.

The used bitrate is dynamically allocated by the driver. DVB-S channels don't contribute to the limit

5) Single/dual demod use

