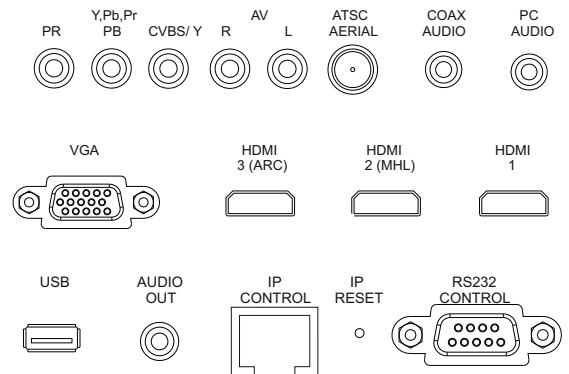


Control Board Specification

Nexus2 is a digital and analogue TV receiver board able to receive both analogue [PAL/SECAM] and digital [DVB-T/T2/C/S2] television signals. It also supports H.264 video decoding. Nexus2 is suitable for use throughout Europe [including the UK], Ireland, and Australia etc.

- ◆ Supports DVB-T MPEG-4 extended ASP up to 1080p@30fps
- ◆ Supports H.264 MP/HP@L4.1 for SD and HD decoding
- ◆ Supports USB 2.0 multimedia play, supports audio and video play; supports txt and picture browse
- ◆ Analogue and digital HD port input signal largest support 1080p
- ◆ The HDMI supports 1.4a, the HDCP supports 1.1
- ◆ The HDMI channel can support the MHL or ARC function
- ◆ 3D video noise reduction
- ◆ Enhanced motion adaptive 3D Y/C separation comb filter for NTSC/PAL system
- ◆ Supports USB updates
- ◆ Supports video SDTV at 480i/576i and 480p/576p
- ◆ Supports video HDTV at 720p and 1080i and 1080p
- ◆ Supports PC RGB input up to UXGA@60Hz[165MHz]
- ◆ Reliable EMC and ESD handle
- ◆ Low Standby current <0.2W
- ◆ Bi-directional RS232 control of all main features
- ◆ Full IP Control with user defined IP address



EU Specification

PANEL	Type	LED
ATV	Resolution Max.	1920X1080
	Receiving range	49MHz – 863MHz
	Input Impedance	75Ω
	Video System	PAL ,SECAM
	Sound System	BG, DK, I, L/L' NICAM/A2
DTV	Receiving range	VHF (174MHz – 230MHz), UHF (474MHz - 862MHz)
	Input Impedance	75Ω
	Bandwidth	7MHz/8MHz
	Modulation	DVB-T:COFDM 2K/8K QPSK, 16QAM, 64QAM DVB-T2: COFDM QPSK, 16QAM, 64QAM, 256QAM DVB-C:16QAM, 32QAM, 64QAM, 128QAM, 256QAM DVB-S2:QPSK, 8PSK
	Video System	MPEG 2 MP@HL, MPEG-2, MP@HL, H.264
	Sound System	MPEG-1 Layer 1/2, MPEG-2 Layer 2, DD, DD+
PC	Sync	H: 30-75KHz V: 56-75Hz
	Video Level	0.7Vp-p@75ohm
	MODE	Max Max UXGA@60Hz
AV	Colour system	PAL/NTSC/SECAM
	Video Level	1Vp-p@75ohm
YPbPr	Audio Level	500mV rms
	Video Level	Y:1Vp-p@75ohm, PbPr:0.7Vp-p@75ohm
	Audio Level	500mVrms
	Format	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
HDMI	Video Standard	TMDS
	Format	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
	Video	CVBS & RGB input, CVBS output
SCART	Video output/input	RGB: 0.7Vp-p@75ohm, CVBS: 1Vp-p@75ohm
	Audio	output/input 500mVrms
	OSD Language	English/French/German/Spanish/Italian
Audio Amplifier	2 X8W @ 8ohm THD<10%	

US Specification

PANEL	Type	TFT-LCD
ATV	Resolution	Max. 1920X1080
	Interface	Single/ Double LVDS
	Input Impedance	75Ω
	Video System	NTSC
DTV	Sound System	M, J, 4.43, BTSC/A2
	Input Impedance	75Ω
	Bandwidth	6MHz
PC	Modulation	ATSC:8VSB QAM:64QAM, 256QAM
	Video System	MPEG 2 MP@HL
	Sound System	MPEG 1/ layer 1/AC-3
	Sync H:	30-75KHz V: 56-75Hz
AV	Video Level	0.7Vp-p@75ohm
	Audio Level	500mV rms
	Video Level	Standard TMDS
HDMI	Format	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
	Video Level	Y:1Vp-p@75ohm,PbPr:0.7Vp-p@75ohm
	Audio Level	500mVrms
YPbPr	Format	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
	OSD	Language English/ French/ Spanish
Audio Amplifier	2 X8W @ 8ohm THD<10%	
Standby	< 0.3W(Main Board Only)	

Auxiliary Connection

Your Aquavision TV also has an RJ48, 10 way auxiliary connector and 2x IR connection sockets fitted to the daughter board that is positioned centrally along the bottom edge of the LCD Panel. IR connection details are on the IR sockets. This is an unmodulated signal. The RJ48 is designed for use with the Aquavision RSP5 remote switch panel, and also with the relay interface module. Technical details on these are as follows:

Connector Details	Tip	Ring	Sleeve
IR Input	IR V out (3.7V 8.1KOhm)	VCC (5V 100Ohm)	Ground
IR Output	IR V out (3.7V 8.1KOhm)	VCC (5V 100Ohm)	Ground

Preset Mode for USB

Please note that USB only supports PHOTO, MUSIC and MOVIE. The system automatically classifies files and only shows the supported files. Hard disk drives are supported however the maximum storage capacity is 1TB. Photos in EXIF format, and any form of flash animation are not supported.

Type	Container	Video Decoder	Max Resolution
MOVIE	AVI	MPEG-4 ASP;H.264;DivX;Xvid	1920 x 1080
		WMV 9 / VC - 1	
		MPEG-4 SP	CIF (352 x 288), QCIF (176 x 144)
		MJPEG	1280 x 720
	MPEG 1/2	MPEG-1 Video, MPEG-2 Video	1920 x 1080
	MPEG4	MPEG-2 Video;MPEG-4 ASP; H.264;Xvid;MJPEG;H.264	1920 x 1080
	WMV	WMV 9 / VC-1	1920 x 1080
	Real Media	RV30 / RV40	1920 x 1080
	Flash Sorenson	H.263; H.264	1920 x 1080
	QuickTime	MPEG-4 ASP; H.264;MJPEG	1920 x 1080
	ASF	WMV3 / WVC1; MP4S / M4S2	
	Matroska Video	MPEG-2 Video; MPEG-4 ASP; H.264;Xvid; DivX;DivX Plus HD; RV30 / RV40; WMV9 / VC-1;	1920 x 1080
DivX	MPEG-4 ASP; DivX; Xvid;	1920 x 1080	
TS Stream	MPEG-2 Video;H.264; WMV 9 / VC-1;	1920 x 1080	

Type	Container	Max Resolution
MUSIC	WAVE	LPCM; ADPCM
	WMA	WMA STD; WMA Prof
	AAC	AAC-LC / HE-AAC
	AC3	AC3; E-AC3
	MPEG	MP1; MP2; MP3; AAC-LC; HE-AAC;
	Read Audio	AAC / HE AAC; Cook
	Ogg	Vorbis
	FLAC	FLAC
PHOTO	DTS	DTS
	JPEG	165370
	Progressive JPEG	61648
	BMP	101439
	PNG	101439
	GIF	
	TIFF	

RS232 Control and Pin Assignments

Please note that due to transmission being bidirectional, a 25ms pause should be left between each command to allow for the 'success' or 'fail' command to be read.

RS232 CODE IS CASE SENSITIVE. PLEASE USE CAPITALS AT ALL TIMES.

IR DETAILS		
PARAMETER	TYPICAL	RANGE
0	1.12MS	1.0-1.23MS
1	2.25MS	2.0-2.4MS
LEADER	9.0MS	8.0-10.0MS
WORD DISTANCE	108MS	
IR DETAILS		
PARAMETER	TYPICAL	RANGE
0	1.12MS	1.0-1.23MS
1	2.25MS	2.0-2.4MS
LEADER	9.0MS	8.0-10.0MS
WORD DISTANCE	108MS	

Baud Rate:	EU - 115200bps US -
Data Length:	8bits
Parity bit:	None
Stop bit:	1 bit
Flow Control:	None



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