

SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER Revision:1.0

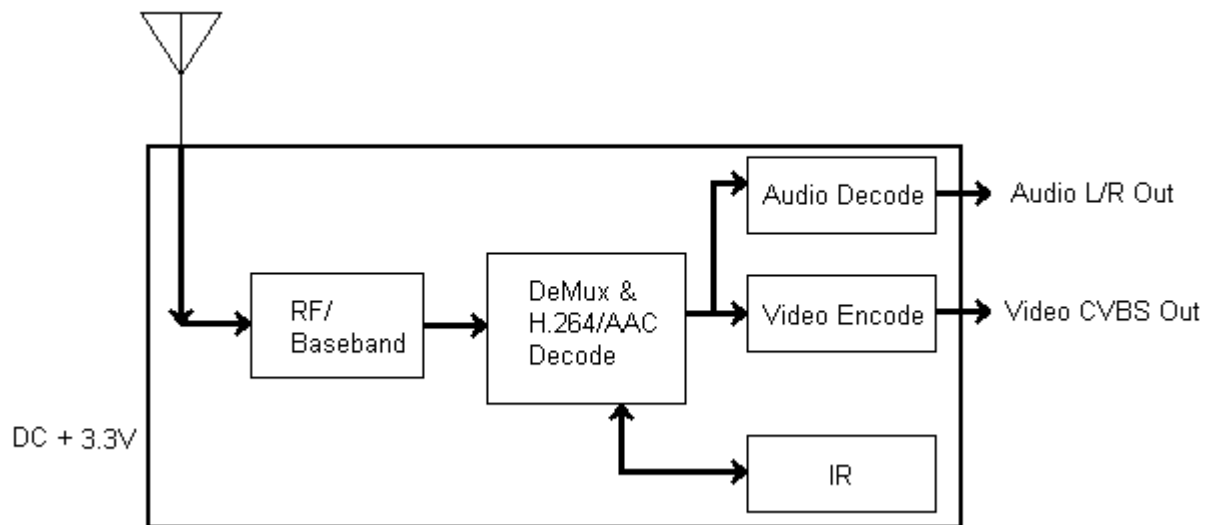
MAIN Feature

PIST1-9000, is a total solution performing antenna-in-video-out reception for ISDB-T 1-Seg signals compliant with the ISDB-T 1-Seg specifications. It provides an easy and convenient way to upgrade existing multimedia electronics to attain ISDB-T reception capability. With its embedded RF tuner, high performance COFDM demodulator, and a hardware H.264 decoder, PIST1 can receive ISDB-T signals over the air through antenna and generate versatile high quality video/audio outputs for display.

PIST1-9000 features with high sensitivity, a very slim dimension at 44mm x 34mm x 6mm, and ultra low power consumption at 1W. These advantages make PIST1-9000 module an ideal subsystem for many portable consumer electronics such as in-car entertainment, car navigation, portable TV, portable DVD players, DVD player/recorder, etc.

PIST1-9000 contains IR ports to facilitate communications requirements between module and host systems. Its 20-pin connector provides a simple and easy interface for integration with host systems. It is a simple, slim, and almost self-contained module. Apart from the power, I/O,A/V connectors,

System configuration





SPECIFICATION			
DIGITAL TERRESTRIAL RECEIVER			Revision:1.0
1. General Specification			
NO	ITEM	SPECIFICATION	NOTE
1-1	Support TV system	Demodulation 1SEG Reception Japanese Standard ARIB STD-B31	(NOTE1)
1-2	RF Input Connector	IPEX Connector	
1-3	Input Frequency Range	UHF 473.143~767.143MHz(CH13~CH62)	
1-4	Input Signal Level	-95dBm ~ -5dBm	
1-5	Input Impedance	50 ohm	
1-6	RF tuning/OFDM DM. IC	NMI 320	
1-7	OFDM Spectrum	4K Carrier	
1-8	Modulation Modes	QPSK(1/2,2/3),16QAM(1/2)	
1-9	Guard Interval Modes	1/32, 1/16, 1/8, 1/4	
1-10	FEC Modes	1/2, 2/3, 3/4, 5/6, 7/8	
1-11	Mobility	Supports	
1-12	H.264 Decoder IC	CLM 9000	
1-13	VIDEO DECODING	H.264/MPEG-4 AVC Baseline Profile 1.2	
1-14	AUDIO DECODING	MPEG4 HE ACC	
1-15	Video Output	CVBS Video output CVBS (QVGA 320*240) Video Decoding Rate (Japan) Frame Rate 15 frames/Sec (Capable of 30frames/Sec) Video Decoding Rate (Brazil) Frame Rate 25 frames/Sec (Capable of 30frames/Sec)	
1-16	Audio Output	Stereo R/L	
1-17	Controls	OSD, Remote Ctrl	
1-18	Program viewing functions	Supports	
1-19	Channel information display	Supports	
1-20	Auto channel scan	Supports	
1-21	EPG	Supports	
1-22	Power Supply Voltage	3.3V +/- 5%	
1-23	Temperature	Operating Temperature:0 ~ 60°C Storage Temperature:-10°C ~ 70°C	
1-24	Weight	5g	



SPECIFICATION						
DIGITAL TERRESTRIAL RECEIVER						Revision:1.0
2. Standard Test Condition						
NO	ITEM	SPECIFICATION				
2-1	Ambient Condition	Temperature 25 +/-2 deg C Humidity 65+/-5% RH				
2-2	Supply Voltage	3.3V +/- 0.1 V DC				
2-3	Current consumption	3.3V, 330mA Typical				
3. Absolute Maximum Voltage						
NO	ITEM	SPECIFICATION				
3-1	Absolute maximum voltage	3.5V				
4. Note						
NO	EXPLANATION					
NOTE1	This specification recovered are obtained on the following condition: Mode:QPSK Guard Interval:1/4 FEC Mode:1/2					
5. Electrical Specification						
NO	ITEM	Specification				Condition
		Min	TYP	MAX	Unit	
5-1	Sensitivity		-95	-97	dBm	QPSK,GI=1/16,CR=1/2
5-2	Power Supply Voltage	3.2	3.3	3.4	V	
5-3	Ripple for Power Supply Voltage		30		mVp-p	3.3V Input
5-4	Current Consumption		330	340	mA	3.3V Input
5-5	Video output level		0.7		Vp-p	CVBS,Load=75 ohm
5-6	Audio output level	1.5	1.8	2.0	Vp-p	R/L,Load=100K ohm Frequency=1KHz

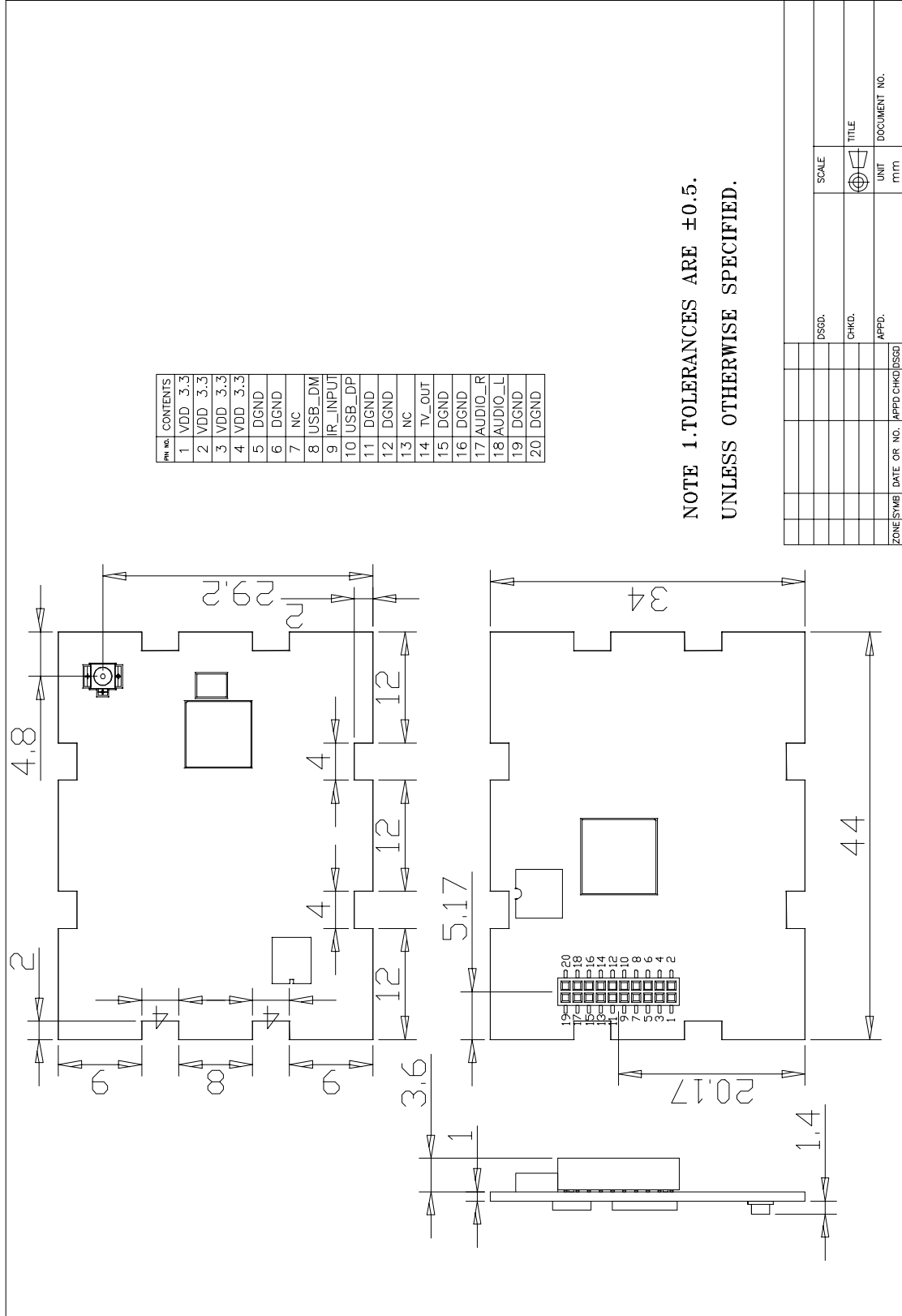


SPECIFICATION		
DIGITAL TERRESTRIAL RECEIVER		Revision:1.0
6. Remote Functions		
CUSTOM CODE:0X10ED		
Code	Command	Description
0x4C	Preset	Make the preset channel list by all channel search (13ch~62ch).
0x4A	Channel Up	Select the forward channel on preset channel list. It is Page DOWN operation when EPG and Channel list are displayed.
0x4B	Channel Down	Select the backward channel on preset channel list. It is Page UP operation when EPG and Channel list are displayed.
0x05	Search Up	Search the receivable channel on physical channel into the forward direction from current channel.
0x47	Search Down	Search the receivable channel on physical channel into the backward direction from current channel.
0x01	Mute	Toggle mute operation.
0x49	Sel	Enter key operation
0x06	Audio Select	Select the audio if there are two audio or more.
0x44	Caption Select	Select Caption operation.
0x5D	Zoom In/Out	Toggle the display size.
0x50	Status	Display the current channel information.
0x56	Channel List Display	Display the Channel list.
0x5F	EPG Display	Display the Program list.
0x42	Program Display	Display the Program contents.
0x07	Page Up	Display the previous page when Program list, Program contents and Channel list are displayed.
0x45	Page Down	Display the next page when Program list, Program contents and Channel list are displayed.
0x11	Exit	Return from the display status of Program list, Program contents and Channel list.
0x46	Clear	Return to the default setting.
0x15	Recall	Channel Return
0x5C	Number key	1
0x1E	Number key	2
0x5E	Number key	3
0x58	Number key	4
0x1A	Number key	5
0x5B	Number key	6
0x1B	Number key	7
0x59	Number key	8
0x5A	Number key	9
0x18	Number key	0

SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0



SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

Operation Description:

Software Version No:20091106-2

1.The screen is shown as below after power-on.



2.Select [Full Scan] and send code (0x49). It starts channel scanning and displays the numbers of channel. The screen is shown as below.

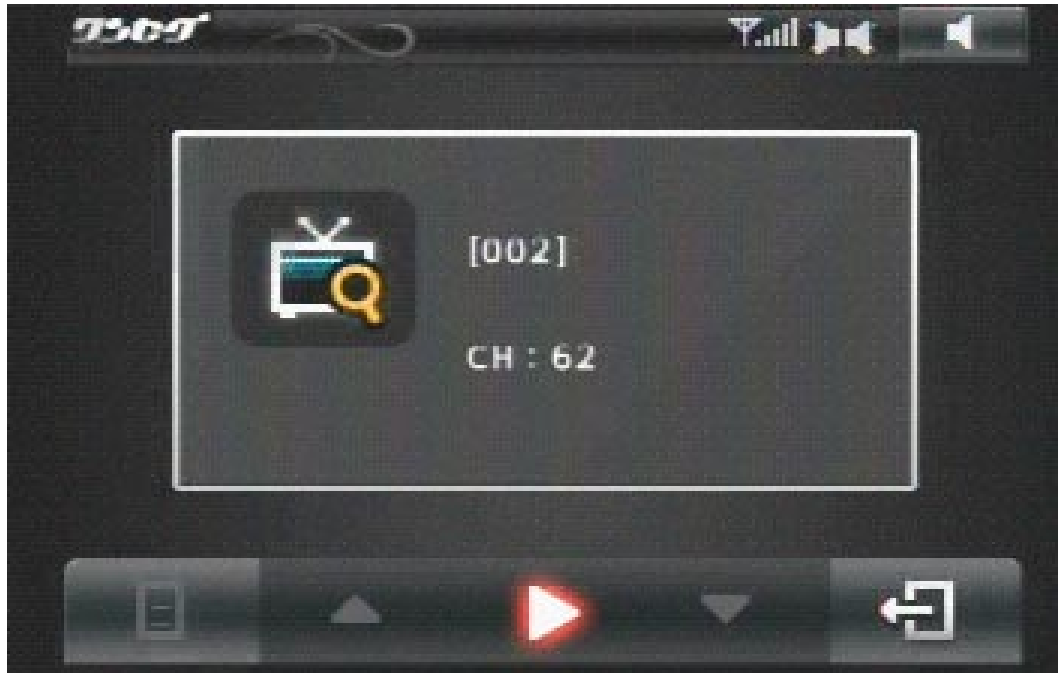


SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

3.After channel scanning is done, the screen is shown as below.



SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

4.Send code (0x56) to display the scanned program names as below.



5.Send code (0x5D) to reduce the screen size as below.



SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

6.Send code (0x5D) again. The screen size will return to original size.



7.Send code (0x50) to display the current channel information as shown below.

Display the current channel information.



SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

8. Send code (0x01) to mute. The screen is shown as below. *Toggle mute operation*



9. Send code (0x11) to return to the Scan Menu as shown below.

Return from the display status of Program list, Program contents and Channel list.



SPECIFICATION

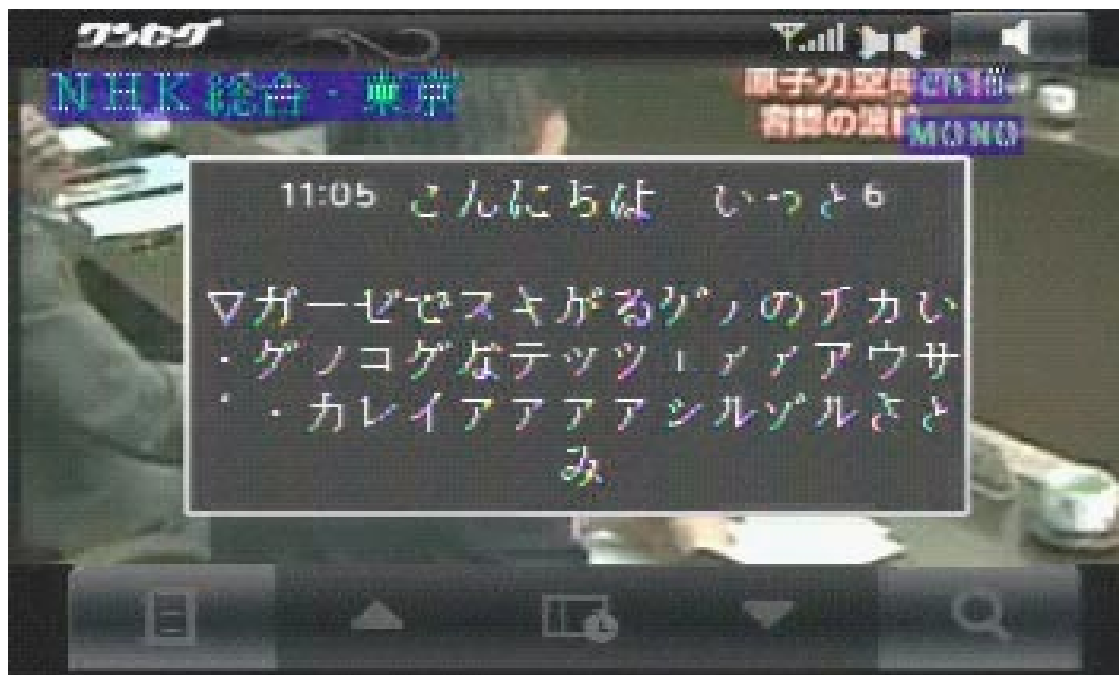
DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

10. Send code (0x0B) and (0x08) to control volume as shown below.



11. Send code (0x42) to display the program contents as shown below. Display the Program contents.



SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

12. Send code (0x5F) to display the program list as shown below.



13. Send code (0x06) to display audio output type as shown below.



SPECIFICATION

DIGITAL TERRESTRIAL RECEIVER

Revision:1.0

14. Send code (0x44) to select Caption as show below. *Select Caption operation.*



15. Send code (0X46) to return to the default setting as shown below. *Return to the default setting.*

