VCM-Series Product Data Sheet

Model Name: VCM-100 Digital Voice Module Rev.I2

Contents

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Instruction

VCM-100 is a digital voice module .It directly plays back 8-bit mono PCM sound files digitized at 8,11,16,22,24,32 KHz. Sound files are programmed and stored in nonvolatile EPROM chips for instant, random access. There is no restriction on the length of each sound, as long as the total length of all sounds combined fit to the chips.

The board is designed to be a stand-alone device and powered by a single voltage supply. Sound playback can be triggered by a number of devices such as push buttons, motion sensors and dry contact closures. The built-in power amplifier can deliver up to 3W into a speaker with a volume control tuner.

The board can be configured to operate in different modes. The configuration data is stored in EPROM chips along with sound bytes. On power up the board will configure itself automatically. There is no need to set switches manually.

There are many Playback Modes: Direct Single, Binary, BCD, Parallel and Serial modes. All of the trigger modes are edit via Rom-Linker Software Tool.

Feature

*Max. Quantity of Messages:

24 Messages in Direct Single Mode

255 Messages in Binary or Serial Mode

*Memory Type: EPROM 4Mb/8Mbits

*Max. Memory Capacity: 8M-bits x 5

*Voice Length: (Max. 40Mbits)

639 Seconds at 8KHz

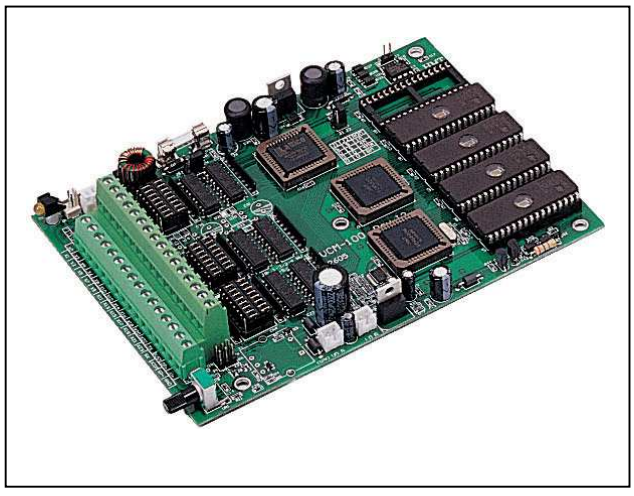
319 Seconds at 16KHz

159 Seconds at 32kHz

* Voltage Supply: 11~36 VDC, 800mA

*Output Amplifier: 3W (Ro = 4 ohm)

Product Photo



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Function / Specification

Input trigger pins number	24 pins, Photo coupler isolated
Input trigger acknowledge	Active High / Low with jumper selections
Exterior response signal	Busy signal and EOV signal (End of Voice)
EPROM IC socket number	5 pcs
EPROM IC type	1Mbits / 4Mbits / 8Mbits （1Mbit/4Mbit Flash ROM supportive）
Sampling rate support	8KHz / 11KHz / 16KHz / 22KHz / 24KHz / 32 KHz
Max. Total length	639 seconds / 8KHz sampling rate
Max. quantity of messages	255 messages in Binary / Serial mode.
Max. address quantity of Digital Voice files	160 files
Properties for every message	Edge / Level, Hold / Unhold, Retrigger / Irretrigger (All of trigger pins can be set individually.)

Trigger Mode Support / Trigger Pins Description / Max. Quantity of Message		
Direct Single mode	X0-X23	24 messages
Single Circulating mode	X0-X23	24 messages
Binary code mode with strobe signal	X0-X7, Strobe: X8	255 messages
BCD code mode with strobe signal	X0-X7, Strobe: X8	100 messages
Parallel of binary mode without strobe Signal	X0-X7	254 messages
Serial code mode	Rx	255 messages
Binary without strobe Signal and single mix Mode	X0-X7 , X8-X23	254 messages
BCD without strobe Signal and single mix mode	X0-X7 , X8-X23	115 messages
Binary with strobe signal and single mix mode	X0-X7, Strobe: X8, X9-X23	254 messages
BCD with strobe signal and single mix mode	X0-X7, Strobe: X8, X9-X23	115 messages

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Electronic Specification

Voltage Supply	DC 11 - 36 V / 0.8A (DC-DC)
Amplifier Output	3 watt, Ro = 4 ohm
Consumption (Audio Output)	0.6A at DC 24 Vin
Consumption (Without Audio Output)	130mA at DC 24V
Trigger Inputs De-bounce Time	Signal length 80ms at least.
Watch Dog Function	Yes
Operating temperature	0℃ - 70℃
Line Out	Yes
Volume Control	Yes
Serial baud rate and format	2400 bps / 4800 bps / 9600 bps, N, 8,1
Serial signal level	Tx: TTL, Rx: TTL / RS-232
PCB Dimension (L x W x H)	174 x 127 x 20 (mm)
Metal Box (Option)	Yes

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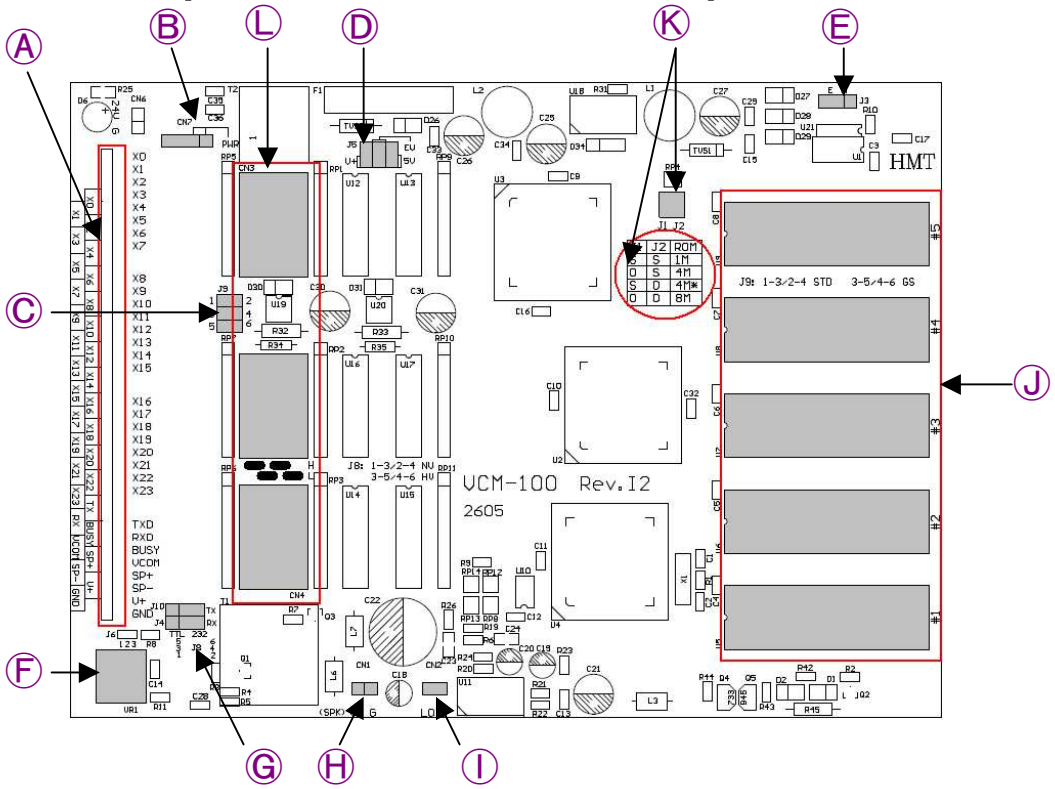
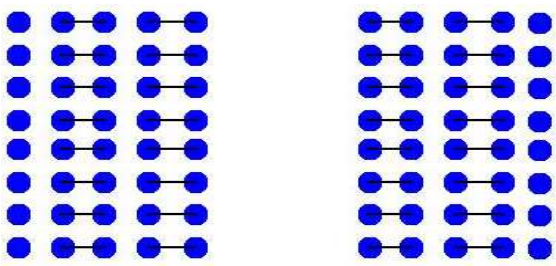
PCB Diagram / Jumpers & Connectors Description



A	Input Pins Information See PCB label: Input Trigger Pins: X0-X23 Tx, (Serial Signal Output) Rx: Serial Signal Input.(RS-232/TTL) GND: Ground. (0V) Vcom: To use double power supply. Busy: Busy Signal Output (Set output level high/low via Rom-link Software, Default:Low) Sp+ / Sp-: Audio Output. V+: Power Supply DC: 11-36 V,0.8A		
B	CN7: To connect Switch (For Box Use) (W/o Box) Normal set at PWR side.		
C	J9, Normal short at 1-3,2-4 side	D	J5,Normal set at “5V” side.
E	J3,Reset pins: System reset.	F	Volume Control.
G	J4: Serial Mode Jumper selections. RS-232 input: Short pin at “232” side. TTL serial input: Short pin at “TTL” side.		
H	CN1: Audio Out with Amplifier.	I	CN2: “LO, G” Audio Out without Amplifier. (Line Out)
J	EPROM Sockets #1 - #5	K	J1, J2:EPROM Type setting. 4Mb(Default Value)
L	By placing the jumpers to certain ports when select which trigger Level is used. H L <Default: Low Trigger> Low Voltage Trigger High Voltage Trigger 		

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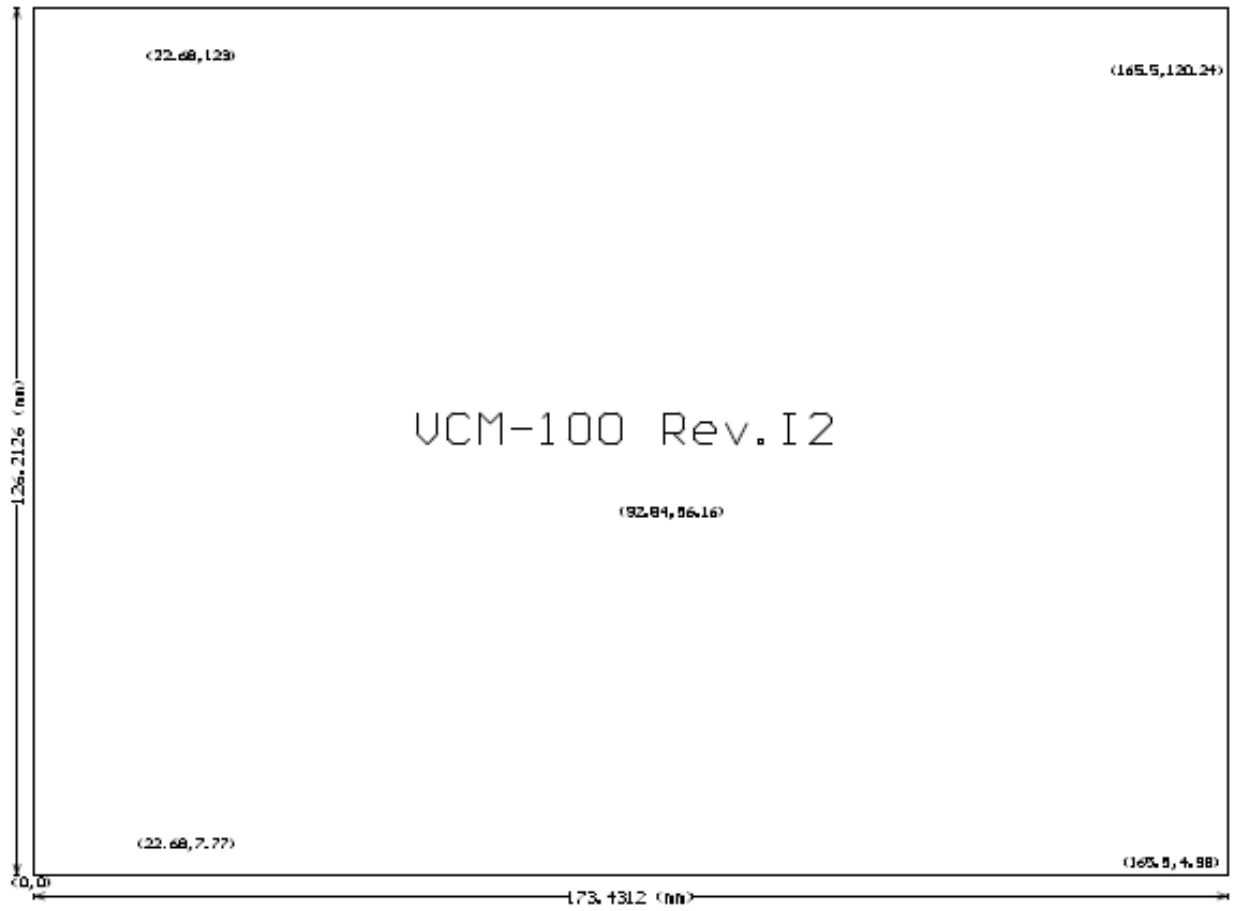
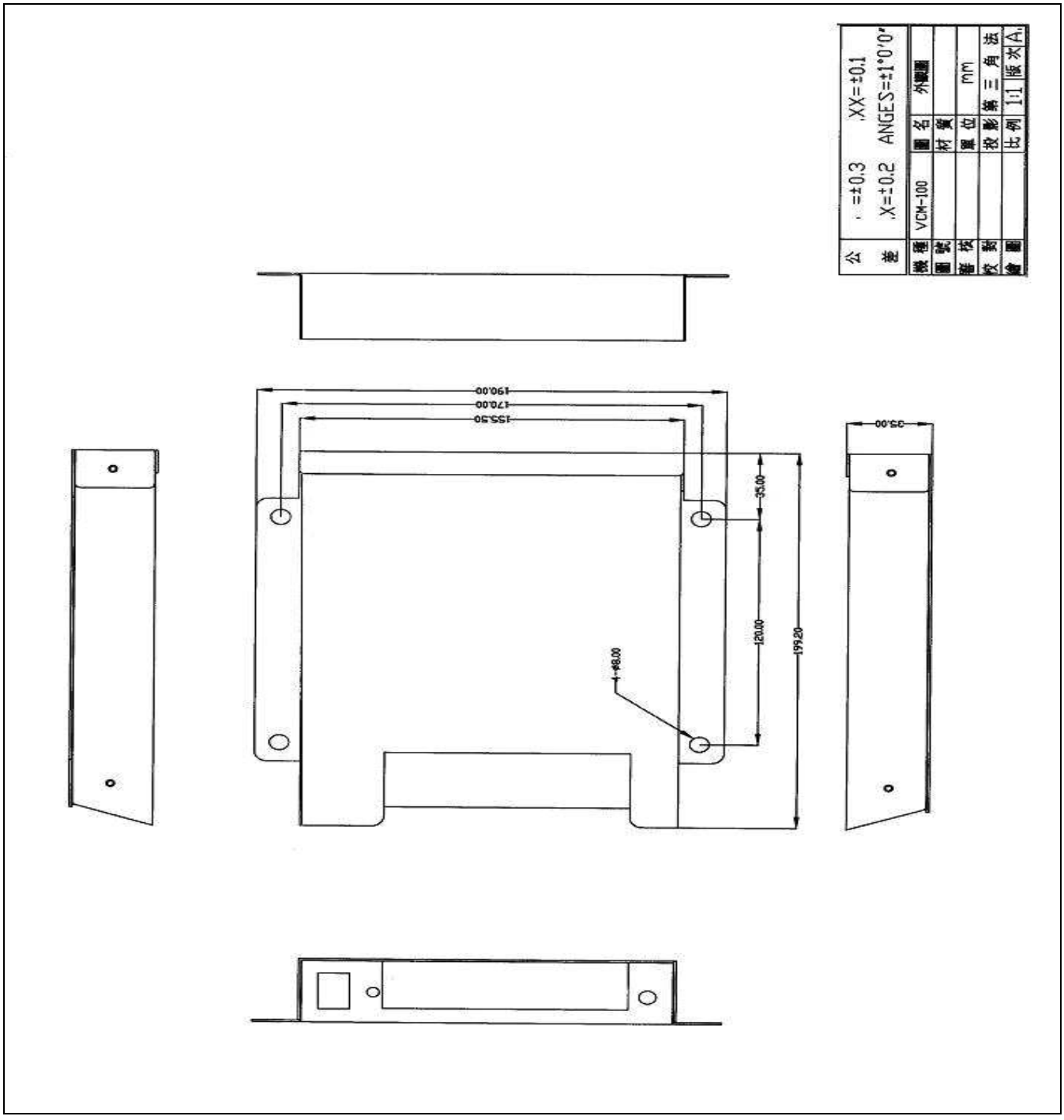
Operation Note

When Power supply is on, the system should sound out “Beep! Beep! (two times)” It represents the P.C.B. and EPROM data programming are ready. If not, please check out Rom-link software setting and all connections.

PCB Dimension Diagram



Metal Box Dimension Diagram



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Metal Box Photo