

VCM-Series Product Data Sheet

Model Name: **VCM-168 Digital Voice Module**

Rev. K

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Introduction

VCM-168 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 standalone device, 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.

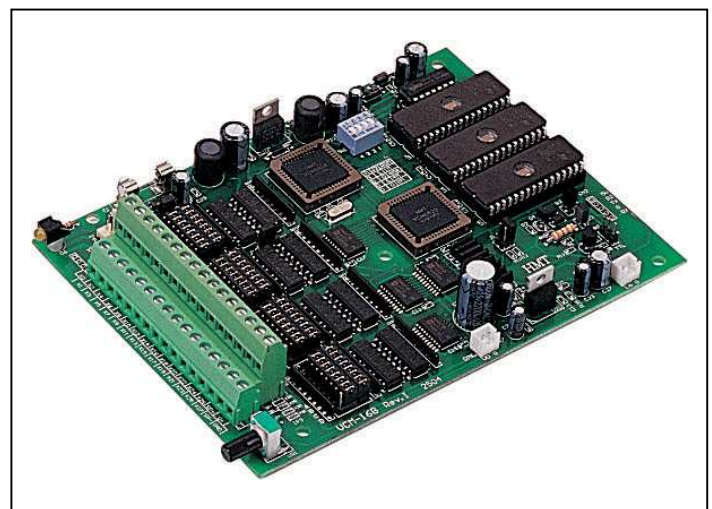
The board can be configured to operate in different modes. The configuration data is stored in EPROM chips along with sound bytes. On power up the board will configure itself automatically. There is no need to set switches manually.

There are many Playback Modes: Direct Single, Direct Single of Cycle, Binary, Parallel and Serial modes. All of input modes are edited via Rom-Linker Software Tool.

Feature

- *Max. Quantity of Messages:
 - 28/32 Messages in Direct Single Mode
 - 255 Messages in Binary/Serial Mode
- *Memory Type:
 - EPROM (27Cxxx),1Mb/4Mb/8Mb
- *Max. Memory Capacity: 8M-bits x 3
- *Voice Length: (Max. 24Mbits)
 - 383 Seconds at 8KHz
 - 191 Seconds at 16KHz
- * Voltage Supply: 12~36 VDC, 800mA
- *Output Amplifier: 3W (Ro = 4 ohm)

Product Photo



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Function / Specification

Input trigger pins number	28 / 32 pins , Optics coupler isolated
Input trigger acknowledge	High/Low with jumper selections.
Exterior response signal	Busy signal and EOVS signal (End of Voice)
EPROM IC socket number	3
EPROM IC type	1Mbits / 4Mbits / 8Mbits with jumper selections.
Support sampling rate	8KHz / 11KHz / 16KHz / 22KHz / 24KHz / 32 KHz
Max. Total length	383 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 independence setup.)

Trigger Mode Support / Trigger Pins Description / Max. Quantity of Message

Direct Single mode	X0-X27 / X0-X31	28 / 32 messages
Single Circulating mode	X0-X27 / X0-X31	28 / 32 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 code mode without strobe signal	X0-X7	254 messages
Serial code mode	Rx	255 messages
Serial frame mode	Rx	255 messages
Binary without strobe signal and direct single mode	X0-X7, X8-X27/X31	254 messages
BCD without strobe signal and direct single mode	X0-X7, X8- X27/X31	115 messages
Binary with strobe signal and single mode	X0-X7, Strobe: X8, X9- X28/X31	254 messages
BCD with strobe signal and single mode	X0-X7, Strobe: X8, X9- X28/X31	115 messages

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Electronic Specification

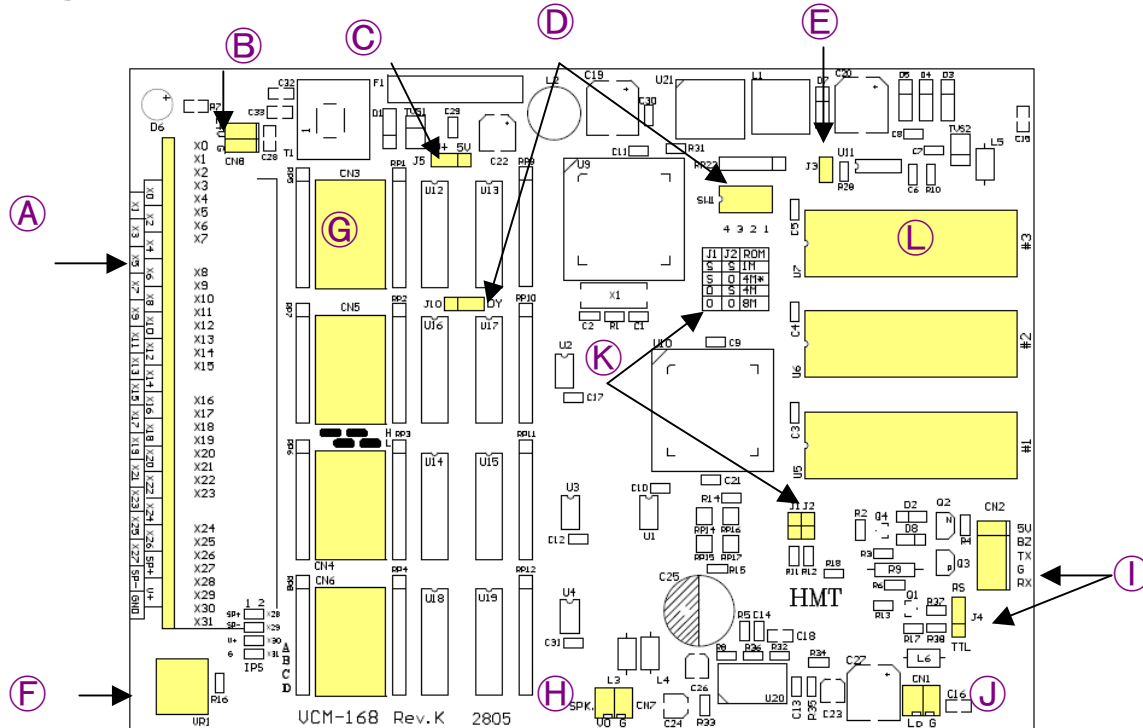
Voltage Supply	DC 12 - 36 V / 0.8A (DC-DC)
Amplifier Output	3 watt, Ro = 4 ohm
Consumption (Audio Output)	0.6A at DC 24 Vin
Consumption (Without Audio Output)	130mA at DC 24V
Trigger Inputs De-bounce Time	Signal length 80ms at least.
Watch Dog Function	Yes
Operating temperature	0°C - 70°C
Line Out	Yes
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


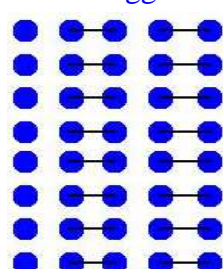
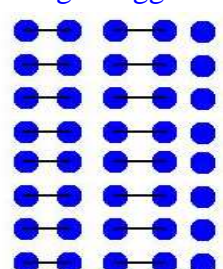
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PCB Diagram / Jumpers & Connectors Description



A	Input Pins Information See PCB label: Input Trigger Pins : X0-X27 / X0-X31 (Connector Type for different.) Sp+ / Sp- : Audio Output. V+: Power Supply DC: 10-36V, 0.8A GND: Ground. (0V)	
B	CN8: Power Supply DC: 10-36V, 1A For X0-X31 Input method useful	C J5 : Normal set at 5V side
D	J10 / SW1: for Special project used only	
E	J3: Reset pins: System reset	
F	Volume Control	
J	CN1: Audio Out without Amplifier	
L	EPROM Sockets #1 - #3	
I	CN2: 5V: output ; BZ: Busy Signal Output ; Tx: Serial Signal Output ; G : Ground ; Rx: Serial Input J4: To set Serial RS-232/ TTL Format	
G	By placing the jumpers to certain ports when select which trigger Level is used.  <Default : Low Trigger> Low Trigger High Trigger  	

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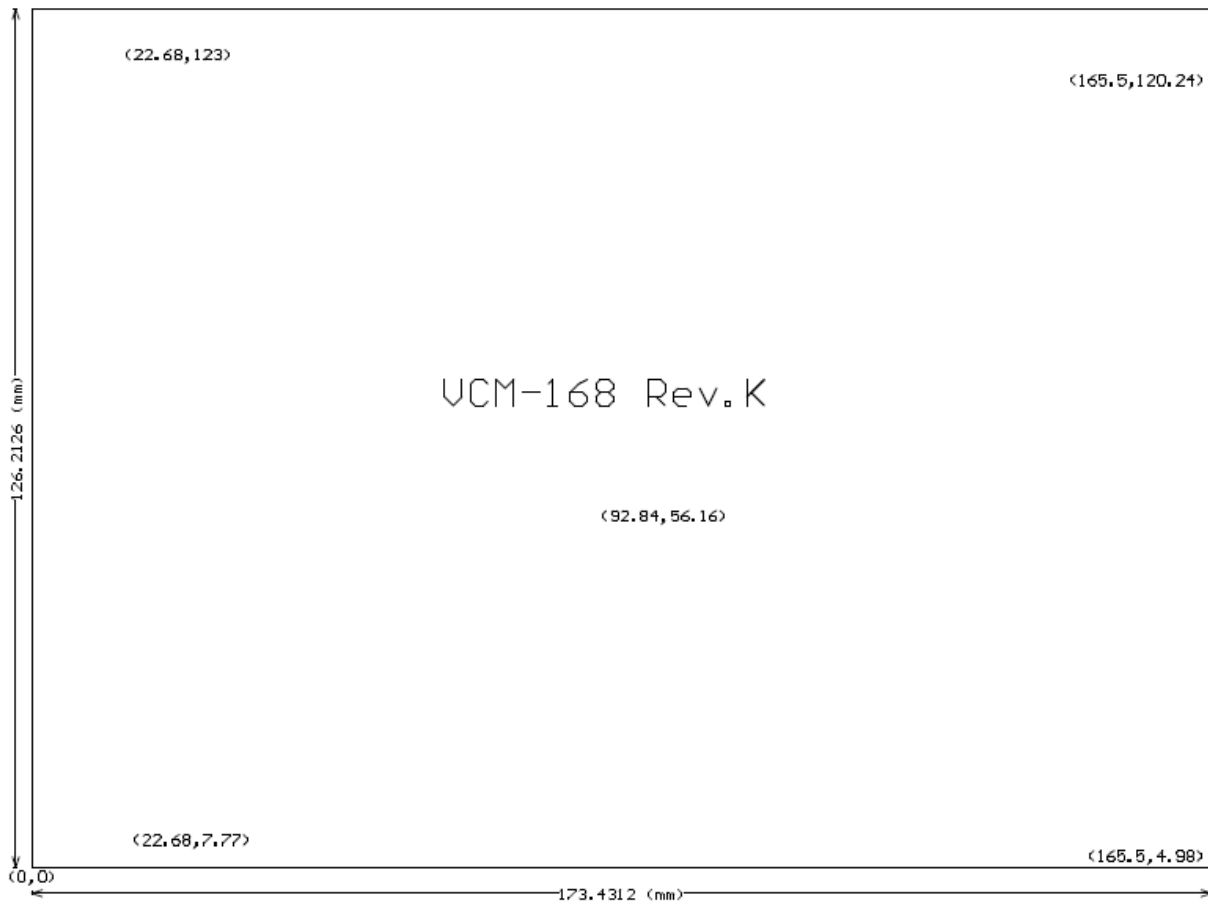
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Operation Note

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

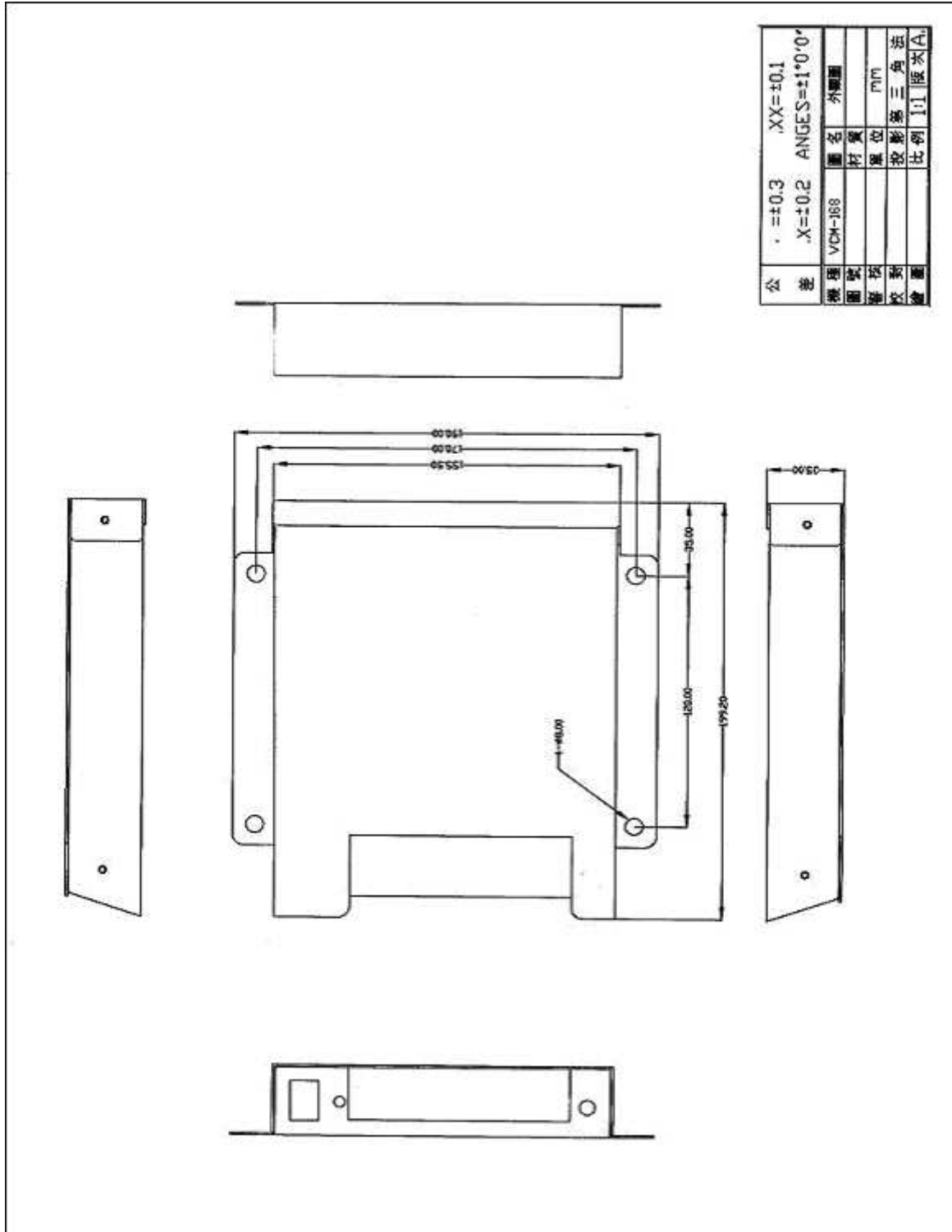


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Metal Box Dimension Diagram



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Metal Box Photo

