



Raptor VeeCAN320

*3.5" LCD Display w/ 2 CAN Channels and 13 pins of I/O
P/N: DISP-VC320-1204*



The Raptor VeeCAN320 is more than just a 3.5-inch color display wrapped in a rugged, environmentally-sealed enclosure. With seven analog inputs, two digital inputs, four outputs, two CAN channels, and a USB port for data logging, the Raptor VeeCAN320 is just as much a small control module as it is a display. For applications that only require a few inputs and outputs, the Raptor VeeCAN320 is often the ideal all-in-one display/controller solution.

The Raptor VeeCAN320 is one of the Raptor™ rugged production displays that use a software development process based upon MATLAB/Simulink and Raptor-Dev which significantly speeds up algorithm development by using automatic integration and code generation. In addition, developers can quickly test application software on their PCs with a built-in onscreen PC simulation.

For more details, contact our Sales Team at
sales@neweagle.net

- **3.5" LCD Color Display**
 - 320(H) x 240(V) QVGA
 - Full Sunlight Readable
- **Programming**
 - MATLAB Simulink with Raptor
- **Processor**
 - Freescale i.MX 286
 - 454 MHz
- **Memory**
 - 128 MB App Flash
 - 96 MB SDRAM
- **9 Inputs**
 - 7 Analog Inputs
 - 2 Digital Inputs
- **4 Outputs**
 - 4 Low Side Drivers (PWM)
- **10-32 V Operating Voltage**
- **Communication**
 - 2 CAN 2.0B
 - 1 RS-232
 - 1 USB 2.0
- **Environmental**
 - -40°C to 70°C Operating Temp
 - Front: IP66 Compliant
 - Back: IP67 Compliant
- **Compiler**
 - CodeSourcery 20100.1.0.202
(Included with Raptor-Dev)
- **Weight**
 - 0.55lb (250g)

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Controller Overview

Hardware	
Microprocessor	Freescall iMX 286
Clock Speed	454 MHz
Environmental	Front 66/Back 67 IP Rating
Operating Temp	-40°C to +70°C
Display	3.5" LCD
Brightness	750 NIT(cd/m2)
Resolution	320(H) x 240(V) QVGA

Note: Supply should be protected by 500mA - Rated circuit breaker/fuse.

Memory Segments	
Memory Segment	Size
FLASH	128MB
SDRAM	96MB

Communication Channels		
Channel	Functions	Options
CAN1	CAN	125k
		250k
		500k
		1000k
CAN2	CAN	125k
		250k
		500k
		1000k
RS-232	Serial	110
		300
		1200
		2400
		4800
		9600
		19200
		38400
		57600
		115200
		230400
		460800
		921600

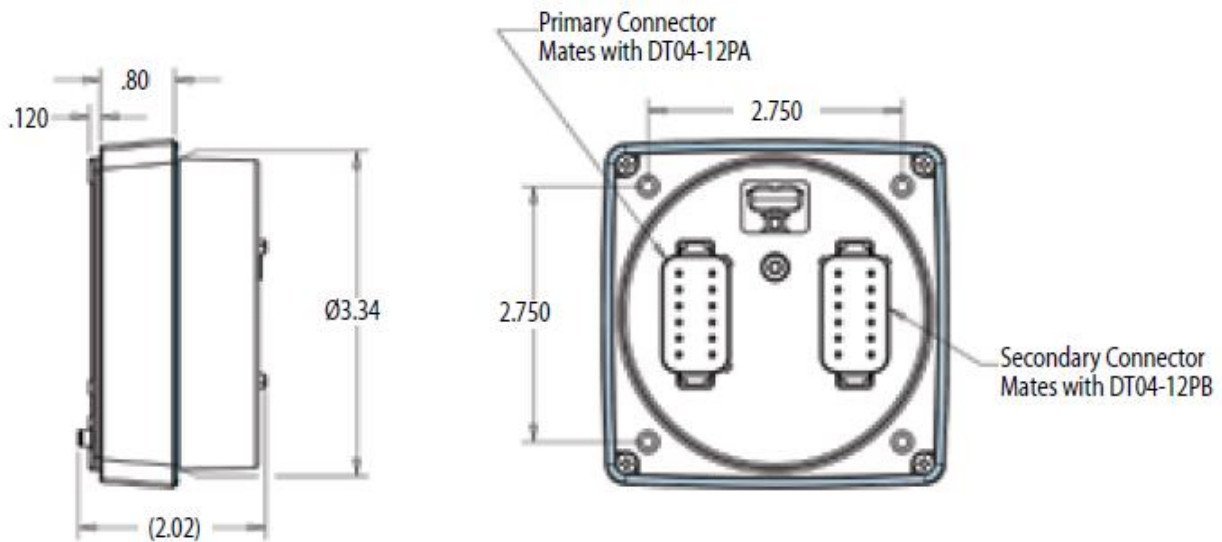
Note: CAN2 is an isolated CAN bus and requires a separate Power Supply and Ground.

Inputs				
Resource	Functions	Voltage Ranges	Pull-Up/Down	Note
BUTTON_1	digital_in			
BUTTON_2	digital_in			
BUTTON_3	digital_in			
BUTTON_4	digital_in			
BUTTON_5	digital_in			
INPUT1	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-1 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT2	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-2 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT3	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-3 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT4	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-4 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT5	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-5 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT6	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-6 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT7	analog_in	0-10 V RESISTANCE	Pull Up	Pin J2-7 Voltage Mode (0-10V) Resistance Mode (0-500 Ohms)
INPUT8	digital_in		Pull Up	Pin J2-8
INPUT9	digital_in		Pull Up	Pin J2-9
INPUT10	freq_in	Frequency Period		Pin J2-10 4.6Hz - 5KHz.

Outputs			
Resource	Functions	Driver Types	Note
OUTPUT1	digital_out pwm_out	Low Side	Pin J1-3 Duty: 0 - 255, Frequency: 0 - 233Hz, Max 500mA
OUTPUT2	digital_out pwm_out	Low Side	Pin J1-4 Duty: 0 - 255, Frequency: 0 - 233Hz, Max 500mA
OUTPUT3	digital_out pwm_out	Low Side	Pin J1-9 Duty: 0 - 255, Frequency: 0 - 233Hz, Max 500mA
OUTPUT4	digital_out pwm_out	Low Side	Pin J1-10 Duty: 0 - 255, Frequency: 0 - 233Hz, Max 500mA
BUZZER	digital_out	Internal	
BUZZER_MUTE	digital_out	Internal	
KEYPAD_BACKLIGHT	pwm_out	LED	
LCD_BACKLIGHT	pwm_out	LED	

Internal Measurements		
Resource	Units	Note
VOLTSUPPLY	V	

Dimensions (mm)



Pinout

J1 Connector (DT04-12PA) Pinout			
Pin	Signal/Function	Pin	Signal/Function
1	GROUND	7	ISOLATED CAN_HI
2	VBATT	8	ISOLATED CAN_LO
3	OUTPUT1	9	OUTPUT3
4	OUTPUT2	10	OUTPUT4
5	ISOLATED CAN SUPPLY GROUND	11	CAN1_LO
6	ISOLATED CAN SUPPLY VBATT	12	CAN1_HI

Note: CAN2 is an isolated CAN Bus and should be supplied from a separate Power Supply and Ground.

J2 Connector (DT04-12PB) Pinout			
Pin	Signal/Function	Pin	Signal/Function
1	ANALOG_SENSOR_INPUT1	7	ANALOG_SENSOR_INPUT7
2	ANALOG_SENSOR_INPUT2	8	DIGITAL_SENSOR_INPUT1
3	ANALOG_SENSOR_INPUT3	9	DIGITAL_SENSOR_INPUT2
4	ANALOG_SENSOR_INPUT4	10	TACHOMETER_INPUT
5	ANALOG_SENSOR_INPUT5	11	RS232 RX
6	ANALOG_SENSOR_INPUT6	12	RS232 TX