



What's in the Kit?

The development kit includes the following components:

- Vector Industrial Compact Enclosure (ICE) loaded with Wind River Linux
- 12 VDC adapter with power connector and AC cord (the mating connector, Phoenix 1847055, shown in the photo is connected to the 12 VDC adapter)

Preparing the Development Kit

Your development kit has been designed to work out of the box. Follow these steps to prepare it for use:

1. Connect a monitor to the VGA output socket.
2. Connect a USB keyboard.
3. Connect the 12 VDC adapter to the power input, and then connect the adapter to AC power.
After several seconds, the operating system begins to boot from the internal CompactFlash card.

Changing BIOS Settings

BIOS defaults have been selected to enable the system to operate in a standard configuration. By default, the serial ports are configured for EIA-232 mode. You can change the serial port mode using the BIOS setup utility.

- To access the setup utility, press F2 during boot.
- To change the serial port mode, click Advanced → Peripheral Configuration → Serial Port Buffer → Enabled → Port x Mode → RS485.
- To restore the default settings, press F9 in the Main tab of the BIOS setup utility.

Operating System Details

Wind River Linux 4.2

- You can log in from the serial console or from the display interface, by choosing an option from the GRUB menu.
- The serial console is on Serial Port 1 at 115200 baud.
- Remote log in via `ssh` is also available.
- The username is "root" and the account password is "IsiTech".
- X Windows is included. Use "startx" to start it.
- Shut down the system before disconnecting power. To shut down, enter "poweroff" at a shell prompt.

Vector ICE Features

The Vector ICE is a Vector single board computer (SBC) housed in a rugged industrial compact enclosure featuring the following:

- Intel® Atom™ Z530P processor at 1.6 GHz
- Intel® System Controller Hub US15WPT
- 1 GB DDR2 DRAM SODIMM (options for 512 MB and 2 GB)
- Battery-backed real-time clock
- Internal CompactFlash card
- Four USB 2.0 ports at low, full, and high speeds
- Two EIA-232 (default) or EIA-485 serial ports
- Gigabit Ethernet port
- Two CAN 2.0B buses
- Mini PCIe expansion slot (contact factory for options)
- VGA output
- Stereo speaker output
- Stereo line output
- Stereo microphone input
- 12 V (nominal) DC power input

The Vector ICE can be easily reconfigured to provide different subsets of the Vector features. Contact your local Eurotech representative for other configuration options.

Hardware Features

Expansion Port

The 12-position terminal block located on the secondary side of the enclosure provides an expansion port that can be easily reconfigured for your application. In the standard configuration, this port has the following pin assignment:

Pin	Name	Type	Description	Vector SBC
1	LINEOUT_L	O	Line out – Left channel	J5.1
2	LO_SENSE	I	Line out sense (note 1)	J5.2
3	LINEOUT_R	O	Line out – Right channel	J5.3
4	GND_HDA	P	Analog ground	J5.4
5	SPKR2+	O	Speaker 2 – Positive signal	J4.1
6	SPKR2-	O	Speaker 2 – Negative signal	J4.2
7	SPKR1+	O	Speaker 1 – Positive signal	J4.3
8	SPKR1-	O	Speaker 1 – Negative signal	J4.4
9	MIC_IN_L	I	Microphone– Left channel	J6.1
10	MIC_SENSE	I	Microphone plug in sense (note 2)	J6.2
11	MIC_IN_R	I	Microphone– Right channel	J6.3
12	GND_HDA	P	Analog ground	J6.4

Notes:

- The default audio is the stereo speaker output. Tying LO_SENSE to ground activates the Line out pins.
- By default, the microphone input is disabled. To enable, short MIC_SENSE to ground.

USB Host Ports

Two ports are general-purpose USB host ports (500 mA max), while two ports support high-current, plug-in modules (1 A max).

VGA Output

The VGA output supports a standard monitor. This output also provides a Display Data Channel interface (DDC_SDA pin 12 and DDC_SCL pin 15) for monitor “Plug and Play”.

Ethernet

Network settings are configured to operate with a DHCP server.

Technical Support

The Eurotech support site includes errata reports, the latest releases of documents, and developer’s forums. These resources are available to registered developers at

<http://support.eurotech-inc.com/>

Next Steps

For a complete description of the Vector SBC including electrical specifications, see the *Vector User Manual (#110124-7000)*.

Serial Ports

The Vector ICE provides two EIA-232/485 serial ports with the following pin assignment on the serial port plugs:

Pin	EIA-232 (Default)	Type	EIA-485 (Option)	Type	Vector SBC (J27 or J34)
2	RXD	I	RX-	I	3
3	TXD	O	TX-	O	5
5	GND	P	GND	P	9
7	RTS	O	TX+	O	4
8	CTS	I	RX+	I	6

Note: Other pins are not connected.

CAN

The current Linux release does not support CAN. Future releases will support two CAN 2.0B buses with the following pin assignment on the CAN plug:

Pin	Name	Type	Description	Vector SBC
1	CANLOW_2	IO	CAN 2-	J25.2
2	CANLOW_1	IO	CAN 1-	J24.2
7	CANHIGH_1	IO	CAN 1+	J24.1
8	CANHIGH_2	IO	CAN 2+	J25.1

Note: Other pins are not connected.

Enclosure

The Vector ICE enclosure has the following dimensions:

Dimensions

Length	141 mm (5.6 in.)
Width (lid)	188 mm (7.4 in.)
Width (base with mounting tabs)	239 mm (9.4 in.)
Height	65 mm (2.6 in.)
Weight	1.1 kg (2.5 lbs.)

The enclosure is not intended to be opened by the customer.

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