

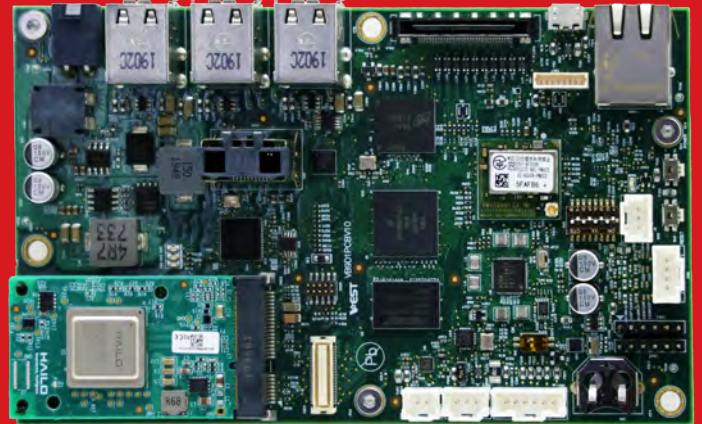


Your Partner in Innovation  
SMART . CONNECTED

# VEST i.MX8M Mini Dev Kit

VEST-8MM-07-DEV

VEST is a leading embedded solutions provider, committing to excellence and innovation. Our Development Kits expedite product development, enabling swift market entry for your products and ensuring a competitive advantage.



Industrial /  
Commercial  
IoT



Efficient  
CPU



Robust Security  
Features



Edge  
Computing

## ABOUT OUR PRODUCT

Introducing the VEST i.MX8M Mini Development (Dev) Kit. This compact solution is a Single Board Computer (SBC) that enable designers to deliver an intuitive, highly interactive, and immersive user experience.

Unleash the full potential of the NXP i.MX8M Mini, featuring an advanced implementation of a Quad Arm® Cortex®-A53 core, which operates at a top clock speed of 1.8 GHz. This provides rich multimedia functionality for general purpose Human-Machine-Interface (HMI) solutions enabling touch, voice, graphics, video.

Further upgrade to include AI / ML capabilities via integration of Hailo-8R™ AI accelerator. VEST software board support package contains drivers for Hailo-8R™ AI accelerator (13 TOPs) and allowing optional upgrade possibilities.

This Dev Kit is versatile and suitable for diverse range of applications, such as

- Edge Computing
- Video / Audio Conferencing
- Advanced Human Machine Interface Application
- Point of Sales, Digital Signage, Smart Retail, Smart Cities
- Point of Care
- Portable Test and Measurement Instruments
- Automation for Industry 4.0

## Key Features

- Rich multimedia capabilities for advanced HMI application
- A general-purpose Cortex®-M4 400 MHz core processor is for low-power processing
- Built-in 10W audio amplifier (plug and play speaker driver)
- Secured data integrity, safeguard against unauthorized access
- Multiple high-speed interfaces that comply with industrial standards facilitate seamless integration with various peripherals
- Integrated Hailo-8R™ AI accelerator with 13 TOPs AI computing budget (optional)

## Support



VESTConnect360  
Cloud Management System

HAILO  
Empowering Intelligence

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# Specifications

CPU Details	
CPU	i.MX8M Mini   4x Cortex®-A53 @ 1.8GHz, Cortex®-M4 @ 400MHz
GPU	GC Nano Ultra for 3D acceleration   GC 320 for 2D acceleration
AI Accelerator	Support Hailo AI Accelerator module up to 13 TOPs (Optional Upgrade)
Memory	
Memory	2GB 32-bit LPDDR4-3000
Storage	8GB eMMC5.1
External Storage	Micro SD 3.0 Socket push-push type
Operating System	
BSP	Yocto Linux, Ubuntu and Android
Multimedia	
Video Encoder	1080p60, H.264, VP8
Video Decoder	1080p60, H.265/4, VP9, VP8
Display Controller	Support up to 1080p60 display through MIPI DSI
Display and Touch	On board LVDS and I2C Touch Connector for 7" or 10" LCD Panel   Socket   Dual Channel 4-lane LVDS   4-lane MIPI-DSI   I2C Touch   PWM   Up to 1A Backlight Output
Audio and Video	Microphone Input (2mm pitch 2 pin header)   2mm pitch, 4 pin header for Speaker L&R, Up to 10W/ch into 8ohm load   Compatible to NXP MIPI-HDMI adapter card
Connectivity	
Wireless	On Board Dual Band Wi-Fi / Bluetooth Module (optional)
USB	USB 2.0 OTG Mirco, Type B   6x USB 2.0 Host, Type A
Serial Communication	RS485 (default) or RS232   CAN-1x 2mm pitch 3 pin header
Ethernet	1x Gigabit Ethernet with AVB, IEEE 1588, EEE
I/O Expansion	0.5mm pitch, 2 x 25 pin header for 4-lane MIPI CSI   SPDIF   SPI   PWM   UART   12C   GPIO   Half & Full Size Mini PCIe with Mirco SIM Card Socket
Debugging & Programming	Debug-2x UART Header, 2.54mm pitch 6 pin header   JTAG-1.27 mm pitch 2x 5 pin header
Buttons and Indicators	1x On/Off Button   1x Reset Button   1x 2mm pitch 3 pin header for Reset & Power   1x GPIO Controlled LED Indicator
Power	12-24VDC, 2 pin 4.2 mm pitch Mini Fit JR Header
Physical	
Form Factor	147mm x 89mm

## What Encompasses i.MX8M Mini Development Kit

## Optional Upgrade



VEST i.MX8M Mini Single Board Computer



LCD 7" or 10" (Option)



Heat Sink



Power Adapter



Plug and Socket



Antenna



Hailo-8R™ AI accelerator

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