**VEST**

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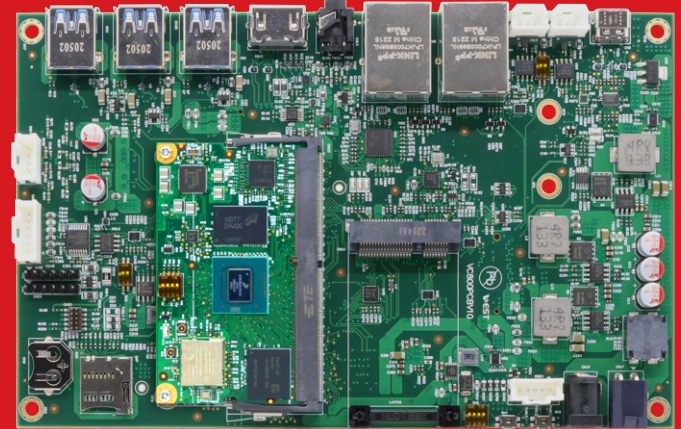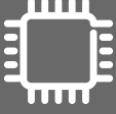Embedded Solutions

**NXP**
Gold Partner

# VEST i.MX8M Plus Dev Kit

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

### Edge Computing

### Rich Multimedia

### High Performance CPU

### Robust Security Features

## ABOUT OUR
## PRODUCT

Introducing the VEST i.MX8M Plus Development (Dev) Kit. This comprehensive solution comprises a System on a Module (SOM) and a Carrier Board.

Unleash the full potential of the NXP i.MX8M Plus, featuring ARM® Cortex®-A53 processor and Neural Processing Unit (NPU). This empowers Artificial Intelligence (AI) and Machine Learning (ML) capabilities, enhances multimedia performance, supports cutting-edge Edge Computing, provides robust video graphics, and enables rapid processing – all within a compact, cost-efficient, and power-efficient package. VEST software board support package contains drivers for Leopard Imaging 8.4 Megapixels LI-IMX715-MIPI Camera, 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

- Dedicated NPU to accelerate AI and machine learning
- Accelerate real-time data processing, with dual display
- Rich multimedia capabilities
- Up to 4K camera support
- 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

## Support

**VESTConnect360**
Cloud Management System

**LEOPARD** IMAGING

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# Specifications (VEST i.MX8M Plus Dev Kit)

| CPU Details | |
|---|---|
| CPU | i.MX8M Plus \| 4x Cortex®-A53 @ 1.8GHz, Cortex®-M7 @ 800MHz |
| GPU | GC7000UL with 2 shaders for 3D Graphics \| GC520L for 2D |
| NPU | Neural Processing Unit (NPU) Operating at up to 2.3 TOPS |

| Memory | |
|---|---|
| Memory | 2GB 32-bit LPDDR4 up to 4.0GT/s |
| Storage | 16GB eMMC5.1 |
| External Storage | Micro SD 3.0 Socket Push-Push Type |

| Operating System / Driver | |
|---|---|
| BSP | Yocto Linux, Ubuntu, Android and NXP Real Time Edge Software |
| Driver | LI-IMX715-MIPI Camera (Leopard Imaging) |

| Multimedia | |
|---|---|
| Video Encoder | 1080p60, H.265, H.264 |
| Video Decoder | 1080p60, H.265, H.264, VP9, VP8 |
| Hi-Fi Audio | Cadence® Tensilica® Hifi 4 DSP @ 800MHz |
| Camera | 2x MIPI CSI with Dual Image Signal Processors |
| Display Controller | MIPI-DSI, up to UWHD and WUXGA \| HDMI 2.0a Tx, up to 4kp30 LVDS (4/8-lane) Tx, up to 1920x1080p60 |
| Display and Touch | On board LVDS and I2C Touch Connector for 7" & 10" LCD Panel \| M.2 Key B Form Factor Display Daughter Board \| Socket \| Dual Channel 4-lane LVDS \| 4-lane MIPI-DSI \| I2C Touch \| PWM \| Backlight Output |
| Audio and Video | HDMI 2.0a Type A \| 3.5mm Headphone Jack with Microphone Input \| 2mm Pitch, 4 Pin Header for Speaker L&R, Up to 10W/ch into 8ohm Load |

| Connectivity | |
|---|---|
| Wireless | On Board Dual Band Wi-Fi/Bluetooth Module (Optional) |
| Networking | 1x 10/100/1000 BaseT RJ45 Ethernet, 1x 10/100/1000 BaseT RJ45 Ethernet with TSN Support |
| USB | USB 3.0 OTG, Type C \| 3x USB 3.0 Host, Type A |
| Serial Communication | RS485 (Default) or RS232 \| 2x CAN/CAN-FD 2mm Pitch 3 Pin Header |
| I/O Expansion | M.2 Key B Form Factor Expansion Daughter Board Socket \| 4-Lane MIPI CSI x 2 \| Full Size Mini PCIe with Gen3 x 1 Lane Nano SIM Card Socket |
| Debugging & Programming | 2x Debug-UART Header, 2.54mm Pitch 5pin Header \| JTAG-1.27mm Pitch 2 x 5 Pin Header |
| Buttons and Indicators | 1x On/Off Button \| 1x Reset Button \| 1x On/Off, Reset, Power LED Control Signal Connector-2mm Pitch 5 Pin Header \| Power LED Indicator-2x, 3.3V & 5V |
| Power | 12-24VDC, 2.0mm DC Jack or 2 Pin 4.2mm Pitch Mini Fit JR Header |

| Physical | |
|---|---|
| Form Factor | 180mm x 112mm (Carrier Board) , 69.6mm x 40mm (SOM) |
| Operating Temperature | Commercial \| Industrial (Optional) |

| Ordering Information | |
|---|---|
| Part No. | VES-8MP-00-00-SMD-DEV |

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