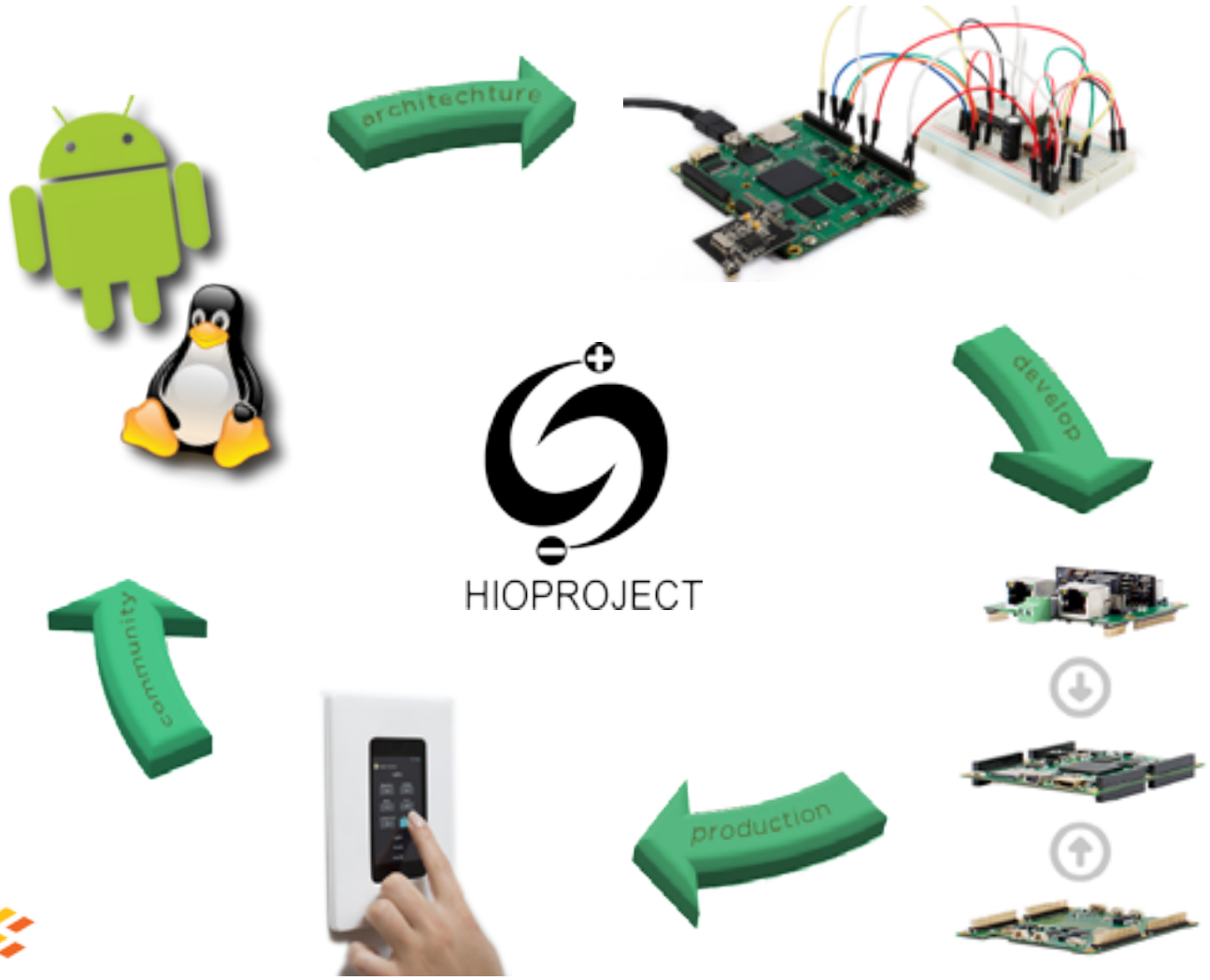
ESTONE TECHNOLOGY

Ultra-Thin 3D Expandable Freescale i.MX6 ARM Open Modular Platform



A Lego-like ARM based open architecture platform for rapid prototyping, quick application development and fast time to market

www.hioproject.org

www.estonetech.com

Modular

Designed with rapid prototyping and expansion in mind, the HIO Mainboard has 200 female headers on the top and bottom and is stackable. The Mainboard can be equipped with a variety of daughter boards in a vertical top and bottom fashion, with wing-type modules or a carrier board.

Open Architecture

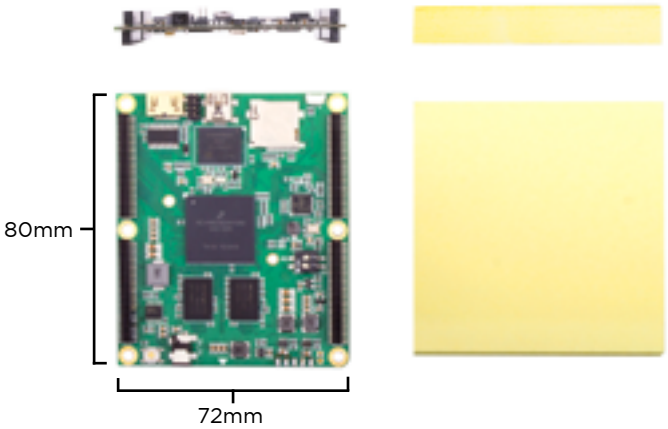
The HIO Project is an open architecture design, allowing you to code your own software and develop your own hardware for any application. We will be providing SDKs for Android and Linux.

Thin

The HIO Project Mainboard is the thinnest computer running on the Freescale i.MX 6 processor. The height is just under 10mm which is roughly the same as a fresh stack of Post-It notes.

HIO

Post-It Notes



Small

The HIO Mainboard is only 72mm x 80mm and only about 10mm tall (about as tall as a new stack of Post-its) allowing it to fit into a standard 2-Gang Electrical Box like in our HIO Wallpad.

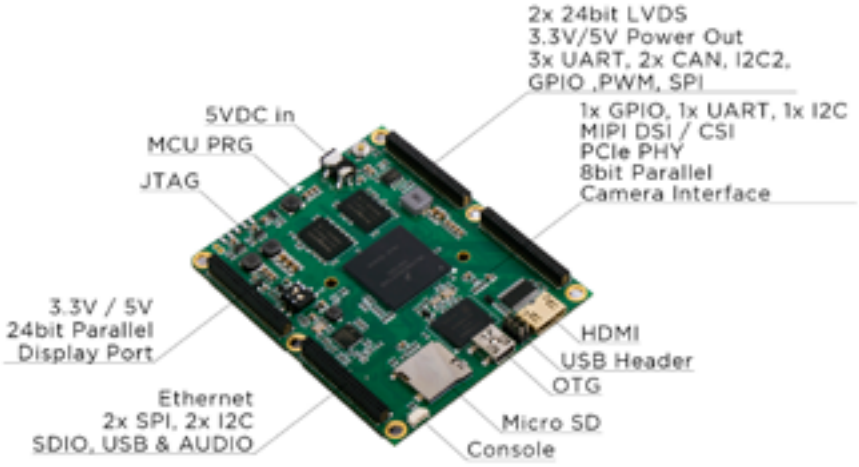
Adaptable

The HIO can be powered by the HIO Mainboard or daughter board like the POE module or the Mainboard power adapter

Flexible I/O

Different configurations bring out all display ports, camera ports CAN, serial, I2C, SPI, SDIO and more I.MX6 I/O resources through HIO's 400 pins

IO & Pinouts



Drop-in PoE In-wall Android Universal Controller

Home Automation | Office Automation | Screen Mirroring | General Control Panel

The HIO Wallpad is a way to completely connect and control your entire home or office in one centralized easy-to-install unit. Running off the latest generation Freescale i.MX6 Processor, the Android powered Wallpad is universally compatible with a number of different control and home automation applications.

HIO Project Freescale i.MX6 ARM Boards

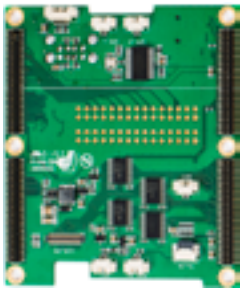
HIO-EMB1200

HIO Mainboard
HIoTX* Form Factor
72x 80mm
Freescale i.MX6 DL/Q
1x HDMI
1x micro SD socket
2x USB2.0, 1x OTG (Device)
1x UART Console
1x on-board audio codec with 1W AMP
1x GbE PHY
8x 50-pin female header**
5VDC Power In

HIO-POE1260-IWK

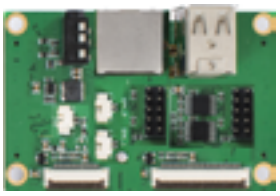
HIO Daughter Board
HIoTX Compatible
72x 60mm
Standard Power
12V POE Module, 802.3af compliant
Ethernet
1x GbE via POE or GbE only without POE module
Serial
1x RS-232 via RJ45, 3x RS-232 via pin header
Optional Power
2-pin terminal block or RJ45
12VDC power input

HIO-PNL1280-IWK



HIO Daughter Board
HIoTX Compatible
72x 80mm
Display Port
Parallel RGB, default support Sharp 3.5" LCD Panel, 2.8VDC
WiFi
1x USB WiFi Module
I/O
1x USB2.0, 1x I2C for TP, 1x power button
Audio
1x Mic-in, 2x 1W speaker out

HIO-IOB1240



HIO Daughter Board
HIoTX Compatible
72x 40mm
Ethernet
1x GbE, RJ45
Camera Port
1x 8bit Parallel, 1x MIPI 2-lane CSI, 2x I2C
I/O
2x USB2.0, 1x 4bit SDIO, 1x 5V +3.3V pin header
Audio
1x Line-out, 1x Line-in, 1x Mic-in, 2x 1W speaker out

Note: We encourage you to develop your application specified HIO daughter board or add-on modules. Ask us for more HIO Mainboard compatible solutions.
* The HIoTX form factor is developed by HABEY USA for the HIO Project open architecture platform. Measuring just 72mm x 80mm, the HIoTX mainboard is a fully functional ARM computer board with on-board processor, RAM, iNAND flash, HDMI, USB and power input from mainboard or add-on boards. It is 80% smaller than the mini-ITX form factor and 20% smaller than the tiny PICO-ITX standard. The HIoTX form factor leverages the Freescale i.MX application processor's rich I/O and flexibility. The unique modular design of the HIoTX form factor allows 3-dimensional expansion utilizing its 200-pin female header on the top and bottom of the board. The HIoTX form factor is designed to enable rapid prototyping, quick application module development and fast time to market.
** 200-pin top and bottom female headers offers: 24bit Parallel Display Port, dual channel 24bit LVDS, MIPI DSI up to 24bit, MIPI CSI up to 4 lane, 8bit parallel camera interface, GbE PHY, x1 PCIe PHY, 2x USB2.0, I2S audio codec output with Line-out/detect, Line-out, Mic-in/detect, speaker out (1W), 4bit SDIO, IOMUX outputs: up to 5x UART, 2x CAN, 3x SPI, 3x I2C, 34 configurable GPIO

HABEY Freescale i.MX6 Embedded ARM Boards

EMB-4500

PICO-ITX Form Factor
100x 72mm
Freescale i.MX6 S/DL/Q
On-board 1G DDR3, 4G iNAND flash
1x mini HDMI, 1x VGA, 2x 24bit dual-channel LVDS
1x micro SD socket, 1x SATA (i.MX6 Q only)
4x USB 2.0, 1x OTG
2x RS-232, 2x CAN
2x I2C, 8x GPIO
5VDC Power in

EMB-3500

Nano-ITX Form Factor
120x 120mm
Freescale i.MX6 S/DL/Q
On-board 1G DDR3, 4G iNAND flash
1x HDMI, 1x VGA, 2x 24bit dual-channel LVDS
2x GbE, on-board USB WiFi option, 1x mini-PCIe with SIM
1x micro SD, 1x SATA (i.MX6 Q only)
5x USB 2.0, 1x OTG
1x RS-485/422, 4x or 12x RS-232, 2x CAN
2x I2C, 1x SPI, up to 40x GPIO
12VDC Power in

EMB-2500

EPIC/OPS Form Factor
165x 115mm
Freescale i.MX6 S/DL/Q
On-board 1G DDR3, 4G iNAND flash
2x HDMI, 2x 24bit dual-channel LVDS, OPS Ready
2x GbE, on-board USB WiFi option, 1x mini-PCIe with SIM
1x micro SD, 1x SATA (i.MX6 Q only)
6x USB 2.0, 1x OTG
1x RS-485/422, 4x RS-232, 2x CAN
2x I2C, 16x GPIO
12VDC Power in

SOM-6510

Computer-on-Module
80x 60mm
Freescale i.MX6 S/DL/Q
On-board 1G DDR3, 4G iNAND flash
6x 40-pin female header with following
1x GbE, 1x mini-PCIe with SIM, LVDS, HDMI, CSI, VGA
1x micro SD, 1x SATA (i.MX6 Q only)
5x USB 2.0, 1x OTG
5x RS-232, 40x Configuable GPIO
Audio Line-in, Line-out, Mic-in
5V and 3.3VDC Power

The HIO Project (www.hioproject.org) is a team of out-of-the-box think-ers, from HABEY USA (www.estonetech.com), who operate on the open source and open architecture model. During the past couple of decades, Habey has designed hundreds of unique embedded boards and systems and produced tens of thousands used in embedded computers around the world.

HABEY USA is a Freescale Connect Partner and has become one of the leading companies in the Embedded Systems field, with products used in numerous applications that include Data Communication, Server Storage, Digital Signage, Banking, Military, Vehicle Integration, Medical and Point-of-Sale (POS) solutions. We have an uncompromising commitment to providing our customers with quality products and services, while meeting the highest level of technical standards and performance.

The HIO Project is a trademark of Habey USA.