**POLYHEX**

3.5" Motherboard Based on NXP i.MX 6 Series Processors

· NXP i.MX 6DualLite 1.0GHz (NXP i.MX 6Solo/NXP i.MX 6Dual/NXP i.MX 6Quad optional)
· Onboard DDR3 1066MHz 1GB memory and 8GB eMMC Nand Flash (default)
· Supports Triple Display: VGA/HDMI/LVDS
· Supports 1x mini-PCIe, 4x RS232, 1x RS485, 5x USB2.0, 2x CAN, 1x SIM, 1x Micro SD slot
· 3.5 inch mini size, low power consumption
· Supports Yocto 2.5.2, Android 9.0, Ubuntu 16.04
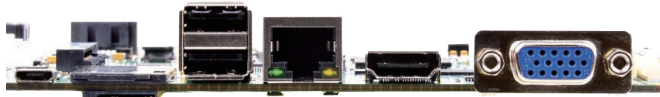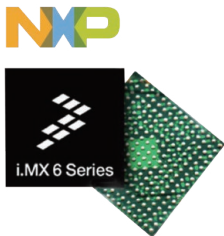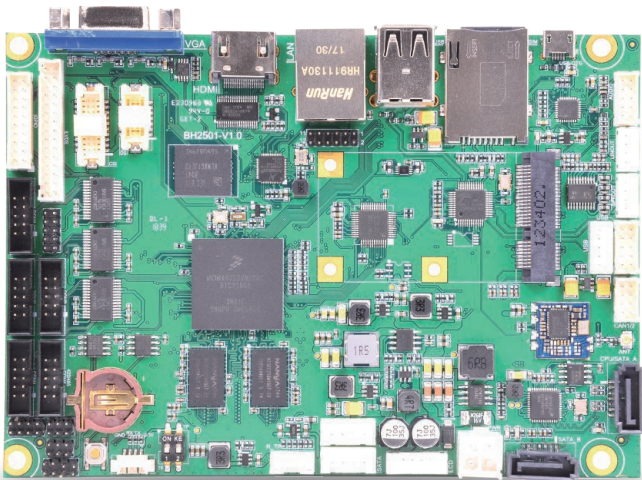
Structure Diagram
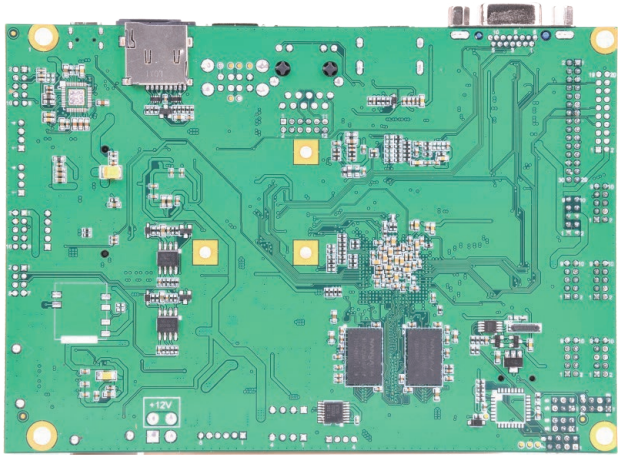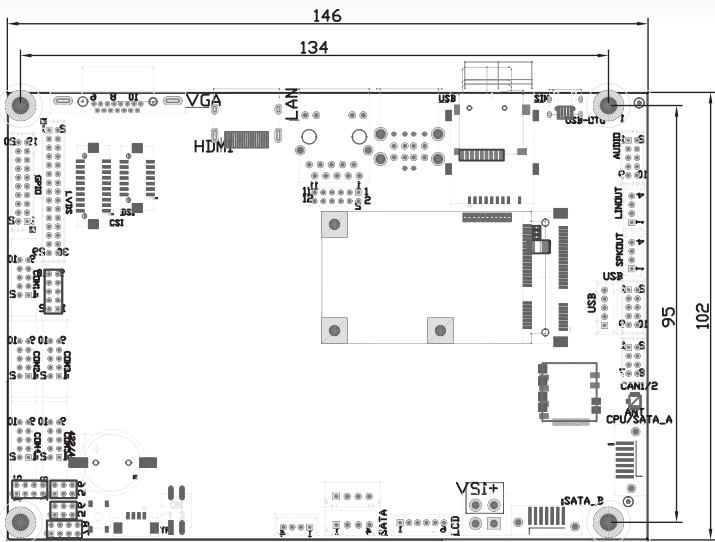
Ordering Information

Part Number	CPU	RAM	Storage	Display	GbE	USB	Audio	Mini-PCIe	SATA	Operating Temp
EMB-iMX6Se-01	NXP i.MX6 Dual Lite 1.0GHz	1G DDR3	8G eMMC	HDMI + VGA + LVDS	1	5 USB 2.0 1 Mcro USB	1	1	2	-20~70℃

Technical Specification:

System	
Processor	NXP i.MX 6DualLite 1.0GHz (Default)
	NXP i.MX 6Solo/NXP i.MX 6Dual/NXP i.MX 6Quad optional
Architecture	ARM Cortex-A9
Memory	Onboard 1GB DDR3(Default), up to 2GB
Storage	eMMC 8GB (Default),16GB/32GB (optional)
Operating System	Yocto 2.5.2, Android 9.0, Ubuntu 16.04
Communication	
Network LAN	1 x RJ45 AR8033
WiFi	1 x RTL8188WEUS
Bluetooth	1 x RTL8723 (optional)
Expansion Interfaces	
Expansion Slots	1 x mini-PCIe with SIM Card Slot
Internal Headers	
Internal Display	1 x Dual channel 8bit LVDS (expansion header)
Expansion Headers	2 x Sata and Sata Power
	1 x DSI
	1 x CSI
	4 x RS232, 1 x RS232/RS422/RS485
	3 x USB2.0
	1 x Power
	1 x GPIO
	2 x CAN
	1 x SPK(L&R)
	1 x Audio(Mic IN, HP Out, Line In)
	1 x RTP(4wire TouchPanel)
	1 x RTC
External Connectors	
External Display	1 x VGA, 1 x HDMI
Network	1 x RJ45 AR8033
USB Host	2 x USB 2.0
SIM Card Slot	1 x SIM
SD Card Slot	1 x microSD card slot
USB OTG	1 x Micro USB
Audio	
Audio Codec	NS4258T (optional ALC5640)
Power Supply	
Power Input	12V DC
Power Consumption	Depending on Configuration
Mechanical & Environment	
Dimensions	146 x 102 x 1.6 mm
Weight	115g
Temperature	Commercial: 0° to +60° C, Extended: -20° to +70° C, Industrial: -40° to +85° C
Relative Humidity	10 to 90 %
MTBF	>100 000 Hours
Shock	50G/25ms
Vibration	20G/0-600Hz

Interface Diagram:

2 x USB Host 2.0

VGA Out   HDMI Out   SIM Card   USB OTG

RJ45 Network

LVDS Out(Dual 8bit)

POE

Display DSI Out

MIC In, HP Audio Out

CSI Camera Out

L & R Audio Out

GPIO

L & R Speaker Out

COM1

3 x USB 2.0 Host

LVDS Power Jumper

2 x CAN

COM2

COM3

WIFI Antenna

COM4

COM5

SATA 2#

COM5 RS232/ RS485/RS422 Jumper

PCIe

MCU Program   Power Button   DIP Switch   Resistive Touch   Display Backlight   SATA 1#

CPU Debug   SATA Power Output   Power Input

ABOUT POLYHEX

As a board level and system level designer and manufacturer, Polyhex, with 9- year experience, always delivers best-in-class embedded computing solutions based on both ARM and X86 architecture, including hardware customization and software debugging etc. Partnered with silicon vendors like Intel, NXP, ST, Rockchip, Allwinner and so on, we have earned trust from clients worldwide in over 30 countries. Polyhex is also certified with ISO9001 and ISO13485 for the self-owned manufacture facility.

POLYHEX
Beyond the Embedded Deployment