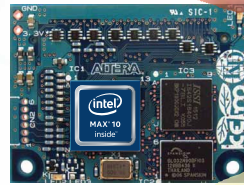# KEIm-08

intel | FPGA Design Solutions Network

It's possible to make mass production even small lot that custom MCU platform which installed Intel® MAX® 10 FPGA.
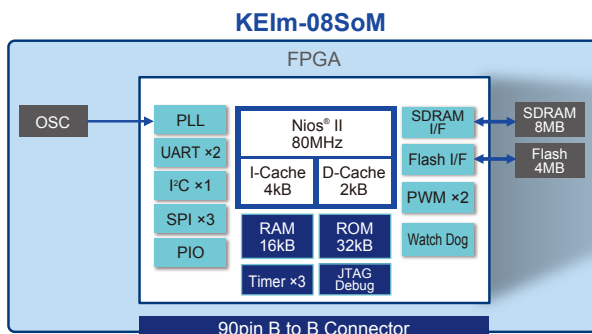
⟨ KEIm-08 Feature ⟩

- To be compact and reduce weight products.
- To develop products shorten the delivery time by the module.
- It will clear up any uncertainties for discontinued.
- It's commonly possible to use it from trial production to mass production.
- Possible to customize
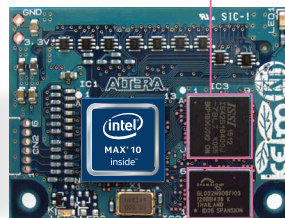
⟨ Introduction cases of our clients ⟩

- Hardware acceleration
- Digital signal processing
- Front end controller of sensing system
- Network node of communication processing system
- Custom MCU platform
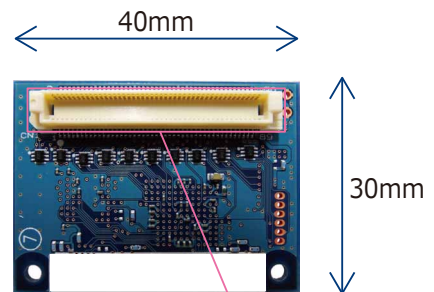
CPU + Peripheral IP + Memory Embedded platform

KEIm-08SoM

FPGA

OSC

PLL
UART ×2
I²C ×1
SPI ×3
PIO

Nios® II 80MHz
I-Cache 4kB | D-Cache 2kB
RAM 16kB | ROM 32kB
Timer ×3 | JTAG Debug

SDRAM I/F
Flash I/F
PWM ×2
Watch Dog

SDRAM 8MB
Flash 4MB

90pin B to B Connector

⟨ Design sample ⟩

SDRAM 8MByte

Flash 4MByte

40mm

30mm

Board to board Connector
Possible to integrate by one connecter of 90 pins
At most 66 pins user I/O

We mainly organize to work trust development business in Japan.
We support general development business that used by KEIm.

KONDO ELECTRONICS INDUSTRY Co.,Ltd.

Please see below the inquiry regarding to purchase the product.
✉ 【 keim-support@kd-group.co.jp 】

Product specifications

KEIm-08 series

▼ KEIm-08 SoM Basic specifications
Price JPY25,000(Excluding tax)

|	
FPGA	10M08SCU169I7G
RAM	SDRAM 8MByte
ROM	NOR-Flash 4MByte
Clock	50MHz Cristal oscillator
Connector	FX8-90P-SV1 (HIROSE) 90pin General purpose I/O port at most 66 pins
Debug I/F	JTAG (Be connected to the connector)
Supply voltage	+3.3V±5%
Current consumption	About 170mA (Typ.)
Operating temperature	-20℃～60℃ (However without condensation)
Dimensions	40mm x 30mm

▼ Design sample

|	
CPU core	Nios® Ⅱ Gen2 Processor 80MHz Instruction cash:4KByte Data cash:2KByte
Peripheral	UART, I2C, SPI, PWM, GPIO, etc.

▼ Board appearance

Intel® MAX ® 10 FPGA   SDRAM   B to B connector
OSC50MHz   NOR-Flash
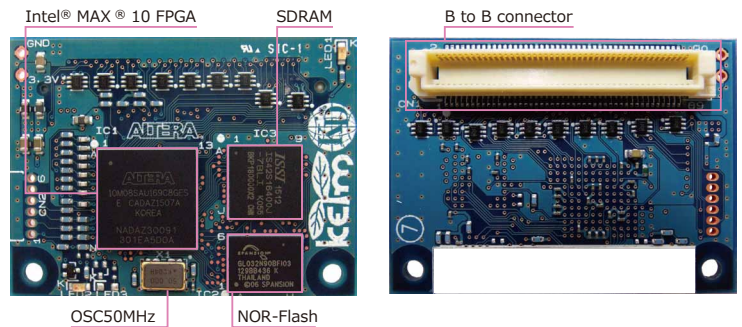
▼ Board size
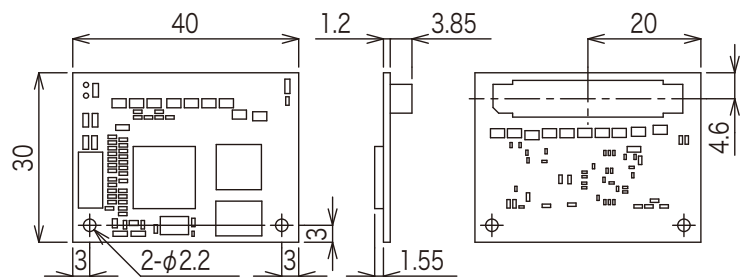
▼ Development environment

Development software	Intel® Quartus® Prime Development software
Sample software	Now showing on Web site

Starter kit

▼ KEIm-08 SoM Development kit
Price JPY35,000(Excluding tax)
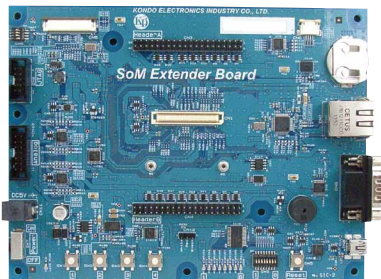
(Package)
AC adapter
USB cable
Screw spacer

Supply voltage	+5V±5%(AC adapter)
Dimensions	130mm × 170mm
Basic specification	JTAG connecter, RS232C, USB serial, Ethernet, EEPROM, ADC, DAC, RTC, Buzzer, etc.

▼ KEIm-08 Header board
Price JPY9,800(Excluding tax)

(Package)
USB cable
Screw spacer

Supply voltage	+5V±5%(USB bus power or pin header)
Dimensions	90mm x 55mm
Basic specification	JTAG connecter, USB serial, Pin header, Push switch, Dip switch, LED, etc.

Manual, Circuit diagram, Parts list, Sample software are able to download by below site.
http://www.kd-group.co.jp/info/contents/product.html