HW6UL-CORE

Hardware Reference Manual

Rev 1.0 20180601

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Trademark

Revision History

Revision	Date	Author	Description
V1.0	07/01/2018	Wig	First Release

Contents

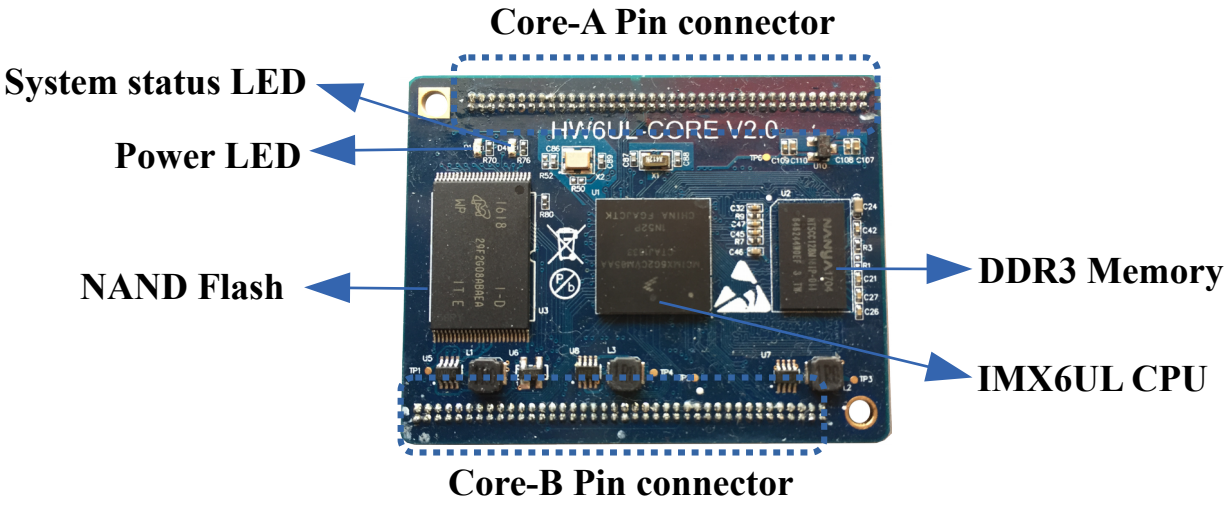
1. HW6UL-CORE System-on-Module Overview

1-1. Introduction

The HW6UL-CORE is a high performance system-on-module designed around the NXP i.MX6UL solo core arm Cortex-A7 CPU, As well as high processing power, compact, cost effective with low power consumption.

The HW6UL-CORE is typically being used as embedded system, this system-on-module main chips is including CPU, DRAM, NAND Flash and two board-to-board 80-pin pin headers (Core A and Core B) that implement other features such as display, ethernet, USB, WiFi, Codec GPIO and etcetera.

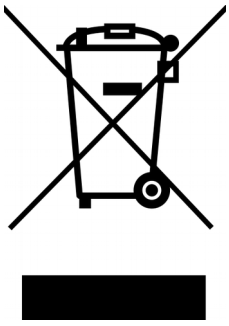
MayQueen Technologies wish HW6UL-CORE could help customers quick to market for the product level.



1-2. General Care and Maintenance

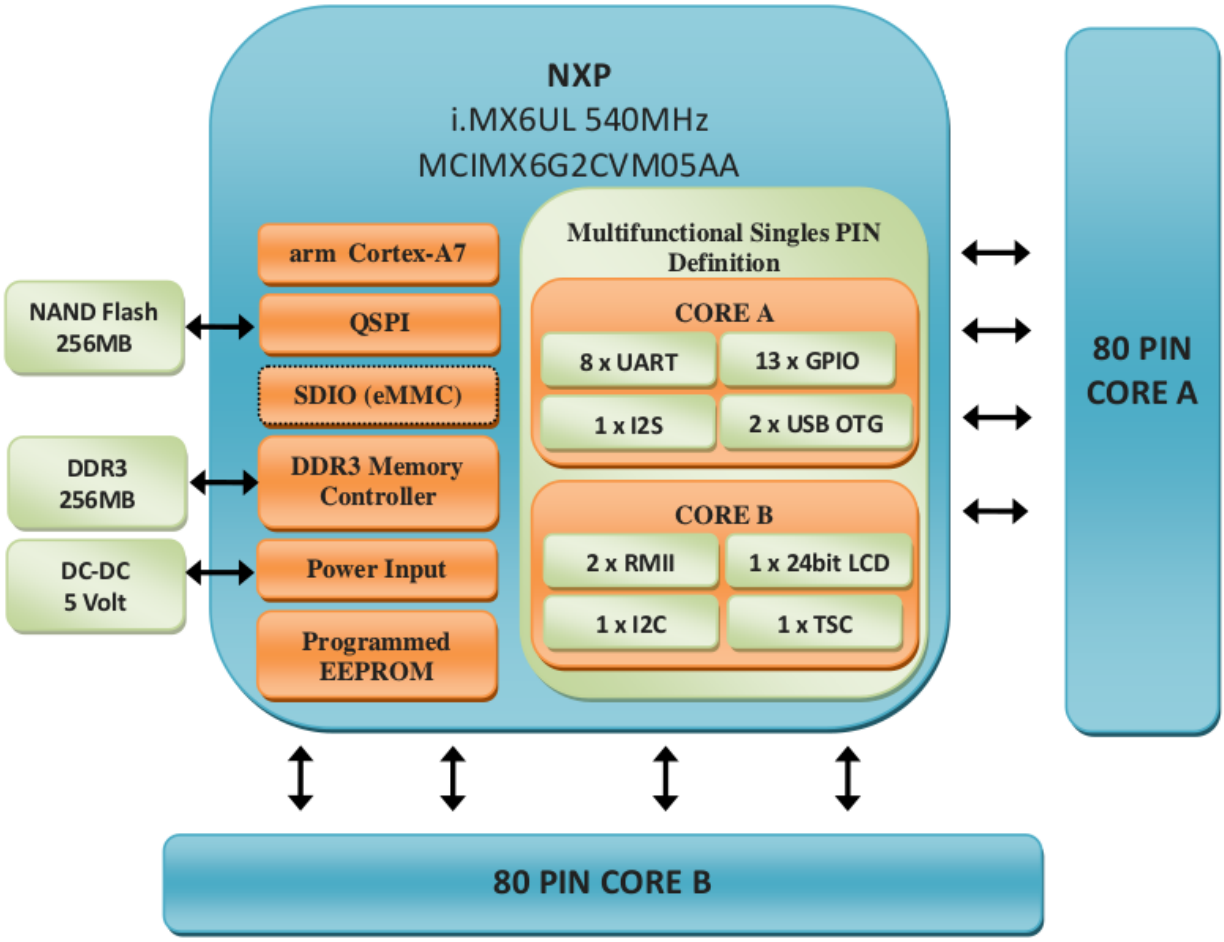
This system-on-module is a product of superior design and craftsmanship and should be treated with care, please following useful suggestions:

- Keep the devices dry. Precipitation, humidity, and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, allow it to dry completely.
- Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device. Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.
- Do not paint the device. Paint can clog the moving parts and prevent proper operation.



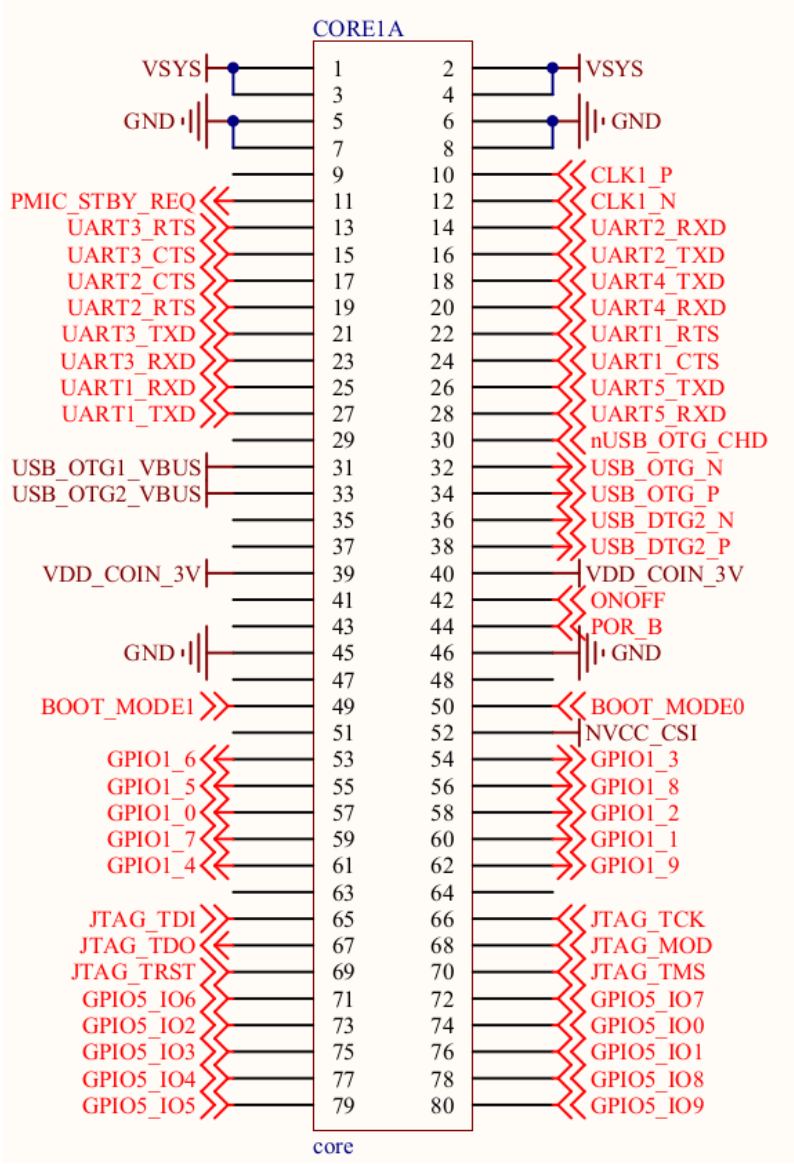
This WEEE symbol on the system-on-module or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

1-3. HW6UL-CORE Block Diagram

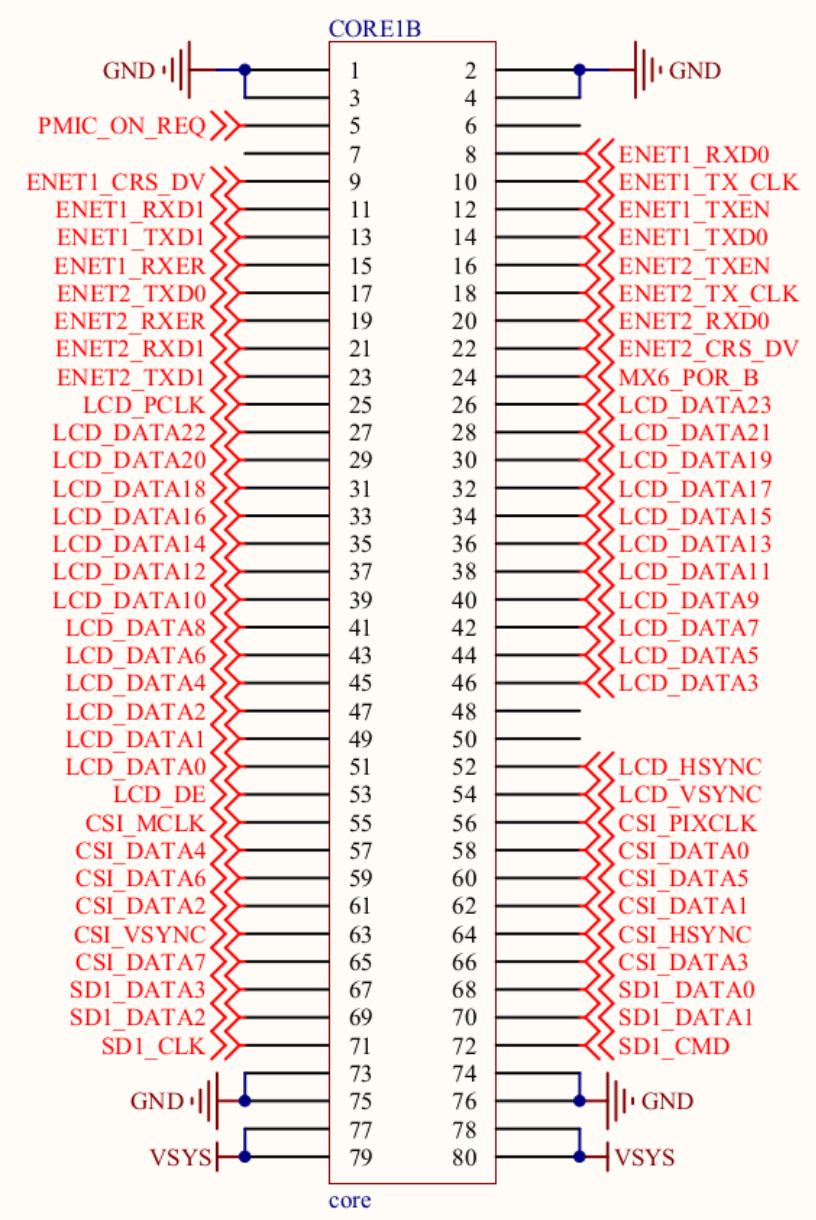


1-4. HW6UL-CORE CORE s definition

CORE-A



CORE-B


CORE1B
GND
PMIC_ON_REQ
ENET1_CRS_DV
ENET1_RXD1
ENET1_TXD1
ENET1_RXER
ENET2_TXD0
ENET2_RXER
ENET2_RXD1
ENET2_TXD1
LCD_PCLK
LCD_DATA22
LCD_DATA20
LCD_DATA18
LCD_DATA16
LCD_DATA14
LCD_DATA12
LCD_DATA10
LCD_DATA8
LCD_DATA6
LCD_DATA4
LCD_DATA2
LCD_DATA1
LCD_DATA0
LCD_DE
CSI_MCLK
CSI_DATA4
CSI_DATA6
CSI_DATA2
CSI_VSYNC
CSI_DATA7
SD1_DATA3
SD1_DATA2
SD1_CLK
GND
VSYS
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67
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77
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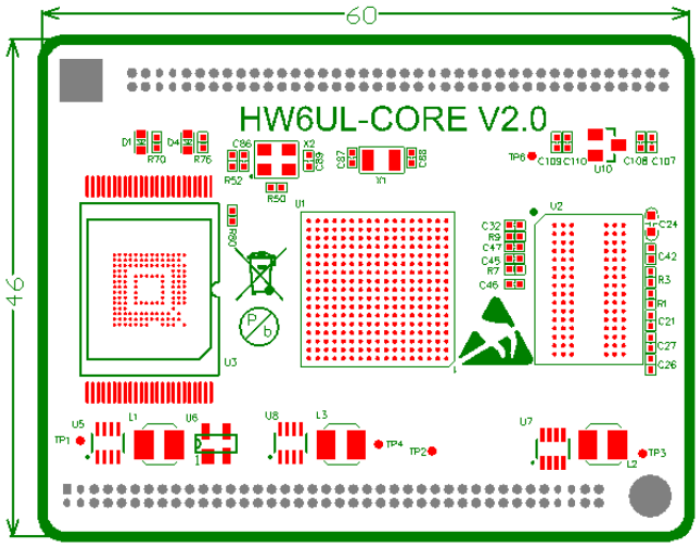
79
80
GND
ENET1_RXD0
ENET1_TX_CLK
ENET1_TXEN
ENET1_TXD0
ENET2_TXEN
ENET2_TX_CLK
ENET2_RXD0
ENET2_CRS_DV
MX6_POR_B
LCD_DATA23
LCD_DATA21
LCD_DATA19
LCD_DATA17
LCD_DATA15
LCD_DATA13
LCD_DATA11
LCD_DATA9
LCD_DATA7
LCD_DATA5
LCD_DATA3
LCD_HSYNC
LCD_VSYNC
CSI_PIXCLK
CSI_DATA0
CSI_DATA5
CSI_DATA1
CSI_HSYNC
CSI_DATA3
SD1_DATA0
SD1_DATA1
SD1_CMD
GND
VSYS
core

1-5. Electrical Characteristics

- 5Vdc Power Supply, larger than 500mA is suggestion
- Power Consumption of Operating Mode: 1.08W
- Power Consumption of Idle Mode: 0.48W
- Power Consumption of Suspend Mode: 12mW
- Operating Temperature: -40°C to 85°C
- Humidity :10% to 90% (operating status), 5% to 95% (storage status)
- MTBF: > 100,000 hour
- Shock: 50G / 20 ms

1-6. PCB Size Overview



- Size is 60x46, Unit: mm
- Pin interval of Core connector is 1.27mm for 2 * 40pins.