

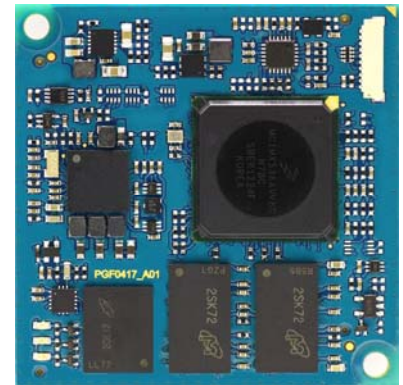
# Q5 series

## System on Module based on NXP i.MX53 processor



### FEATURES

- Support i.MX534/i.MX535/i.MX536/i.MX537 processors
- High pin multiplexing flexibility on 240pin connector
- Industrial and automotive applications
- Low power consumption
- Rugged System On Module
- Small dimensions only 50 mm x 50 mm



Actual size

#### CPU

NXP i.MX534/i.MX535/i.MX536/i.MX537 application processor:

- ARM® Cortex®-A8 CPU up to 1.0 GHz
- NEON coprocessor
- Vector Floating Point unit (VFP)

#### MEMORY

- Up to 1 GB DDR3-800 SDRAM memory (32 bit BUS)

#### STORAGE

Various storage options available<sup>1</sup>:

- 0/256MB/512MB NAND Flash memory (bigger flash memory sizes available on request)
- Optional onboard eMMC memory (start from 2GB eMMC, other sizes available on request)
- Optional onboard microSD connector
- SATA port available
- Fully customizable boot sequence on carrier board, without need to burning eFuses

#### MULTIMEDIA AND HUMAN INTERFACE<sup>1</sup>

- Powerful Graphics 2D/3D accelerator for rich UI design
- Up to 2 LVDS Video outputs
- Up to 2 full 24bit parallel RGB Video outputs
- VGA video output
- Up to 2 Camera Sensor Interfaces
- 1x SPDIF transmitter output and input
- 1x I2S audio output
- 1x Keypad Matrix 4x4 controller (16 keys)
- 3x status LED

<sup>1</sup>Please note that all function may not be available simultaneously, due to pin muxing limitation of SOM connector restrictions. Function availability depends also on the installed processor. For more details refer to processor datasheet.

#### I/O PERIPHERALS<sup>1</sup>

- Up to 3x MMC / SDIO / SD card interfaces (3V3)
- 1x USB OTG 2.0 LS/FS/HS
- 1x USB Host 2.0 LS/FS/HS
- 1x Additional USB Host 2.0 LS/FS/HS (Require external ULPI Transceiver on Carrier Board)
- 1x Full Ethernet 10/100 BASE-T with onboard PHY
- 2x CAN controllers
- Up to 3x UART (TX,RX,RTS,CTS)
- Up to 3x I2C busses
- Up to 2x SPI busses
- Up to 2x PWM outputs from iMX53
- Additional 2x PWM outputs from PMIC
- 2x ADC Input from PMIC
- 1x One Wire
- 1x 4Wire Resistive touch screen interface
- On-board Temperature Sensor (optional)
- On-board Accelerometer (optional)

#### SYSTEM

- 1x Unique Power Supply Input 5V
- 1x Power Supply Output 3.2V for Carrier Board
- 1x Power Supply Output 1.8V for Carrier Board
- 1x Power Supply Output 2.775V for Carrier Board
- Power-ON and RESET input/output
- Onboard RTC functionality

#### OPERATING SYSTEM

- Linux

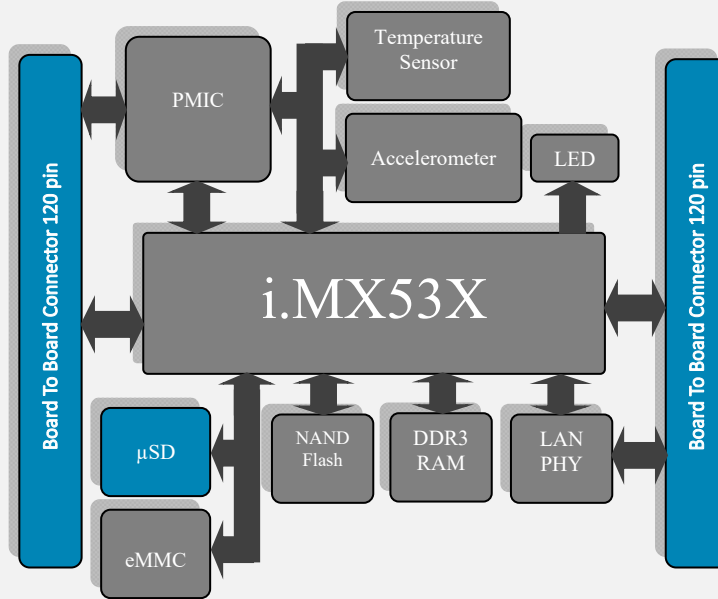
#### TEMPERATURE<sup>2</sup>

- 0 to +70 °C for commercial version
- -40 to +85 °C for industrial version

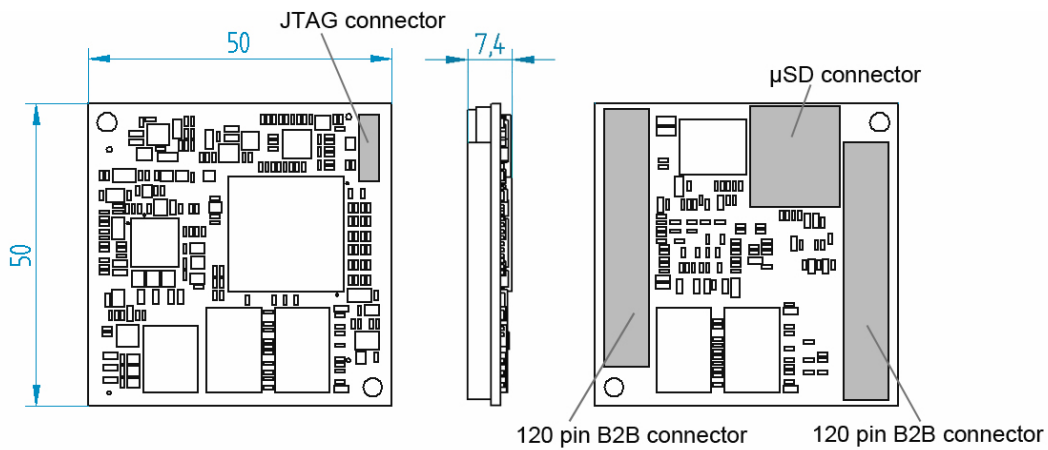
<sup>2</sup>Appropriate cooling measures must be provided.



## BOARD DIAGRAM



## DIMENSIONS



## ORDERING INFORMATION

Processor Part Number	Selector	DDR3	Selector	Memory	Selector	Temperature Range	Selector	Option	Selector
i.MX534 -800MHz	<b>3SM2000_A</b>	<b>256MB</b>	<b>1</b>	None	<b>A</b>	<b>Commercial</b>	<b>1</b>	<b>Without options</b>	<b>.0</b>
<b>i.MX535 -1000MHz</b>	<b>3SM2000_B</b>	512MB	<b>2</b>	<b>Flash 256MB</b>	<b>B</b>	Industrial	<b>2</b>	3-Axis accelerometer	.1
i.MX536 -800MHz	3SM2000_C	1GB	3	Flash 512MB	C			Temperature sensor	.2
i.MX537 -800MHz	3SM2000_D							Jtag connector	.3
								Slot micro SD*	.4
								e-MMC 2GB*	.5

Red color is the default configuration 3SM2000\_B1B1.0

\* mutually exclusive options

Please contact sales department to verify the correct code generated

### Ordering Code Examples 3SM2000\_A1B1

i.MX534 -800MHz	3SM2000_A	256MB	1	Flash 256MB	B	Commercial	1	Default	None
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### Ordering Code Examples 3SM2000\_A2C1.1.2

i.MX534 -800MHz	3SM2000_A	512MB	2	Flash 512MB	C	Commercial	1	3-Axis accelerometer	.1
								Temperature sensor	.2

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