

# DHCOM i.MX6x

## Pluggable, compatible SOM



### TECHNICAL DETAILS

Processor	ARM Cortex-A9 up to 1.2 GHz Solo/DualLite/Dual/Quad
CPU features	2D / 3D graphics accelerator Imaging processing unit
DDR3 DRAM	256 / 512 / 1024 / 2048 Mbyte
SLC-NAND flash	0 / 128 / 256 / 512 / 1024 Mbyte
eMMC flash	4 / 8 / 16 Gbyte
E <sup>2</sup> Prom	128 byte
microSD socket	Available on module
Real-time clock RTC	Available on module
Supply	3.3 or 5.0 VDC / typ. 1.5-4.0 W
Temperature range	-40 to +85 °C / 0 to 70 °C
Dimensions	67.6 x 36.7 x 8.1 mm
Debug interface	JTAG interface on module
BSPs	Linux Android and WinCE (WEC7 & WEC2013)

### SODIMM-200 SOCKET

Bus interface	16 bit address/data, 2 CS
Ethernet 1	10 / 100 Mbit, IEEE 1588
Ethernet 2	-
MMC/SD interface <sup>[2]</sup>	4 bit mode
CAN <sup>[3]</sup>	V2.0B / 1Mbit/s
UART 1 <sup>[4]</sup>	Full Function, up to 5.0 Mbit/s
UART 2 <sup>[4]</sup>	Rx / Tx / Rts / Cts, up to 5.0 Mbit/s
UART 3 <sup>[4]</sup>	Rx / Tx, up to 5.0 Mbit/s
SPI 1	max. 25 MHz
SPI 2	max. 25 MHz
I2C 1	max. 400 kbit
I2C 2	max. 400 kbit
USB host 1	High-Speed
USB host 2	-
USB OTG	High-Speed
CSI (parallel camera) <sup>[5]</sup>	-
Display RGB	Max. 1920 x 1200 pixels, 24 bit
Display LVDS 1 <sup>[1]</sup>	Max. 1366 x 768 pixels @60 fps
Touch	4-wire
I2S <sup>[6]</sup>	1
GPIOs	23 IOs
PWM <sup>[7]</sup>	1, 16 bit
Analog inputs	1, 12 bit SAR converter

### HIGH SPEED SOCKET

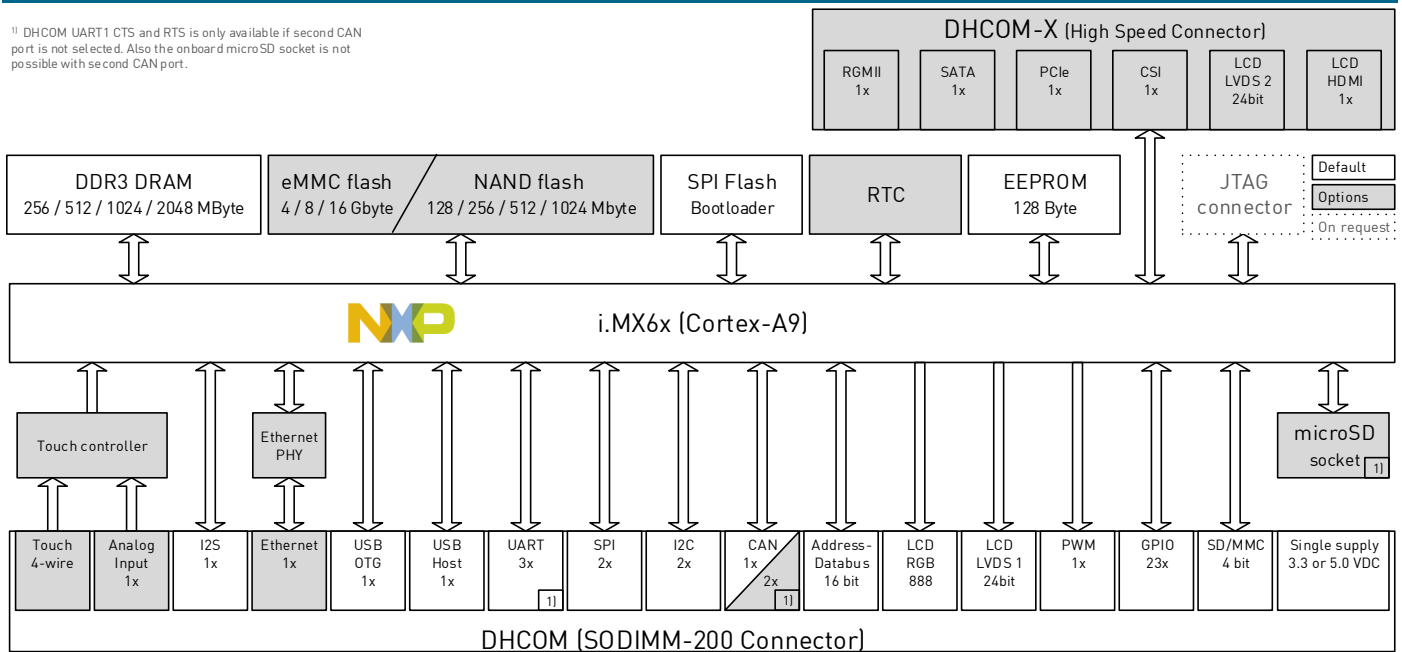
RGMII (Gbit Ethernet)	1
Sata	Serial ATA Rev. 2.5
PCIe	PCIe 2.0 and 1.1 compliant
MIPI CSI-2 (camera)	MIPI D-PHY support, 2-data lanes
Display LVDS 2 <sup>[1]</sup>	Max. 1366 x 768 pixels @60 fps
HDMI	Max. 1080p @60 Hz, HDMI 1.4a

<sup>[1]</sup> The dual channel LVDS interface can support resolutions up to 1920 x 1200 @60 fps. <sup>[2]</sup> Supports up to two SD/MMC ports (Note: Not DHCOM standard compatible). <sup>[3]</sup> Second CAN port available on request. <sup>[4]</sup> Supports up to five UART ports (Note: Not DHCOM standard compatible). <sup>[5]</sup> Camera interface available on request (Note: Not DHCOM standard compatible). <sup>[6]</sup> Supports up to two I2S ports (Note: Not DHCOM standard compatible). <sup>[7]</sup> Supports up to four PWM ports (Note: Not DHCOM standard compatible).

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### BLOCK DIAGRAM

<sup>1)</sup> DHCOM UART1 CTS and RTS is only available if second CAN port is not selected. Also the onboard microSD socket is not possible with second CAN port.



### ORDERING INFORMATION

#### Ordering Configurations: DHCM-CPU-Cxxx-Rxxx[-Fxxxx][-E][-CAN2][-SD][-RTC][-T][-HS][-COATING]-X-01D2

CPU	Solo: i.MX6S, DualLite: i.MX6DL, Dual: i.MX6D, Quad: i.MX6Q
Cxxx	800MHz: C080, 1000MHz: C100, 1200MHz: C120
Rxxx	128MByte: R012, 256MByte: R025, 512MByte: R051, 1024MByte: R102, 2048MByte: R204
X	Commercial temperature range (0°C - 70°C): C, Industrial temperature range (-25°C/-40°C - 85°C): I, Extended commercial temperature range (-20°C - 85°C): EC
01D2	DHCOM Revision, SODIMM200 socket

#### Options

[-Fxxxx]	128MByte NAND: F0012, 256MByte NAND: F0025, 512MByte NAND: F0051, 1024MByte NAND: F0102, 4096MByte eMMC: F0409, 8192MByte eMMC: F0819, 16384MByte eMMC: F1638
[-E]	Ethernet
[-CAN2]	Second CAN port available <b>Note:</b> With second CAN port the option -SD is not possible.
[-SD]	microSD socket
[-RTC]	Low power temperature compensated real time clock (instead of CPU internal RTC)
[-T]	Resistive touch controller
[-HS]	High speed interface connector
[-COATING]	PCB and component conformal coating

Item number	Model [other configurations on request]	Product description
HI00041	DHCM-i.MX6DL-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2	DHCOM i.MX6 DualLite 800MHz, 1GB DRAM, 8GB eMMC flash, ethernet, microSD slot, RTC, res. touch, high speed connector, industrial temp. range
HI00045	DHCM-i.MX6Q-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2	DHCOM i.MX6 Quad 800MHz, 1GB DRAM, 8GB eMMC flash, ethernet, microSD slot, RTC, res. Touch, high speed connector, industrial temp. range
HI00046	DHCM-i.MX6S-C080-R051-F0819-E-SD-RTC-T-HS-I-01D2	DHCOM i.MX6 Solo 800MHz, 512MB DRAM, 8GB eMMC flash, ethernet, microSD slot, RTC, res. Touch, high speed connector, industrial temp. range