

DHCOM i.MX6x

Pluggable, compatible SOM



Cortex
Intelligent Processors by ARM

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 [1]	Max. 1366 x 768 pixels @60 fps
HDMI	Max. 1080p @60 Hz, HDMI 1.4a

TECHNICAL DETAILS

Processor	ARM Cortex-A9 up to 1.2 GHz Solo/DualLite/Dual/Quad
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 ² 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)

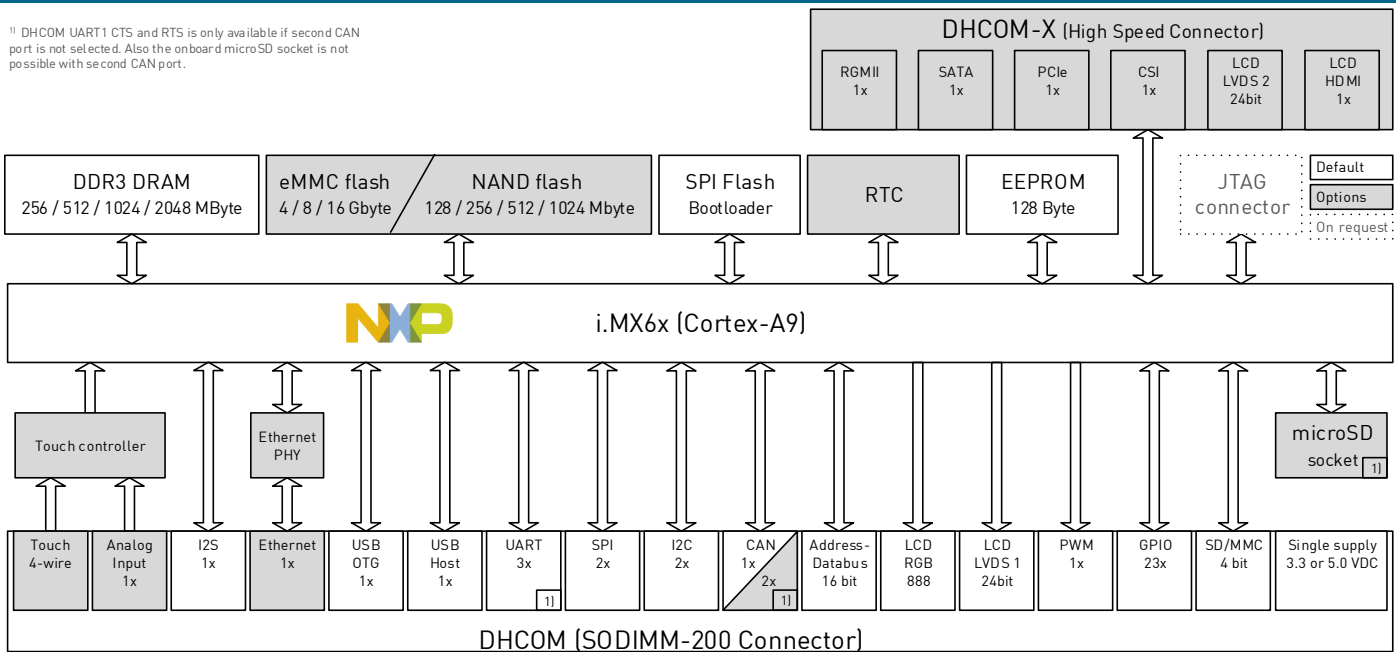
SODIMM-200 SOCKET

Bus interface	16 bit address/data, 2 CS
Ethernet 1	10 / 100 Mbit, IEEE 1588
Ethernet 2	-
MMC/SD interface [2]	4 bit mode
CAN [3]	V2.0B / 1 Mbit/s
UART 1 [4]	Full Function, up to 5.0 Mbit/s
UART 2 [4]	Rx / Tx / Rts / Cts, up to 5.0 Mbit/s
UART 3 [4]	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) [5]	-
Display RGB	Max. 1920 x 1200 pixels, 24 bit
Display LVDS 1 [1]	Max. 1366 x 768 pixels @60 fps
Touch	4-wire
I2S [6]	1
GPIOs	23 IOs
PWM [7]	1x 16 bit
Analog inputs	1x 12 bit SAR converter

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

BLOCK DIAGRAM

¹⁾ 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	800 MHz: C080, 1000 MHz: C100, 1200 MHz: C120
Rxxx	128 Mbyte: R012, 256 Mbyte: R025, 512 Mbyte: R051, 1024 Mbyte: R102, 2048 Mbyte: 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 Note: Industrial temp. range for eMMC version is -25 °C -85 °C. Please contact us for -40 °C - 85 °C version.
01D2	DHCOM Revision, SODIMM200 socket

Options

[-Fxxxx]	128 Mbyte NAND: F0012, 256 Mbyte NAND: F0025, 512 Mbyte NAND: F0051, 1024 Mbyte NAND: F0102, 4096 Mbyte eMMC: F0409, 8192 Mbyte eMMC: F0819, 16384 Mbyte eMMC: F1638
[-E]	Ethernet
[-CAN2]	Second CAN port available Note: 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 800 MHz, 1 Gbyte DRAM, 8 Gbyte eMMC flash, ethernet, microSD slot, RTC, res. touch, high speed connector, industrial temp. range
HI00045	DHCM-iMX6Q-C080-R102-F0819-E-SD-RTC-T-HS-I-01D2	DHCOM i.MX6 Quad 800 MHz, 1 Gbyte DRAM, 8 Gbyte eMMC flash, ethernet, microSD slot, RTC, res. Touch, high speed connector, industrial temp. range
HI00046	DHCM-iMX6S-C080-R051-F0819-E-SD-RTC-T-HS-I-01D2	DHCOM i.MX6 Solo 800 MHz, 512 Mbyte DRAM, 8 Gbyte eMMC flash, ethernet, microSD slot, RTC, res. Touch, high speed connector, industrial temp. range