

MCIMX6D6AVT10ADR Information

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General Information

Parameter	Value
Part Number	MCIMX6D6AVT10ADR
Description	i.MX 6 series 32-bit MPU, Dual ARM Cortex-A9 core, 1GHz, FCBGA 624
Product Line	GZAMX6DL
PTI	MVMT
Material Type	Tested Packaged Device
Life Cycle Description (code)	PRODUCT RAPID GROWTH
Status	Active
Application/Qualification Tier	AUTO; >=10 YEARS APPLICATION LIFE

Package Information

Parameter	Value
Package Type and Termination Count	FCPBGA 624
Package Description and Mechanical Drawing	FC-PBGA 624 21*21*2 P0.8

Device Weight(g)	3.32360
Package Length (nominal)(mm)	21.000
Package Width (nominal)(mm)	21.000
Package Thickness (nominal)(mm)	2.000
Tape & Reel	Yes

Environmental and Compliance Information

Parameter	Value
Pb-Free	
RoHS Compliant	
Halogen Free	Yes
Material Composition Declaration (MCD)	Download MCD Report  Download MCD Report 
RoHS Certificate of Analysis (CoA)	Contact Us
2nd Level Interconnect	e1
Moisture Sensitivity Level (MSL)	3
Floor Life	168 HOURS
Peak Package Body Temperature (PPT)(°C)	260
Maximum Time at Peak Temperature (s)	40
Number of Reflow Cycles	3
REACH SVHC	NXP REACH Statement

Manufacturing Information

Parameter	Value
Micron Size(μm)	.04

Ordering Information

Parameter	Value
Minimum Package Quantity (MPQ)	500
MPQ Container	REEL
Exempt from Minimum Delivery Value	Yes
Preferred Order Quantity (POQ)	500
POQ Container	REEL
Leadtime (weeks)	10
Export Control Classification Number (US)	5A992
Harmonized Tariff (US) Disclaimer	8542.31.0000
CCATS Document	-
ENC Status	-
Other Trade Compliance Documents	-
Budgetary Price excluding tax(US\$) Change Currency	1000 @ US\$32.65 each
Order	

Product/Process Change Notice (PCN)

Number	Type	Title	Issue Date	Effectivity Date
16354	Product Bulletin	i.MX 6Quad/6Dual Reference Manual Update	01 Aug 2014	02 Aug 2014
16355	Product Bulletin	i.MX 6Quad/6Dual Errata Document Update	01 Aug 2014	02 Aug 2014
16118	Product Bulletin	I.MX 6QUAD/6DUAL DATASHEET UPDATE	01 May 2014	02 May 2014

15997	Product Bulletin	I.MX6DQ Rev 1.3 Production Release	28 Jan 2014	29 Jan 2014
15968	Product Bulletin	I.MX 6DUAL6QUAD DOCUMENTATION UPDATE	11 Dec 2013	12 Dec 2013

Operating Characteristics

Parameter	Value
Additional Features	Temperature Sensor Tamper Detect SATA 2.0 PCIe 2.0 1x Lane MLB150 (Media Local Bus) LVDS
Additional security features	A-HAB ARM TrustZone Cryptographic accelerator NIST approved RNG Secure RAM
Android	IMX6_KK443_200_ANDROID
Audio-specific modules	Audio Accelerator ESAI
Boot ROM (KB)	96
Bus Frequency (Max) (MHz)	533
Cache (KB)	32
Camera interfaces	2x 20-bit parallel camera port 4-lane MIPI-CSI2
CAN	2x FlexCAN
CAN Type	FlexCAN

Core: Number of cores (Spec)	2
Core: Type	ARM Cortex-A9
Debug & Trace	JTAG
Display interfaces	1x 24-bit RGB 2x LVDS 2x MIPI-DSI HDMI 1.4
Display resolution @60Hz (max)	4x WXGA
DRAM frequency (max)(MHz)	533
ECSPI	5
ESAI	1
Ethernet	1x 1Gbps + IEEE 1588
Ethernet Type	1 Gbps + IEEE 1588
External Bus Interface	NAND NOR WEIM
External Bus Width (bit)	64
External memory support	16/32-bit NOR 2x32-bit LPDDR2 40-bit ECC 64-bit DDR3 64-bit DDR3L 8-bit managed NAND ONFI2.2
External Memory Supported	DDR3 DDR3L FLASH LPDDR2

External storage support	1x SDXC 3x SD/MMC 4.4
External Storage Support	MMC SD
GPU 2D (BLIT)	Vivante GC320 (600Mpx/s)
GPU 2D (Vector Graphics)	Vivante GC355 (300Mpx/s)
GPU 3D	Vivante GC2000 (176Mtri/s)
HW Dev. Tools	MCIMX6QAICPU1
HW Video Encoder / Decoder	HD1080p30 Video Encode HD1080p30 Video Transcode HD1080p60 Video Decode
I2C	3
I2S	3
Integrated power management	Partial PMU integration (LDO)
Internal RAM (KB)	256
Junction Temperature (Max) (°C)	125
Junction Temperature (Min) (°C)	-40
L2 Cache (Max) (KB)	1000
Linux	L3.10.53_1.1.0
Main CPU: L2 Cache (max) (KB)	32/32
Main CPU: L2 Cache (max) (KB)	1024
Main CPU: Number of cores	2
Main CPU: Operating frequency (max) (MHz)	1000
Main CPU: Type	ARM Cortex-A9
Media Local Bus (MLB)	25/50/150

Multimedia	Camera Interface
On-chip SRAM (KB)	256
Operating Frequency (Max) (MHz)	1000
Package dimension (LxWxZ) (mm)	21x21x2
Package pitch (mm)	0.8
Package Type	FCPBGA
PCIe 2.0 (# Lane)	1
Pin compatible i.MX families	i.MX 6Quad i.MX 6DualLite i.MX 6Solo
PWM (bit)	16
PWM (ch)	4
PWM modules (resolution)	4 (16-bit)
Recommended PMIC	MMPF0100
Sample Exception Availability	N
SATA	S-ATA II (3Gbps)
SDIO	1
SPI	5
Supported graphics libraries	OpenCL OpenGL ES 1.1 OpenGL ES 2.0 OpenGL ES 3.0 OpenVG 1.1
Tamper detection	Yes
Temperature sensor	Yes

General Purpose Timer

Timer type	Periodic Interrupt Timer Watchdog Timer
Timers	2
UART	5
USB	4
USB features	1x HS USB 2.0 Host + PHY 1x HS USB 2.0 OTG + PHY 2x HS USB 2.0 Host + HSIC
USB features	Integrated PHY USB 2.0 USB OTG HS
Video/Display features	HD1080p Video Decode HD1080p Video Encode HD1080p Video Transcode HDMI 1.4 Image Pre and Post Processor LCD Controller OpenCL OpenGL ES 1.1 OpenGL ES 2.0 OpenVG 1.1
Watchdog	2

Reliability Data Lookup