



Image may be representation.  
See specifications for product details.



## MC9S12XDT512CAA

Manufacturer Part Number	<b>MC9S12XDT512CAA</b>
Manufacturer	<b>NXP Semiconductors</b>
Allelco Part Number	32D-MC9S12XDT512CAA
ECAD Model	Request Free CAD Models
Parts Description	IC MCU 16BIT 512KB FLASH 80QFP
Package	80-QFP
Data sheet	<b>MC9S12XDP512 Datasheet.pdf</b>
RoHs Status	<b>ROHS3 Compliant</b>

**Get a Quote**

MC9S12XDT512CAA - NXP USA Inc..New Original in Stock. Download Linear Technology MC9S12XDT512CAA datasheet/specifications on AllelcoElec.com.  
Request a quote for MC9S12XDT512CAA, please send us email: [info@allelco.com](mailto:info@allelco.com)

### Specifications

MC9S12XDT512CAA Tech Specifications  
MC9S12XDT512CAA - NXP USA Inc. technical specifications, attributes, parameters

Product Attribute	Attribute Value	Product Attribute	Attribute Value
Manufacturer	NXP Semiconductors	Oscillator Type	External
Voltage - Supply (Vcc/Vdd)	2.35V ~ 5.5V	Operating Temperature	-40°C ~ 85°C (TA)
Supplier Device Package	80-QFP (14x14)	Number of I/O	59
Speed	80MHz	Mounting Type	Surface Mount
Series	HCS12X	EEPROM Size	4K x 8
RAM Size	20K x 8	Data Converters	A/D 8x10b
Program Memory Type	FLASH	Core Size	16-Bit
Program Memory Size	512KB (512K x 8)	Core Processor	HCS12X
Peripherals	LVD, POR, PWM, WDT	Connectivity	CANbus, EBI/EMI, I <sup>2</sup> C, IrDA, LINbus, SCI, SPI
Package / Case	80-QFP	Base Product Number	MC9S12
Package	Tray		

### Parts with Similar Specifications

The three parts on the right have similar specifications to NXP USA Inc. MC9S12XDT512CAA

Product Attribute				
Part Number	MC9S12XDT512CAA	<b>MC9S12XDT512MAG</b>	<b>MC9S12XDT256MAL</b>	<b>MC9S12XEG128MAL</b>
Manufacturer	NXP USA Inc.	NXP USA Inc.	NXP USA Inc.	NXP USA Inc.
Program Memory Type	FLASH	FLASH	FLASH	FLASH
Speed	80MHz	80MHz	80MHz	50MHz
Package	Tray	Tray	Tray	Tray
Supplier Device Package	80-QFP (14x14)	144-LQFP (20x20)	112-LQFP (20x20)	112-LQFP (20x20)
Number of I/O	59	119	91	91
Voltage - Supply (Vcc/Vdd)	2.35V ~ 5.5V	2.35V ~ 5.5V	2.35V ~ 5.5V	1.72V ~ 5.5V
Core Processor	HCS12X	HCS12X	HCS12X	HCS12X
Peripherals	LVD, POR, PWM, WDT	LVD, POR, PWM, WDT	LVD, POR, PWM, WDT	LVD, POR, PWM, WDT
Data Converters	A/D 8x10b	A/D 24x10b	A/D 16x10b	A/D 16x12b
Base Product Number	MC9S12	MC9S12	MC9S12	MC9S12
EEPROM Size	4K x 8	4K x 8	4K x 8	2K x 8
Series	HCS12X	HCS12X	HCS12X	HCS12X
Oscillator Type	External	External	External	External
Mounting Type	Surface Mount	Surface Mount	Surface Mount	Surface Mount
Core Size	16-Bit	16-Bit	16-Bit	16-Bit
Connectivity	CANbus, EBI/EMI, I <sup>2</sup> C, IrDA, LINbus, SCI, SPI	CANbus, EBI/EMI, I <sup>2</sup> C, IrDA, LINbus, SCI, SPI	CANbus, EBI/EMI, I <sup>2</sup> C, IrDA, LINbus, SCI, SPI	CANbus, EBI/EMI, I <sup>2</sup> C, IrDA, SCI, SPI
Operating Temperature	-40°C ~ 85°C (TA)	-40°C ~ 125°C (TA)	-40°C ~ 125°C (TA)	-40°C ~ 125°C (TA)
RAM Size	20K x 8	20K x 8	16K x 8	12K x 8
Program Memory Size	512KB (512K x 8)	512KB (512K x 8)	256KB (256K x 8)	128KB (128K x 8)
Package / Case	80-QFP	144-LQFP	112-LQFP	112-LQFP

### MC9S12XDT512CAA Datasheet PDF

Download MC9S12XDT512CAA pdf datasheets and NXP USA Inc. documentation for MC9S12XDT512CAA - NXP USA Inc..

#### Datasheets

[MC9S12XDP512 Datasheet.pdf](#)


#### PCN Packaging

[All Dev Label Update 15/Dec/2020.pdf](#)

[Mult Dev Pkg Seal 15/Dec/2020.pdf](#)


## Environmental Information

 NXP USA Inc REACH.pdf

 NXP USA Inc RoHS Cert.pdf

## PCN Design/Specification

 Mult Dev 25/May/2020.pdf

 Trace Marking Removal 20/Jun/2019.pdf

## Customers Also Interested in

### Recommended Products



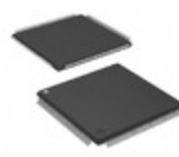
**MC9S12XEG384CAA**

FREESCAAL



**MC9S12XEG128VAA**

Freescal / NXP Semiconductors



**MC9S12XDT512MAG**

NXP USA Inc.  
IC MCU 16BIT 512KB FLASH  
144LQFP



**MC9S12XDT256MAL**

NXP USA Inc.  
IC MCU 16BIT 256KB FLASH  
112LQFP



**MC9S12XDT384CAG  
0L15Y**

Freescal / NXP Semiconductors



**MC9S12XDT384CAL**

Freescal / NXP Semiconductors



**MC9S12XEG128MAL**

NXP USA Inc.  
IC MCU 16BIT 128KB FLASH  
112LQFP



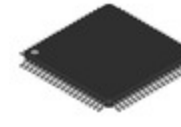
**MC9S12XDT384CAA**

Freescal / NXP Semiconductors



**MC9S12XEG128MAA**

NXP USA Inc.  
IC MCU 16BIT 128KB FLASH 80QFP



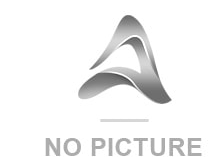
**MC9S12XDT512CAA**

Freescal Semiconductor  
IC MCU 16BIT 512KB FLASH 80QFP



**MC9S12XDT256VAL**

NXP USA Inc.  
IC MCU 16BIT 256KB FLASH  
112LQFP



**MC9S12XDT512CAAE**

FREESC



**MC9S12XDT384MAL**

Freescal / NXP Semiconductors



**MC9S12XDT384VAL**

Freescal / NXP Semiconductors



**MC9S12XEG128MAA**

Freescal Semiconductor  
IC MCU 16BIT 128KB FLASH 80QFP



**MC9S12XDT256VAL**

Freescal Semiconductor  
IC MCU 16BIT 256KB FLASH  
112LQFP



**MC9S12XDT256MAG**

Freescal Semiconductor  
IC MCU 16BIT 256KB FLASH  
144LQFP



**MC9S12XEG384CAG**

Freescal / NXP Semiconductors

## Shipment

### Delivery Time

In-stock items can be shipped within 24 hours. Some parts will be arranged for delivery within 1-2 days from the date all items arrive at our warehouse. And Allelco ships order once a day at about 17:00, except Sunday. Once the goods are shipped, the estimated delivery time depends on the shipping methods and Delivery destination. The table below shows are the logistic time for some common countries.

### Delivery Cost

> Use your express account for shipment if you have one.

> Use our account for the shipment. Refer to the table below for the approximate charges.

(Different time frame / countries / package size has different price.)

### Delivery Method

> Global Common Shipment by DHL / UPS / FedEx / TNT / EMS / SF we support.

> Others more shipping ways, please get in touch with your customer manager.

Common Countries Logistic Time Reference

Region	Country	Logistic Time(Day)
America	United States	5
	Brazil	7
Europe	Germany	5
	United Kingdom	4
	Italy	5
Oceania	Australia	6
	New Zealand	7
Asia	India	6
	Japan	7
Middle East	Israel	6

DHL & FedEx Shipment Charges Reference

Shipment charges(KG)	Reference DHL(USD\$)
0.00kg-1.00kg	USD\$60.00
1.00kg-2.00kg	USD\$70.00
2.00kg-3.00kg	USD\$80.00

Note: The above table is for reference only. There may have some data bias for the uncontrollable factors.

Contact us if you have any questions.

## Payment Support

The payment method can be chosen from the methods shown below:

Wire Transfer (T/T, Bank Transfer), Western Union, Credit card, PayPal.



## Your Faithful Supply Chain Partner -



Efficient Supply Management



Cost-Saving Procurement



Fast Sourcing & Delivery

Contact us if you have any questions.



Phone

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Email

info@allelco.com

## Certifications & Memberships



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