

Image may be representation.  
See specifications for product details.



## AT90USB647-MU

Manufacturer Part Number	<b>AT90USB647-MU</b>
Manufacturer	<b>Microchip Technology</b>
Allelco Part Number	32D-AT90USB647-MU
ECAD Model	PCB Symbol, Footprint & 3D Model
Parts Description	IC MCU 8BIT 64KB FLASH 64QFN
Package	64-VFQFN Exposed Pad
Data sheet	<a href="#">AT90USB64x,128x Complete.pdf</a> <a href="#">AT90USB64x,128x Summary.pdf</a>
RoHs Status	ROHS3 Compliant

**Get a Quote**

AT90USB647-MU - Microchip Technology. New Original in Stock. Download Linear Technology AT90USB647-MU datasheet/specifications on AllelcoElec.com. Request a quote for AT90USB647-MU, please send us email: [info@allelco.com](mailto:info@allelco.com)

## Specifications

AT90USB647-MU Tech Specifications

AT90USB647-MU - Microchip Technology technical specifications, attributes, parameters

Product Attribute	Attribute Value	Product Attribute	Attribute Value
Manufacturer	Microchip Technology	Oscillator Type	Internal
Voltage - Supply (Vcc/Vdd)	2.7V ~ 5.5V	Operating Temperature	-40°C ~ 85°C (TA)
Supplier Device Package	64-QFN (9x9)	Number of I/O	48
Speed	16MHz	Mounting Type	Surface Mount
Series	AVR® 90USB	EEPROM Size	2K x 8
RAM Size	4K x 8	Data Converters	A/D 8x10b
Program Memory Type	FLASH	Core Size	8-Bit
Program Memory Size	64KB (64K x 8)	Core Processor	AVR
Peripherals	Brown-out Detect/Reset, POR, PWM, WDT	Connectivity	EBI/EMI, I <sup>2</sup> C, SPI, UART/USART, USB OTG
Package / Case	64-VFQFN Exposed Pad	Base Product Number	AT90USB647
Package	Tray		

## Parts with Similar Specifications

The three parts on the right have similar specifications to Microchip Technology AT90USB647-MU

Product Attribute				
Part Number	AT90USB647-MU	<a href="#">AT90USB646-AU</a>	<a href="#">AT90USB647-AU</a>	<a href="#">AT90USB82-16MU</a>
Manufacturer	Microchip Technology	Microchip Technology	Microchip Technology	Microchip Technology
Core Processor	AVR	AVR	AVR	AVR
Voltage - Supply (Vcc/Vdd)	2.7V ~ 5.5V	2.7V ~ 5.5V	2.7V ~ 5.5V	2.7V ~ 5.5V
Core Size	8-Bit	8-Bit	8-Bit	8-Bit
Program Memory Size	64KB (64K x 8)	64KB (64K x 8)	64KB (64K x 8)	8KB (8K x 8)
Mounting Type	Surface Mount	Surface Mount	Surface Mount	Surface Mount
Oscillator Type	Internal	Internal	Internal	Internal
Data Converters	A/D 8x10b	A/D 8x10b	A/D 8x10b	-
Number of I/O	48	48	48	22
EEPROM Size	2K x 8	2K x 8	2K x 8	512 x 8
Connectivity	EBI/EMI, I <sup>2</sup> C, SPI, UART/USART, USB OTG	EBI/EMI, I <sup>2</sup> C, SPI, UART/USART, USB	EBI/EMI, I <sup>2</sup> C, SPI, UART/USART, USB OTG	EBI/EMI, PS/2, SPI, UART/USART, USB
Peripherals	Brown-out Detect/Reset, POR, PWM, WDT	Brown-out Detect/Reset, POR, PWM, WDT	Brown-out Detect/Reset, POR, PWM, WDT	Brown-out Detect/Reset, POR, PWM, WDT
Base Product Number	AT90USB647	AT90USB646	AT90USB647	AT90USB82
Operating Temperature	-40°C ~ 85°C (TA)	-40°C ~ 85°C (TA)	-40°C ~ 85°C (TA)	-40°C ~ 85°C (TA)
RAM Size	4K x 8	4K x 8	4K x 8	512 x 8
Package / Case	64-VFQFN Exposed Pad	64-TQFP	64-TQFP	32-VFQFN Exposed Pad
Program Memory Type	FLASH	FLASH	FLASH	FLASH
Supplier Device Package	64-QFN (9x9)	64-TQFP (14x14)	64-TQFP (14x14)	32-VQFN (5x5)
Package	Tray	Tray	Tray	Tray
Series	AVR® 90USB	AVR® 90USB	AVR® 90USB	AVR® 90USB
Speed	16MHz	16MHz	16MHz	16MHz

## AT90USB647-MU Datasheet PDF

Download AT90USB647-MU pdf datasheets and Microchip Technology documentation for AT90USB647-MU - Microchip Technology.

### Datasheets

[AT90USB64x,128x Complete.pdf](#)

[AT90USB64x,128x Summary.pdf](#)

### PCN Packaging

[2.73KHz.pdf](#)

## PCN Design/Specification





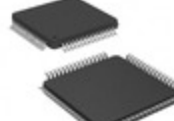






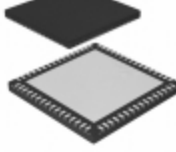




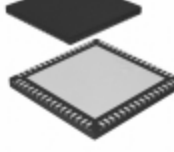

 Cylindrical Battery Holders.pdf

## PCN Assembly/Origin

 2.73KHz.pdf

## Customers Also Interested in

### Recommended Products

					
<b>AT90USB646-AU</b> Microchip Technology IC MCU 8BIT 64KB FLASH 64TQFP	<b>AT9110</b> AT NO PICTURE	<b>AT90USB64-15MU</b> Atmel (Microchip Technology)	<b>AT90USB162-16MES</b> Atmel (Microchip Technology)	<b>AT90USB647-AU</b> Microchip Technology IC MCU 8BIT 64KB FLASH 64TQFP	<b>AT9110AT</b> Analog Technologies NO PICTURE
					
<b>AT90VC8544-4AAD</b> Atmel (Microchip Technology)	<b>AT90USB82-16MU</b> Microchip Technology IC MCU 8BIT 8KB FLASH 32VQFN	<b>AT90WM3-16MQ</b> Atmel (Microchip Technology)	<b>AT90USB162EAW-16MU</b> Atmel (Microchip Technology)	<b>AT90USB647-AUR</b> Microchip Technology IC MCU 8BIT 64KB FLASH 64TQFP	<b>AT90USB646-MU</b> Microchip Technology IC MCU 8BIT 64KB FLASH 64QFN
					
<b>AT90VC8534-1AC</b> Atmel (Microchip Technology)	<b>AT90USB162-16MU</b> Microchip Technology IC MCU 8BIT 16KB FLASH 32VQFN	<b>AT90VC8544-4AAX</b> Atmel (Microchip Technology)	<b>AT90VC8544-4AAL</b> Atmel (Microchip Technology)	<b>AT90USB646-MUR</b> Microchip Technology IC MCU 8BIT 64KB FLASH 64QFN	<b>AT90USB64-16MU</b> Atmel (Microchip Technology)

## 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 -

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