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## Project Inspection Report

Company : NA  
Address : N/A  
Sample Name : STM32F103RDT6  
Manufacture : ST  
Date Code : N/A  
Package Type : LQFP-64  
Sample Number : 494pcs  
Check Number : 494pcs  
Date of Received : 09/07/2021  
Date of Tested : 10:00/09/08/2021 ~ 16:30/09/08/2021

### WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

**Inspected by Engineer**  
**Yoo**

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**Reviewed by Project Manager**  
**Lucy**

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### **Note:**

1. This report will be invalid if reproduced in whole or in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used separately.
3. This report is only valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.
5. This report is only responsible for the samples tested.



## INCEL Electronic Component Center Laboratory

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Dis. Shenzhen China  
Tel: 0755-83762185      Email:engineer@iclabcn.com



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### Items test

- External visual inspection
- Pin Correlation Test
- Programming test
- Solder ability Analysis
- Radiography (X-ray)
- ROHS test
- Key Functional Testing (KFT)
- Baking
- Tape and Reel
- Internal visual inspection

### Methods & Equipment

#### 1.1 Applicable Standard

- GB/T 17574-1998 IV 3-6

#### 1.2 Optical Microscope

- Equipment Spec.:  
Top view: FINIAL Hi-scope System SEZ-260: X7 ~ X45

#### 1.3 Functional testing Equipment

- SUPERPOR/6100N:  
Support numerous (over 10,000) types of devices, including PROM, E/EPROM, PLD and MCU from more than 150 manufacturers.  
Device insertion test (48 pins or less) to detect defective chips, improperly inserted devices and pins of poor contact (model dependent)

#### 1.4 Testing environment

- Ambient temperature: 25±5°C    Relative humidity: 45%-65%RH

#### 1.5 Testing base

- [ST STM32F103RDT6]:  
<https://www.semiee.com/file/ST/ST-STM32F103RD.pdf>

### Analysis Summary



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## Programming test Results:

Programming test	Result:
Total quantity tested:	494pcs
Total quantity passed:	488pcs
Total quantity failed:	6pcs
Note:	488 devices passed the programming test, 5 devices has no respond, and 1 devices has failed to verify.

Programming test Results:	
Tested Parameters	Result
Pin continuity	5Pcs Failed
ID Check	Pass
Erase	Pass
Program	Pass
Verify	1Pcs Failed
Erase	Pass
Blank Check	Pass

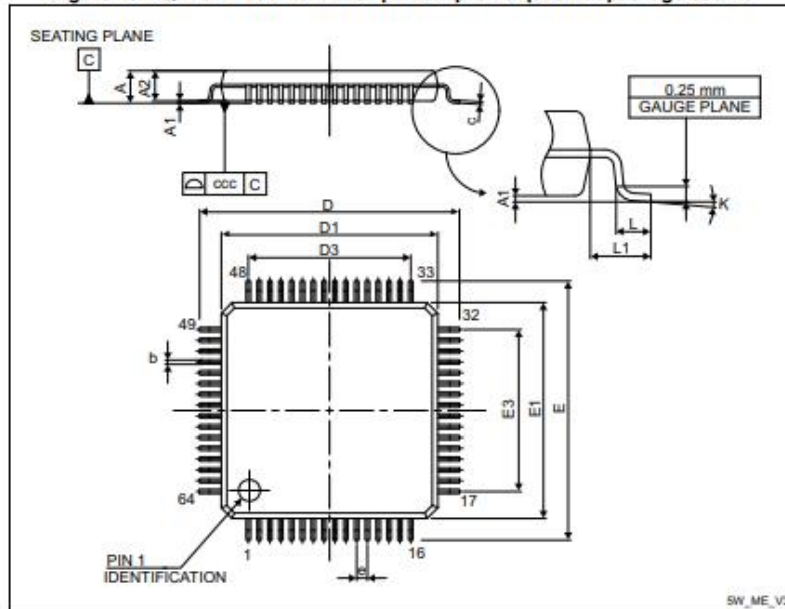
# 1. Device Description:

The STM32F103xC, STM32F103xD and STM32F103xE performance line family incorporates the high-performance Arm® Cortex®-M3 32-bit RISC core operating at a 72 MHz frequency, high-speed embedded memories (Flash memory up to 512 Kbytes and SRAM up to 64 Kbytes), and an extensive range of enhanced I/Os and peripherals connected to two APB buses.

# 2. Package dimensions:

## 6.6 LQFP64 package information

Figure 76. LQFP64 – 10 x 10 mm 64 pin low-profile quad flat package outline



1. Drawing is not in scale.

Table 73. LQFP64 – 10 x 10 mm 64 pin low-profile quad flat package mechanical data

Symbol	millimeters			inches <sup>(1)</sup>		
	Min	Typ	Max	Min	Typ	Max
A	-	-	1.600	-	-	0.0630
A1	0.050	-	0.150	0.0020	-	0.0059
A2	1.350	1.400	1.450	0.0531	0.0551	0.0571
b	0.170	0.220	0.270	0.0067	0.0087	0.0106
c	0.090	-	0.200	0.0035	-	0.0079
D	-	12.000	-	-	0.4724	-
D1	-	10.000	-	-	0.3937	-
D3	-	7.500	-	-	0.2953	-
E	-	12.000	-	-	0.4724	-
E1	-	10.000	-	-	0.3937	-



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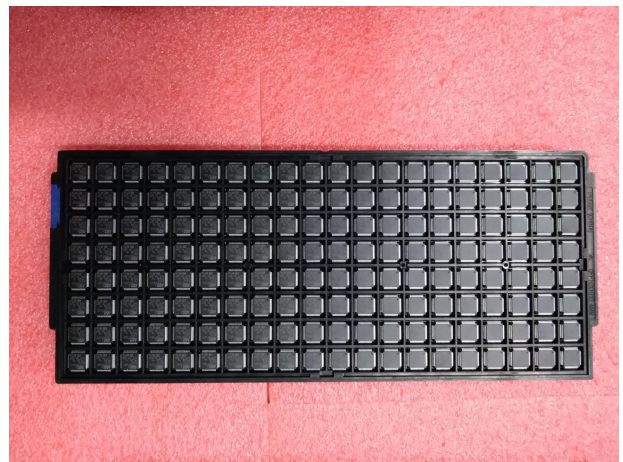
## 3. Receiving Inspection:

Gross Weight:	1000g	Parts Total	494PCS
Number Of Boxes	N/A	Intact Label	Non Present
Package type	Tray	Moisture protection	Non Present
MSL	N/A	ESD protection	Non Present

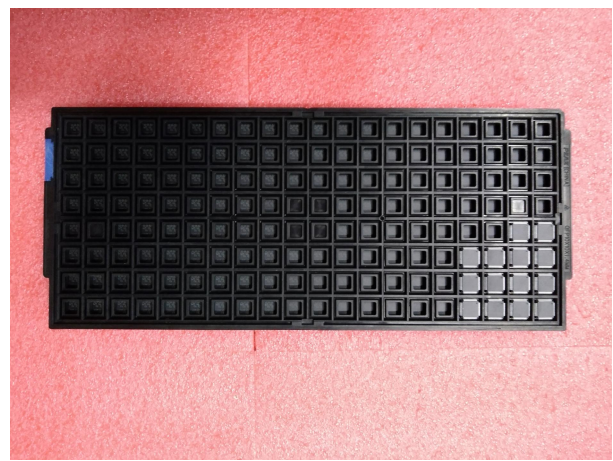
Received View-1



Received View-2



Received View-3





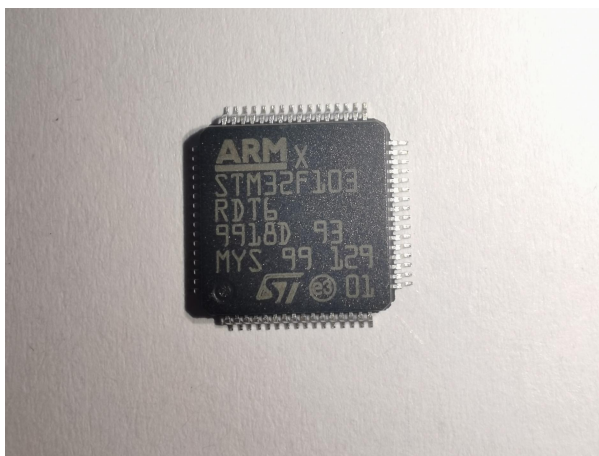
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## 4. Programming test:

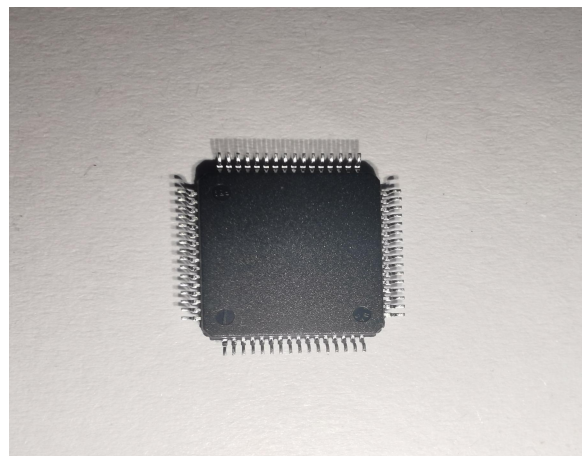
Devices were tested for the followings using Xeltek platform at 25°C:

- Pin continuity: Wrong chip insertion check. Prevent chips from accidental damage.
- ID Check: Device ID is the code read from the chip to identify the manufacturer and the device type. If the device ID is unmatched, an error will occur.
- Erase: Erase the chip to blank state. This operation can only be executed with the chip that can be erased electrically.
- Program: Devices are programmed with random data.
- Verify: The function compares the content of the buffer to that of the chip. If there is any discrepancy, verification will cease and failure message will be displayed. Only the chips that pass verification can be recognized as chips being programmed correctly.
- Erase: Erase the chip to blank state. This operation can only be executed with the chip that can be erased electrically.
- Blank Check: Ensure no program on device.

Top



Bottom





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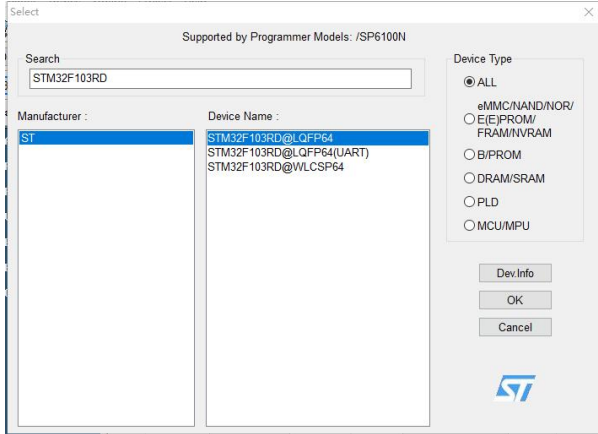
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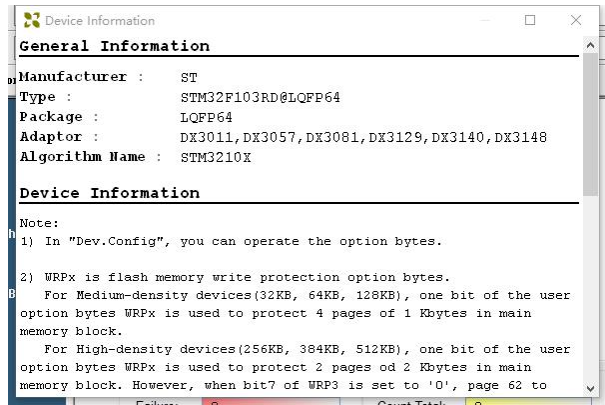


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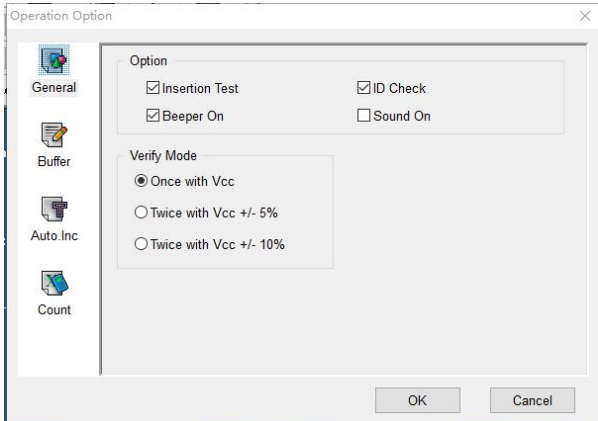
## Select Parts



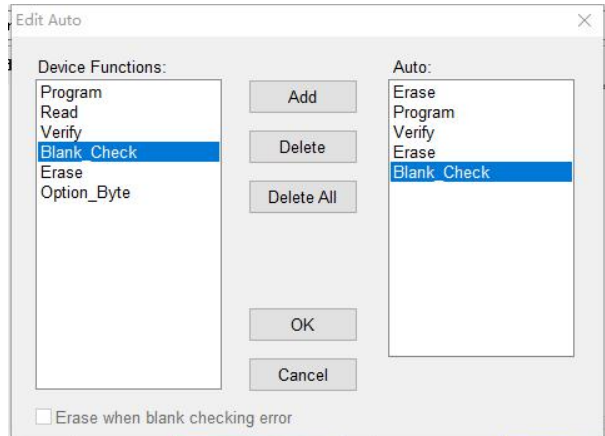
## Device Information



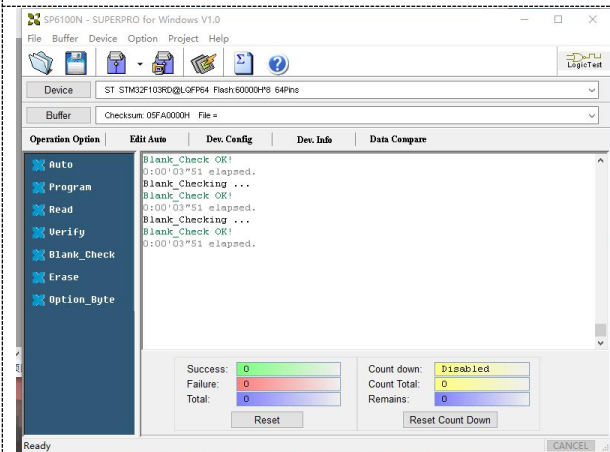
## Operation Option



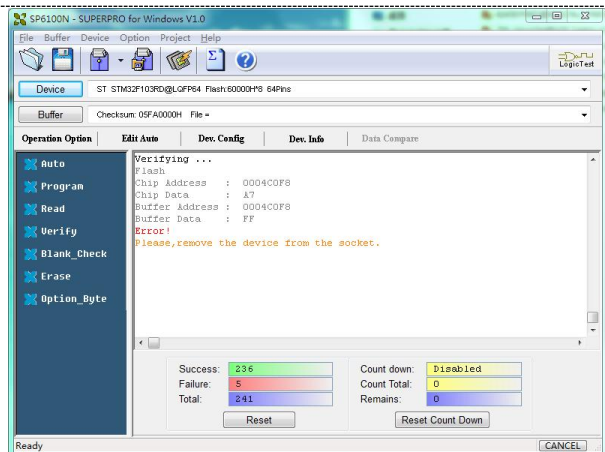
## Edit Auto



## Test Result (Pass)



## Verify (Fail)





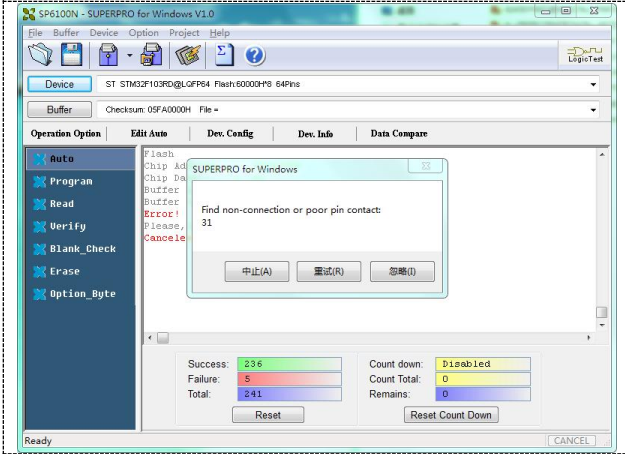
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## No Reaction (Fail)



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**END**





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