

# How to Certify an Integrated Device

Revision 1.2

May 2020

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#### 1.0 General

## 1.1 Purpose

The purpose of this document is to describe the process to obtain PTCRB certification for an integrated device. This process is often used by vendors of IoT devices to get their products certified.

The PTCRB certification program provides a streamlined process for certifying devices that incorporate fully certified wireless modules ("integrated devices"), providing an efficient and low-cost pathway for certification of IoT devices.

#### 1.2 What is PTCRB Certification?

PTCRB certification demonstrates a device's compliance to international wireless standards for 4G and 5G network interoperability. Many wireless operators in North America require devices accessing their network to obtain this certification. Without PTCRB certification, vendors run the risk that their devices will perform poorly on these networks.

CTIA Certification is the administrator for the PTCRB certification process and for the allocation of PTCRB IMEI TACs.



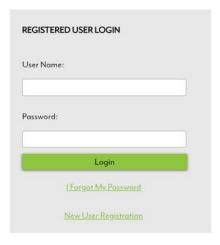
## 2.0 Requesting Access to the PTCRB Member Website

To get access to the PTCRB member website go to <a href="https://www.ptcrb.com">https://www.ptcrb.com</a>, click on "Login," select "New User Registration," and complete the form. You will receive your username and password by email, usually within the same day.

The email address used to register must be from a valid company domain. User registration requests from web-based email services will not be accepted.



HOME



CTIA Certification LLC is the administrator for the PTCRB certification process and PTCRB-issued IMEIs.



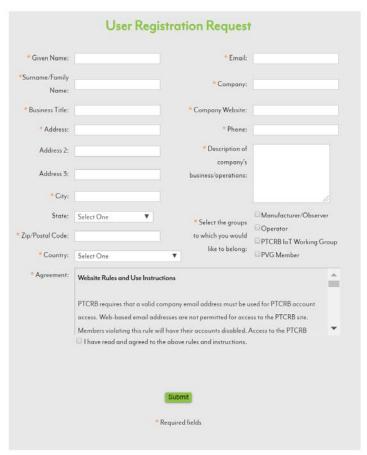


HOME





CTIA Certification LLC is the administrator for the PTCRB certification process and PTCRB-issued IMEIs.





## 3.0 Navigating the PTCRB Website

Once you have gained access to the PTCRB website, please pay attention to the following areas:

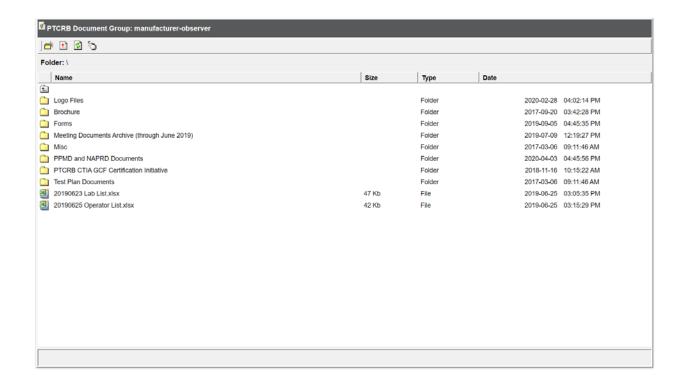
#### 3.1 Documents Area

From the Documents menu header, select "manufacturer-observer" to see PTCRB-related documentation. Some key items to look for in this section:

- Current PTCRB Program Management Document (PPMD) and NAPRD reference documents: these define the rules, procedures and requirements for obtaining PTCRB certification
- Lab List: contains the PTCRB Authorized Test Labs and the authorized testing capabilities of each



HOME DOCUMENTS DATABASES MEMBERS UPDATE PROFILE ADMIN LOG OUT



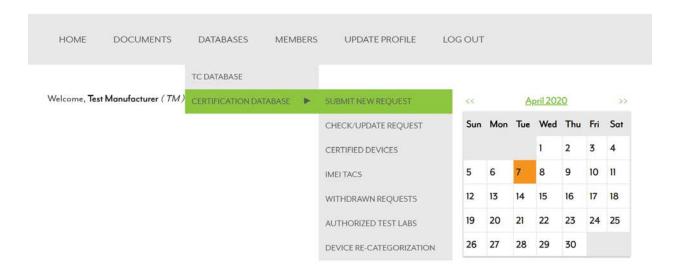


#### 3.2 The Certification Database

Once access to <a href="www.ptcrb.com">www.ptcrb.com</a> has been granted, please send an email to <a href="support@ctiacertification.org">support@ctiacertification.org</a> to request access to the certification database. Make sure your PTCRB website username is included in the request to CTIA Certification.

Log in to PTCRB.com with your username and password, and under the Databases menu select "Certification Database." Within this menu there are options for the following items:

- Submitting a new certification request
- Checking the status of requests already submitted
- Viewing all previous approved devices for your company
- Viewing IMEI TACs issued
- Viewing withdrawn certification requests
- Viewing a list of all PTCRB Authorized Test Labs





## 4.0 Entering a Request in the Database

Before submitting a new PTCRB certification request, make sure you have collected some key pieces of information ahead of time:

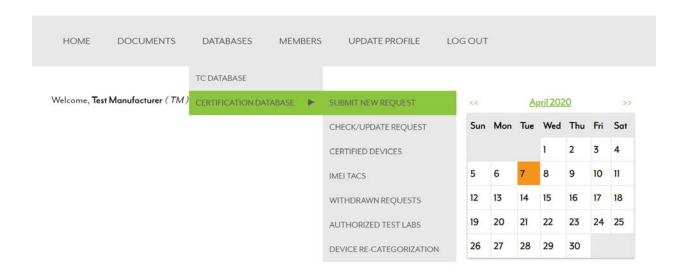
- Talk to your module manufacturer to confirm the module configuration you should select for certification:
  - Module model name/number
  - Module HW
  - Module SW
  - Module SVN
- Establish which PTCRB Authorized Test Lab will be performing the certification testing
  - Use the Authorized Test Labs link to find labs that are approved to be able to perform testing
  - Make sure you are aware of the lab costs and certification timelines before assigning a certification request to the lab
- Make sure you have the model name/number available for the integrated device
- Generate a PO number if your organization requires CTIA Certification to put that on the certification fee invoice
  - The PTCRB certification fee for an Integrated Device is \$1,500 for an Initial certification request.

Every effort should be made to enter correct and accurate information into the database when submitting a request. Once a lab accepts the certification request you will be unable to modify the information provided. If you find later that there are mistakes, first contact your PTCRB test lab, as they are able to update much of this information as they process the certification request. For any additional updates to your certification request information, please contact CTIA Certification at <a href="mailto:support@ctiacertification.org">support@ctiacertification.org</a>.



#### 4.1 Submitting a New Request

- From the Databases tab, go to Certification Database and select "Submit New Request"
- Select "Initial Certification Request" from the drop-down menu
- Select "Continue"



home > submit new request

# **Submit New Request**

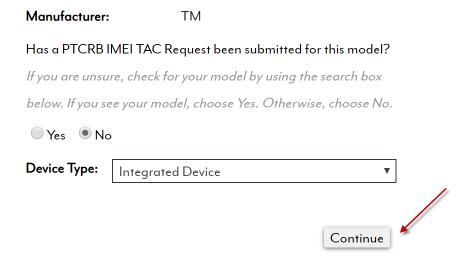
Please choose the type of request you would like to submit from the following options.



- Select "No" in response to whether a PTCRB TAC Request has been submitted for this device
- Select "Integrated Device" under the Device Type option
- Select "Continue"



# **Initial Certification Request**





#### 4.1.1 Device Name and Basic Details

 Enter the model name/number for your integrated device. This is the reference by which the device will be certified.

Note: this model name/number shall identify a single device; wild-card digits are not permitted for naming a device.

Optional: Additional marketing name(s) under which your device shall be placed on the
market may be listed in the optional marketing name field. Please enter each additional
marketing name as a separate entry and click "Add" to list each marketing name. Note
that multiple marketing names shall all reference back to the same model name/number.

## **Initial Certification Request**

Please enter the Model Name/Number and select the module.

Manufacturer:	TM		
Device Type:	Integrated Device		
Model Name/Number:  Marketing Name(s):	Your Device Model		
Marketing Name 1		Add	
	multiple modules? Voc ® No	No additional marketing name	es

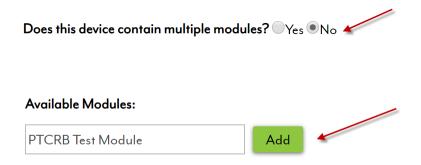
Available Modules:	<b>A J J</b>
Search for a module	Add



#### 4.1.2 Selecting the Correct Module Configuration

- If your device contains more than one cellular radio module, indicate "Yes" for the question, "Does this device contain multiple modules?" If there is only one cellular radio module, "No" should be selected.
- Search for or select the module which is integrated in the device. Select "Add" to link the module to the request.

Note: It is only possible to link one module to an integrated device certification request. If your device contains multiple cellular radio modules, there will be a document upload section in the request where it will be required to upload a declaration indicating the number of modules in the integrated device and identifying each of them.



• Then, select the radio button next to the HW version, SW version, and SVN of the module being integrated in your device.

**SVN** 

• Select "Continue".

PTCRB Test Module

Please select the HW/SW version



**SW Version** 

#### **Chosen Module:**

HW Version

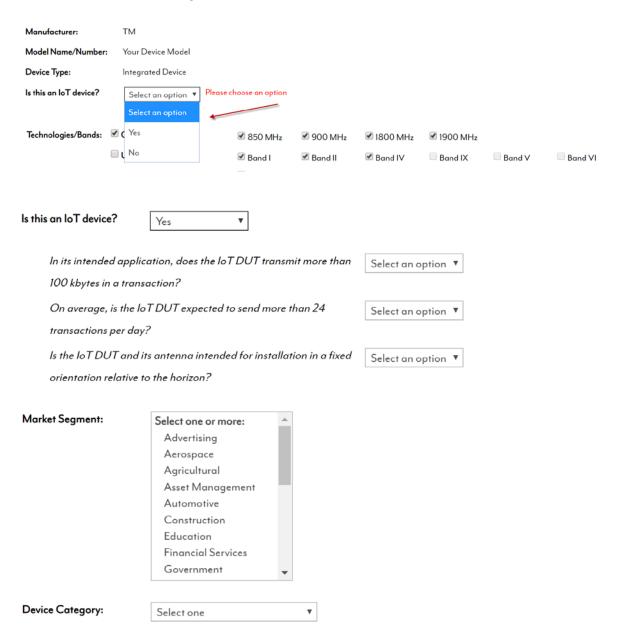




#### 4.1.3 Device Detailed information

Specify whether your device is considered an IoT device by selecting "Yes" or "No". If
"Yes," fill in the additional related questions. Multiple market segments may be selected
by holding down the "Ctrl" key and selecting multiple options.

#### Initial Certification Request

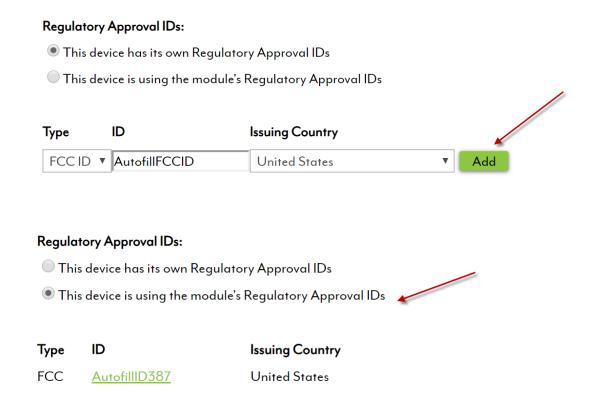




Review the technologies/bands information, which the database will have inherited from
the embedded module you selected. You may uncheck any bands not supported by your
integrated device. However, it is not possible to enable any frequency band that was not
originally approved on the embedded module.



Enter the regulatory ID associated with this device and select "Add". If your device meets
the condition of the module's FCC grant and you will be using the module's FCC ID, you
may also select "This device is using the module's Regulatory Approval IDs".





- Enter the HW and SW versions of your integrated device (end product)
  - Note that the SW and HW version of the integrated device seeking certification should not be the same as the module versions
  - If your integrated device does not have integration level SW, indicate a SW version of "0".
- The POC will auto populate based on the user entering the request. Add the billing contact information for the certification fee.
- If a PO number is required in order to process the certification fee invoice and payment, enter a PO number and this will be listed in the invoice. If the PO number is not available yet, this can be added later after the request is submitted.
- Once the invoice is generated, CTIA Certification will send a notification email to the request POC and the listed billing contact.
- Select "Continue".



#### 4.1.4 Device Features Supported:

- Features supported by the module selected shall already be checked when you reach this screen
- Many features cannot be changed by the integrated device; those are shown with shaded text.
- Select from the remaining any additional features supported by the device.
- Select "Continue"



# **Initial Certification Request**

Mar	nufacturer:	TM
Мос	del Name/Number:	Your Device Model
Dev	ice Type:	Integrated Device
Tech	nnologies/Bands:	GSM:850/900/1800/1900, UMTSFDD:BandI/BandII/BandIV, E-UTRAFDD:BandI/Band2/Band3
Feat	tures:	
	A-GNSS	
•	GNSS	
	AMR-NB	
	AMR-WB	
	AT Commands	
•	Bluetooth	
	CDMA2000	
	Circuit Switched Void	ce ce
*	DARP	
	EGPRS Multislot Cla	ss ss
	FUMO	
	GAN/UMA	
	GPRS Multislot Class	5
•	HAC	3 ▼ M-Rating
		3 ▼ T-Rating (Optional)
	HSDPA	
	HSUPA	
	IMPS	
	ISM	
	Java Version	- <b>▼</b>
	LTE UE Downlink Cat	egory
	LTE UE Uplink Catego	ory
	LwM2M	- ▼
	MIMO Downlink	- ▼
	MIMO Uplink	- ▼
	MMS Release	- <b>▼</b>
	Multi-SIM Support	- ▼ Number
		- <b>v</b>
		Feature



OMA Browsing	
OMA PoC	
OMA DM	
OMA SUPL	
Consumer Remote SIM Provisioning	eSIM OS Vendor (e.g. Gemalto, G&D)
(GSMA SGP.22)	Add
M2M Remote SIM Provisioning (GSMA	eSIM OS Vendor (e.g. Gemalto, G&D)
SGP.02)	
331.02)	Add
Rx Diversity	
SCOMO	
STK SIM	
STK USIM	
TD-SCDMA	
TTY	
Video Telephony	
UICC-Based NFC	
VoLTE	
WAP Version	
Wi-Fi	
	802.11a 802.11b
	802.11g <b>V</b>
	Wi-Fi Solution Manufacturer and Model Name/Number

#### 4.1.5 Selecting the Test Lab

- From the drop-down list, select the test lab who will be performing the certification testing. Contact should have been made with lab prior to entering the certification request in the database.
- Select the point of contact at the lab if known, otherwise select "All"
- If your target operator(s) require LTE / LTE CA Interoperability testing, you may select this optional test at this time.
- Select "Continue"



## **Initial Certification Request**

TM

Model Name/Number: Your Device Model

Manufacturer:

**Device Type:** Integrated Device

**Technologies/Bands:** GSM: 850 / 900 / 1800 / 1900, UMTS FDD: Band I / Band IV, E-UTRA FDD: Band 1 / Band 2 / Band 3

Features: DARP,Wi-Fi,GNSS,HAC,Bluetooth

Please select a lab and point of contact for the testing.



#### 4.1.6 Specifying the IMEI Information

#### 4.1.6.1 IMEI Issuer

- The PTCRB certification requirements allow an integrated device to use the module's IMEI TAC allocation if the integrator is shipping less than 100,000 devices
  - If this condition is true, you may select the option for using the module's TAC and select the appropriate module TACs from the list.



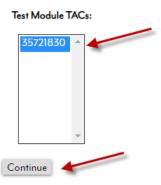
Please select the IMEI TAC you will be using for certified commercially available products.

We are requesting a new TAC

We are ONLY using the module's TAC

We are using the module's TAC AND requesting a new TAC

Please note you may only use the module manufacturer's IMEI TAC if your production will not exceed 100,000 units. If this is the case, please select the TAC(s) below and click Continue. If not, please choose "We are requesting a new TAC" above.



- If the device will be shipping more than 100,000 units, a unique TAC is required.
  - If your integrated device has already been assigned a unique IMEI TAC, or if
    you require a unique TAC assignment for your integrated device, select the
    option "We are requesting a new TAC", then identify the TAC issuing body.
  - Select "Continue".

Please select the IMEI TAC you will be using for certified commercially available products.



• We are ONLY using the module's TAC

We are using the module's TAC AND requesting a new TAC



Who will issue the IMEI TAC?

PTCRB BABT or other



#### 4.1.6.2 Requesting a PTCRB-issued IMEI TAC (If Applicable)

- If requesting CTIA Certification to issue a PTCRB IMEI TAC, additional information will be required to complete your IMEI TAC assignment.
- **Note:** There are GSMA fees for TAC allocation. Please see <a href="https://imeidb.gsma.com/imei/tacallocation-termsandconditions">https://imeidb.gsma.com/imei/tacallocation-termsandconditions</a> for details.

GSM Association (GSMA) - Required Information:			
-	C details as they will be listed in the MA only and will not impact your P	e GSMA IMEI Database. The details below are unique to this TAC request for the PTCRB certification request.	
NOTE: There are GSMA fe	es for TAC allocation. Please see <u>h</u> t	https://imeidb.gsma.com/imei/tacallocation-termsandconditions for details.	
Model Name:	Your Model Name		
Brand Name:	PTCRB		
Marketing Name:	Your Model Name		
Equipment Type:	IoT Device ▼		
Operating			
System/Platform	Proprietary OS ▼		
Supported:			
5G Series Supported:	Select option	▼	
GSM Association (GSMA) - F	Required Information:	Continue	
Please provide the IMEI TAC not impact your PTCRB certif		SMA IMEI Database. The details below are unique to this TAC request for the purpose of reporting to GSMA only and will	
Select the Low Power Wide A	area Network [LPWAN] supported by	y your device	
Does your device support EC	-GSM-IOT?	● Yes ○ No	
Does your device support Cat-NB1?		○ Yes ● No	
Does your device support Cat-NB2?		○ Yes ◎ No	
Does your Cat-NB device support multicast?		○ Yes ◎ No	
Does your device support Cat-M1?		● Yes ○ No	
Does your device support Cat-M2?		○ Yes ● No	
Does your Cat-M device support multicast?		● Yes ○ No	

Continue



#### ${\sf GSM\,Association\,(GSMA)-Required\,Information:}$

Please provide the IMEI TAC details as they will be listed in the GSMA IMEI Database not impact your PTCRB certification request. Please see description of UICC and elements of the control of the contr	se. The details below are unique to this TAC request for the purpose of reporting to GSMA only and will UICC <b>here</b> .		
Does your device support removable UICC?   Yes  No  How many removable UICC does the device support?	Does your device support removable eUICC?   Yes  No  How many removable eUICC does the device support?		
Does your device support Non removable UICC?   Yes  No  How many Non removable UICC does the device support?	Does your device support Non removable eUICC?   Yes  No How many Non removable eUICC does the device support?		
Total number of IMEI assigned to this device or model:	Total number of SIM Slots used in the device:		
GSM Association (GSMA) - Required Information:  Please provide the IMEI TAC details as they will be listed in the GSMA IMEI Database.  not impact your PTCRB certification request. Please read the definition of technical de			
PTCRB	Manufacturer Head Office Address  123 Main St, Any Town, USA 12345		
	Contact Email		
	testptcrb@ptcrb.com		
	Contact Job Title PTCRB		
One TAC allows for the allocation of 1,000,000 IMEIs. Please choose the number of TACs you wish to request.			

Continue



#### 4.1.7 Submitting the Request

- Before submitting your certification request, you may choose how your device is listed on the public portion of the PTCRB website after it is certified.
  - You may choose to publish the device when it is certified, or choose to publish up to 365 days after certification by entering the number of days in the box.
  - "Basic" includes the Manufacturer and Model Name/Number
  - "Detailed" includes the Manufacturer, Model Name/Number, Supported Technologies and Frequency Bands, HW Version, SW Version

Please select when the device shall be published on the ptcrb.com certifie	ed devices list.
Publish when certified	
Publish days after certification	
Please select the amount of information to be published:	
Basic	
Detailed	
	Continue

- On the next screen, you will be able to check the box next to any operator(s) you would like to grant access to view your certification request (and any subsequent ECOs of this device model) while the submission is in pending status (prior to being certified).
- Select "Submit".

## **Initial Certification Request**

Manufacturer:	TM
Model Name/Number:	Your Device Model
Device Type:	Integrated Device
Technologies/Bands:	GSM: 850 / 900 / 1800 / 1900, UMTS FDD: Band I / Band II / Band IV, E-UTRA FDD: Band 1 / Band 2 / Band 3 / Band 1 / Band 2 / Band 3 / Band 1 / Band 2 / Band 3 / Ba
Features:	DARP,Wi-Fi,GNSS,HAC,Bluetooth
Market Segment:	Unknown - Legacy
Request #51335 (Initial) a	nd #51336 (TAC) have been submitted successfully. You can review your requests by clicking here.
	Upload Documents Done



#### 4.2 Next Steps

- At this stage the certification request has been submitted and will be in the lab queue for them to process.
- After your device is submitted to the certification database, you can view the pending request by navigating to the Check/Update Request menu item (under the Databases tab and Certification Database). Click on the request # to go to the request page and view the submitted device information.
- Once a lab accepts the request for testing, you will be unable to modify the certification request information. If you find that there are mistakes, first contact your PTCRB test lab, as they are able to update much of this information as they process the certification request. For any additional updates to your certification request information, please contact CTIA Certification at <a href="mailto:support@ctiacertification.org">support@ctiacertification.org</a>.

#### 4.2.1 Uploading Required Documents

- The only thing left to complete in the database is to upload the user manual. Under the "Required Documents" section on the second page of the request, there is a field to upload the user manual. Use the "Choose File" button to locate the user manual on your local drive and upload it to the database. Then select "Upload Docs".
  - The user manual must reference the manufacturer name and model name/number of the device
  - Draft documents are acceptable as well as any document describing the device such as a product brochure
  - The file name may not contain any spaces or special characters
- If you indicated that your device contains multiple radio modules, you will also see an additional section to upload a "Description of Multiple Modules Implementation". This document is required to include the following elements:
  - Identify how many modules are in the device
  - Identify the module makes, model names/numbers, and SW versions
  - Indicate whether the modules have a dedicated antenna or share an antenna
  - Indicate whether the modules can transmit simultaneously



## Initial Certification Request - Requirements Checklist

Request #: 51094

Submitter: Test Manufacturer

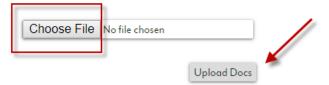
Manufacturer: PTCRB

Model Name/Number: Your Model Name

#### **Required Documents**

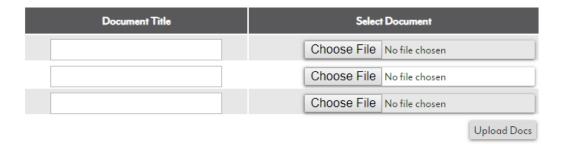
Please upload the following required documents.





#### **Optional Supporting Documentation**

If you have supporting documentation you would like to provide with this request, please name the documents and upload them here.



### 4.2.2 Payment

 The invoice for the PTCRB certification fee will be automatically generated as soon as the lab accepts the request for testing. Once the invoice is available, you will receive a notification via email. The invoice can be downloaded from the Payment section on the



second page of the request as shown. Please contact CTIA Certification at <a href="mailto:support@ctiacertification.org">support@ctiacertification.org</a> with any questions.



## 5.0 Questions

If you have any questions, please contact CTIA Certification at <a href="mailto:support@ctiacertification.org">support@ctiacertification.org</a> and one of the certification team members will be happy to assist. If your question is about a specific certification request, please provide the request number in your email to locate it more quickly.



# **Revision History**

Date	Rev	Description
09/02/2015	1.0	Initial release
12/12/2018	1.1	Updated PTCRB logo/images and process steps
05/05/2020	1.2	Editorial and process updates: updated CTIA Certification contact
		email; updated database screenshots throughout document; updated
		process steps to include marketing name field, IoT device categories
		and market segments, requirements for devices with multiple
		modules, and requirements for use of module's TAC