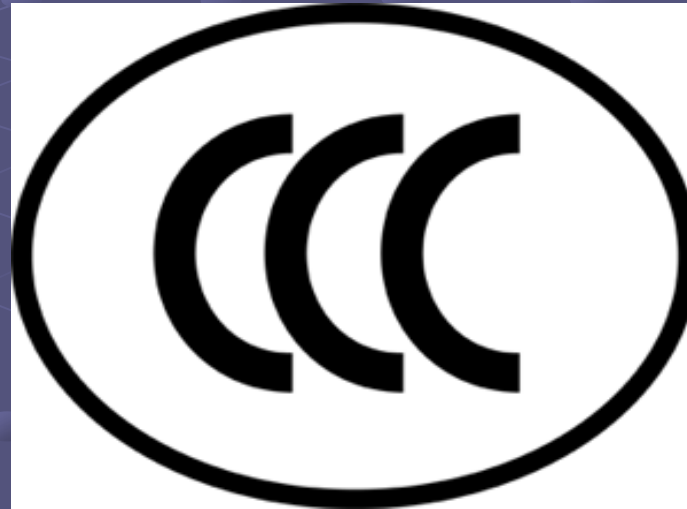




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# CCC Certification Process



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# Quick Overview of CCC Mark

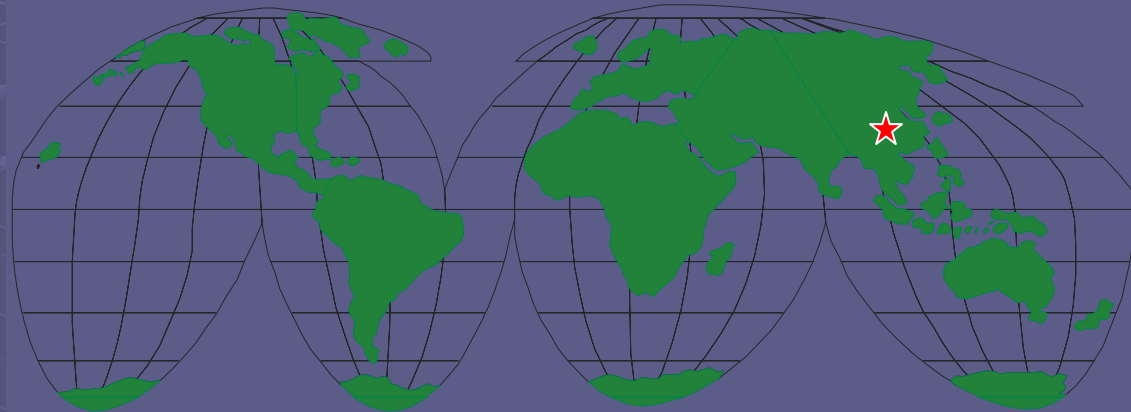
- Currently, there are **22** groups of products divided into **132** product categories that require mandatory CCC Mark
- Component parts of finished products, spare parts and replacement parts, may in some cases require CCC certification
- Products applied for CCC certification must conform to Chinese standards and/or other additional technical requirements
- The CCC system is based on the Chinese GB Standards, **GB** stands for "**Guo Biao**" in Chinese which means literally "National Standards". Most are harmonized with International Standards
- First step is to determine if your product falls under CCC Mark category
- Using "Tariff Code" or "HS Code" is the most efficient way to find out if a product falls under CCC Mark



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# Sample Case Study

- Target Country:
  - China – CCC Mark



- Basic Computer 1U Chassis with single internal power supply “Pizza Box”





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## Case Sample CCC Submittal Process

- In order to determine the scope of work, equipment specification/data sheet and photos will have to be provided
- Need to know if equipment has a CB report (w/Chinese deviations)
- Need to know if power supply is CCC certified. If not, does the power supply has a CB report (minimum)
- Need to know manufacturing facility information such as where it is located, if it has been CCC approved (has gone through CCC Initial Factory Inspection).
- Need to know if the manufacturing facility has a CCC Factory Inspection report.
- Need to know detailed information regarding various models within a family, if any



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## Case Sample CCC Submittal Process

- All documents MUST match Applications, labels & associated documents (Company name, product description, model number(s). If any item does not match, the document will be required to be revised
- Typically, the CB report will require some type of revision and therefore may greatly delay the project



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# 4 Basic Steps for CCC Certification

- I. DOCUMENTATION
- II. SUBMITTING SAMPLES & TESTING
- III. INITIAL FACTORY INSPECTION  
(if applicable)
- IV. CCC MARK and LABELING





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# CCC Documentations

- CCC Application and Factory Questionnaire forms must be completed correctly
- Production flow chart for the product
- Quality manual (title of contents pages, if the document is too big)
- List of documented procedures associated with the product (title of contents pages, if the document is too big)
- Quick Start Guide (must reference exact product name and model numbers to the Application and CB report)
- Copy of CB report (w/Chinese deviations) for the overall product(s)
- Copy of CB report of the power supply (if not CCC approved)
- Applicant and manufacturing facility's business license
- Name plate or label in Chinese (Simplified Chinese)
- Factory's organization chart



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## CCC Documentations

- For the Quick Start guide, basic items that are needed are: Products name, model number, product content, basic installation, and operating instructions, equipment rating (voltage/current), company information, any warning and cautionary statements
- The quick start guide can be a summary of the manual which generally is one to a two-page document. It should contain basic instruction, rating, and any safety warning information (in Simplified Chinese)
- If a series of equipment is being certified, a formal letter describing the differences needs to be provided
- Power Cable (input) - for China the power cable used (shipped with the product) must be CCC approved, specification for the CCC approved cable is required.
- The company will need to obtain the CCC certificate from the power supply manufacturer which will be submitted to CQC





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## CCC Documentations

- A list of Key components for Safety & EMC must be provided. For the Safety, the critical component list from the CB report will suffice
- A list of EMC components such as CPU's, oscillators, filters, ferrites, foam gaskets, capacitors used for filtering will need to be provided
- Once all of the documentations are received, specifically the signed Application & Factory Questionnaire, then everything will be submitted to CQC for review. An application number will be generated by CQC for the Applicant and then samples can be sent to China for evaluation and testing



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## Submitting Samples and Testing

- Once CQC issues a formal Application number to the Applicant, samples can now be sent to China for evaluation and testing
- CQC has the option to send or assign testing of your product to various laboratories in China based on the category of the equipment as well as other factors (\*discuss in further details)
- Currently, there are between 18 – 20 various testing laboratories in China that are designated by CNCA (China National Certification and Accreditation Agency) to perform CCC Mark testing
- Generally, 2 samples are required to be sent to China. However, depending on the product, the actual test samples to be provided may vary
- Preparing test samples as well as having all of the proper information when shipping products to China for testing may be a bit confusing
- Generally, a Custom Agent is required to pick up test sample and deliver to testing laboratory



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## Submitting Samples and Testing

- The designated laboratory will perform Safety (if no CB) and EMC evaluation and testing based on IEC 60950 (GB 4943), EN 55022/55024 (GB 9254) and EN 61000-3-2/-3-3 (GB 17625)
- Once the Safety of EMC/EMI evaluation and testing is completed by the laboratory, a test report will be generated by the test laboratory and then provided to CQC for review and approval
- Once the test report has been approved by CQC, then Initial Factory Inspection can be scheduled (IFI)



# CCC Factory Inspection

- Initial Factory Inspection (IFI) is required for a manufacturer that does not have a valid CCC Factory Inspection report or it is the first time going through the CCC certification process
- CQC typically assigns CEMC in Hong Kong or UL (in some rare cases) to carry out Initial Factory inspections
- One of the biggest unknown or challenge for scheduling a CCC IFI is obtaining U.S. Visas for the inspectors
- CQC sends 2 auditors for a period of 2 days to audit each factory. However, the time frame may vary based on the number of products to be certified
- If UL is assigned to perform the IFI, it cannot be coordinated with other regular UL visits
- During the Factory Inspection, the auditors will be primarily looking at the company's existing quality system
- Auditors will request to witness the Dielectric Strength and Ground Resistance tests to be performed on the product(s) during the audit



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Test item	Requirements for certification standards	Test results	Judgment	Remarks
1. Dielectric strength	When 184V(Peak or DC value) < rated power voltage $\leq$ 354V(Peak or DC value), 1500VAC for basic insulation, 3000VAC for reinforced insulation, <b>and no breakdown in 60s</b> ; The equipment with other working voltage shall be in accordance with GB4943-2001 Table 5H.	No breakdown	Eligible	Between either power pole and the accessible part
2. Ground resistance	① If current rating of the circuit to be tested is less than or equal to 16A, test current is 1.5 times current rating of the circuit to be tested; test voltage shouldn't exceed 12V; <b>test time is 60s</b> ; and resistance $\leq$ 0.1 $\Omega$ . ② If current rating of the circuit to be tested is more than 16A, test current is 2 times current rating of the circuit to be tested; test time 2min, or comply with the specification specified by DC equipment manufacturer; voltage drop of protective connection conductor shouldn't exceed 2.5V.	0.07 $\Omega$	Eligible	Between input ground and grounding point





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# CCC Factory Inspection

- Manufacturers often dispute the soak time required for 100% testing of products (Dielectric Strength and Ground Resistance)
- Auditors follow CNCA-01C-020:2001 – Implementation Rules for Compulsory Certification of Electrical and Electronic Products for Information Technology Equipment
- For other product categories, there are other Implementation rules, however the process is generally the same
- If discrepancies are found, manufacturer has 30 days to address non-compliances
- Factory will be assigned an ID if the audit is successful. The ID number can be placed under the CCC logo but not mandatory
- Once CQC has obtained test reports from the test laboratory and IFI auditor (w/no major non-compliances), then the CCC certificate can be issued for the product
- Last component is the approval of the CCC Mark and Labeling procedure





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# CCC Factory Inspection

Typical discrepancies found during audits are:

Daily functional check on the equipment used for the routine and verification tests is not being performed as required. A functional check is to be performed on a daily basis and record maintained.

The manufacturer does not have the capability to perform the ground resistance check at 25A, 12V. This check is required as a routine production test as well as the check of consistency of the product.

A documented procedure has not been established for conducting the ground resistance test at 25A, 10V. This test is required as both routine and verification testing.

The manufacturer has not established the documented procedure which ensure the appropriate keeping and using of the Certification Mark.

A documented quality plan or equivalent documents relevant to certified (CCC marked) products has not been established.



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# CCC Factory Inspection

## Typical audit agenda:

### Day 1

- 8:00AM Arrive/Opening Meeting
- 8:30AM Responsibility and Authority and Documentation  
Control of the CCC mark
- 10:00AM Internal Audits
- 11:00AM Purchasing
- 1:00PM Changes to Certified Product
- 2:00PM Receiving Inspection
- 3:00PM Calibration
- 4:00PM Open issues and daily wrap up
- 5:00PM Depart

### Day 2

- 8:00AM Arrive/Review Outstanding Issues from Day 1
- 8:30AM Process Control and Inspection  
Routine and Verification Tests  
Packing Handling and Storage
- 1:00PM Consistency of Product  
Appendix 4 Testing  
Completion of Product Description Form
- 3:00PM Report Writing
- 4:30PM Closing Meeting
- 5:00PM Depart



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# CCC MARK & LABELING

- Manufacturer has the option to purchase “A sticker” from CNCA or they may submit a drawing to CNCA for approval in order to print their own CCC label
- The manufacturer cannot apply for CCC Mark and labeling until the CCC certificate for the product has been issued. The certificate number for the product is included in the application for printing the CCC Mark
- The CCC label artwork must be submitted along with the CCC application. The artwork needs to display the dimensions of the CCC Mark and location on the main product label
- The manufacturer has the option, in some cases, to print the CCC Mark on the outside packaging, manual, etc. however they must provide a design scheme
- The CCC Mark must be linear proportional to the size of the standard CCC Mark
- The background and color of the CCC Mark can be chosen reasonably according to the appearance of the product and/or nameplate
- Generally, it takes about 1 – 2 weeks to obtain the CCC Mark approval from CNCA



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# Summary

- Generally, the entire CCC Certification process of an ITE product may take between 2 – 4 months (if the manufacturing location has not been CCC approved)
- In order to label and ship your product, these conditions need to be met:
  1. All documentations, including applications, need to be submitted
  2. Samples must be evaluated and found to be in compliance
  3. Initial Factory inspection must be performed and approved
  4. CQC must review and approved the test and IFI reports
  5. CCC Mark authorization to label certificate
- Annual follow-up inspection will be required which is similar to IFI
- GOOD LUCK TO ALL OF YOU!





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# Questions & Answers

