# Humidity Test Report

**Issue by**

Design Technology Department

Report No: 1204DT0608

<table>
<thead>
<tr>
<th>Product Model</th>
<th>R03C35T-RTE1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Description</td>
<td>3.5” Industrial PDA: S370T</td>
</tr>
</tbody>
</table>

**Test Reason**

- New product
- 3.5” Industrial PDA
- Renew product
  - PCB:
  - BIOS:
- Revision change
  - PCB:
  - BIOS:
  - Component:

**Issue date**  2012/04/17  
**Approved** Lindon Lin  
**Test Engineer** Freeman Lee
1. Document Introduction and Revision History

This document describes how we conduct the environment conditions and test procedure. It includes the test equipment we use, the test condition, and the test procedure we take. We also define our test criteria and the way to conclude the test result. (According to client’s test specification, please see following sheets in detail.)

Table of Testing Summary Results

<table>
<thead>
<tr>
<th>NO</th>
<th>Test Item</th>
<th>Condition Description</th>
<th>Sect. / Page</th>
<th>Reference to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Humidity Test</td>
<td>Operation Test temperature: 30°C to 60°C ± 2°C Relative Humidity : 95%RH ± 3% For a period of 120 Hours (5 Cycles; 1 Cycle=24Hours)</td>
<td>4 / 5</td>
<td>MIL-STD-810G Method 507.5 Figure 507.5-7</td>
</tr>
</tbody>
</table>
## 2. Product Configuration

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/B</td>
<td>CQ350T-100</td>
</tr>
<tr>
<td>CPU</td>
<td>TI Cortex A8 DM3730 1.0GHz</td>
</tr>
<tr>
<td>Panel</td>
<td>EDT ETM035009ADH6</td>
</tr>
<tr>
<td>RAM</td>
<td>Hynix H5MS2G22AFR-E3M</td>
</tr>
<tr>
<td>Flash</td>
<td>Micron MT29F4G16ABBDAHC</td>
</tr>
<tr>
<td>GPS</td>
<td>Ublox EU-1513S</td>
</tr>
<tr>
<td>Bluethooth &amp; WiFi</td>
<td>Jorjin WG-7310-0A</td>
</tr>
<tr>
<td>Operating System</td>
<td>Android 2.3.4</td>
</tr>
<tr>
<td>Kernel</td>
<td>2.6.37</td>
</tr>
<tr>
<td>Build</td>
<td>242T</td>
</tr>
<tr>
<td>Battery</td>
<td>JHT J1042-1 2600mAh 3.7V 1S1P</td>
</tr>
<tr>
<td>Adapter</td>
<td>Powertron PA1008-1SU AC: 100-240V~ 50-60Hz 0.3A DC: 5V 1A 5W</td>
</tr>
</tbody>
</table>
3. Photo of Product Configuration

Photo of EUT

Top View

Bottom View

Front View

Back View

Left Side View

Right Side View
4. Humidity Test

A. Test Equipment:
   - Test Site: Winmate LAB
   - Programmable Temperature & Humidity Chamber
     —TERCHY / MHC-120L / S/N: 960731

B. LAB Environmental Conditions:
   - Ambient Temperature: 25 +/- 3°C
   - Relative Humidity: 55 +/- 20% RH

C. Test Method / Specification:
   - Reference to MIL-STD-810G Method 507.5 Testing Procedures
   - Selecting Produces: Operation (This method has one produce.)
   - Reference to Figure 507.5-7. Aggravated temperature-humidity cycle.
     - Temperature: 30 to 60°C ± 2°C
     - Humidity: 95 +/- 3%RH
   - For a period of 120 Hours (5 Cycles; 1 cycle=24 Hours)
   - Testing Software:
     - Running Android 2.3.4
   - Quantity: Total 1 Set

Note: Perform Operational Checks near the end of fifth cycles.

Figure 1: Humidity Test Cycle
D. Check Condition and Requirements:

After the preconditioning, humidity and temperature cycling is to be carried out in accordance with Fig. 1. This test determines the ability of equipment to be operated under condition of high humidity.

A single cycle is used with an upper temperature limit of +60°C which is the maximum that occurs in the earth’s surface atmosphere with a relative humidity of 95%RH.

The EUT shall be placed in a chamber at normal room temperature and relative humidity. The temperature shall then be raised to +30°C to +60°C±2°C, and the relative humidity raised to 95% +/- 3% over a period of 2 hours. The conditions shall be maintained for a period of 120 Hours.

Exposing the test item(s) to the appropriate number of test cycles (figure 507.5-7). Within 15 minutes after (figure 507.5-7) is completed, conduct an operational performance check, if applicable, and document the results.
E. Test Result:

Examine the appearance of specimen(s) by visual check and perform functional check after this test. Connect the specimen with rated power then examine whether the display function of specimen could be work normally or not.

— Functional Check & Mechanical Structure: Normal
— Appearance check (Visual check): No visible damage
— The requirements of the performance test and check shall be met.

<table>
<thead>
<tr>
<th>Check Item</th>
<th>Appearance check (Visual check)</th>
<th>Functional &amp; Performance check</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5&quot; Industrial PDA: R03C35T-RTE1</td>
<td>No visible damage</td>
<td>Normal</td>
</tr>
</tbody>
</table>

F. Test Judgment:

— Test Result