K24 SMT PVT EE FA
Summarize

2009/05/14
By: Lewis Chang
MAC-1 & Screen Station Hard Failures

**Mac-1 Failures**

- **USB**
  - USB 2.0 Speed Verification Test Fail
  - USB 1 Load Box Test Fail

- **SD Card**
  - MMC Write Read Test Fail

- **Sensors**
  - TC0D Sensor Test Fail
  - Accelerometer Test Fail

- **Others**
  - Can Not Detect Network

**Screen Station Failures**

- **Mikey**
  - Mikey 30# Test Fail
  - Mikey 32# Test Fail

- **DVI**
  - DVI #5 test fail

- **Audio**
  - Digital pattern Test Fail
  - THDN Test Fail
Mac-1: MMC Plus Card Data test Fail

**FA:** MMC card test fail due to Write Protection pin deform. This is raw material defeat from Foxlink from date code 24N ~ 30 N.

**Action:** Part quality issue. Visually inspect the Write protection pin for Pin bent. Or soldering issue on each single pin. Keep monitor the latest date code.

![Diagram of bus circuitry](image)

*Figure 34: Bus circuitry diagram*
**Mac-1: Acceleleometer Sensor Test Fail**

**FA:** First check the log to determine which axis fail within the spec (X/ Y or Z)

**Action:** Suggest to reflow the part with air gun first, general cause by uneven or insufficient solder. If still not work. Remove and reflow the part back. Finally, it should be most likely to be the raw material issue.
**Mac-1: Can Not Detect Network**

**FA:** Ethernet connection can not been establish.

**Action:**
- Check all Ethernet power has been deliver. (3.3V / 1.0V)
- Check T3901 and T3902 for transformer soldering
- Also visual inspect J3900 connector soldering

[Image of circuit board with a note: T3901 Pin 1 Motor broken]
Mac-1: USB 2.0 Speed Verification Fail

- **FA**: Measured L4600 and L4610 choke impedance should be 4.4 ohm. Ensure L4615 impedance is not “OL”.
Mac-1: USB Loading Box Fail

FA: USB loading Box fail with red light

Action: Most case its the USB port power switch defeat.
**Mac-1: TSOD Test Fail**

**FA:** Launch System Platform Console to exam if the sensor is reading correctly.

**Action:** In this case, TSoD is CPU thermal sensor, failure cased by defeat U5515.

**Diagram:**

*CPU T-Diode Thermal Sensor*
**Screen: Mikey #32 Test Fail**

**FA:** Measured J6700 Pin.1 and Pin.2 on known good MLB, impedance should be 0.2~0.4 Ohm. Anything above 2 ohm means connectors connection are wrong.

**Action:** Replace audio jack. Even its retest pass.
**Screen: Mikey #30 Test Fail X1**

**FA:** DVM measure J6700 Pin.6 with ground should be 0.4 ohm when Mikey cable insert. With known good MLB it should be 100K.

**Action:** Replace Audio Jack
**FA:** If failure symptom relate to Optical cable didn’t receive signal. Its most likely related to audio codec. Also check if R6701 has been knock off as its location is too close to the edge of the board.

**Action:** Replace Audio Code