

Gemini Communication Ltd.

TELSIMA BTS TROUBLESHOOTING

IDU RELATED ISSUE

- **IDU Dead on Arrival**
 - Check for any Physical Damage.
 - Check the power supply connectivity; it should be reverse @ -4l

- **IDU Rebooting**
 - **Flash Card not Detecting**

Change the Flash Card and if still same problem raise change the IDU
 - **When BS is not booting up check the boot parameters**

Step 1: Give the system hard reboot

Restarting system!!!!

Slot 1 is rebooting

Loading StarMAX-41xx... Done

Step 2:

Press `tbwa` (immediately after Loading StarMAX-41xx.... Done)

You will come to the VxWorks prompt

[VxWorks Boot]:

Step 3:

Press p to dump the boot parameters

[VxWorks Boot]: p

```
boot device           : ata=0,0
unit number          : 0
processor number      : 0
host name             : host
file name             : acb/images/acb_kernel
inet on ethernet (e) : 192.168.131.2:ffffff00
host inet (h)         : 192.168.180.19
gateway inet (g)     : 192.168.131.1
user (u)              : root
ftp password (pw)    : password
flags (f)             : 0x0
target name (tn)     : ACB
startup script (s)   : acb/acbboot.txt
other (o)             : sedEnd0
```

To change any of the above parameters press c

- **Unable to login through console**
 - Give the hard reboot to the BS.

- **IDU not reachable from NMS**
 - Take the Logs of the BS with the following command:
 - Telsima_bs#show software version
 - Telsima_bs#show logging slot-number 1
 - Telsima_bs#show chassis-status
 - Telsima_bs#show system
 - Telsima_bs#show environment
 - Telsima_bs#show uptime
 - Telsima_bs#show synchronization
 - Telsima_bs#show association-table

Give Hard Reboot to the IDU.

After rebooting Verify the existing boot rom (primary and Default) in the system by TAC

- **IDU hang**
 - **Give the Hard reboot to the IDU**

GPS RELATED ISSUE

- **GPS not locked**
- **GPS not synchronize**
- **No PPS**
 - **IF master is not OK than:**
 - Check the GPS Cable/connector
 - GPS may be faulty
 - IDU GPS port may be faulty

 - **IF master is OK and slave not locked/no PPS:**
 - Check the back panel cable
 - Check the configuration
 - Check it is configured as Slave
 - Check with Internal/generated 1 Hz clock
 - Swap Master with slave and change the configuration accordingly.
 - Check both with Internal / External clock.
 - Check Software version (As we have observe this problem due to older version of software, it should be at least 2.0.6)
 - Back panel me be faulty of IDU.

ALARMS

- **Alarms**
 - **RF/IF ALC not Locked (it is not service effecting)**
 - Check the output power configured/radiate .
 - Check the connectors

 - Check the Logs whether ODU & HB detected and Tx Power amplifier enabled.
 - Reboot the PMP once

- **Synchronization problem: not locked**
Check the GPS steps mention above.

- **ODU1 frequency not locked**
Reboot the PMP Port
Enable/Disable the port
Check the Physical Connectivity
Check the status of ODU power up or not or give the command:
#powerup odu1 <Depends of ODU 1 or 2>

- **Sector 2 card down**
Check the configuration whether the port is enable or not.
Reboot the PMP port.
Check the Admin/Operational Status with the command:
#show interface wimax config

- **Software Upgrade in progress**
- **SOFTWARE DOWNGRADE**
- **SOFTWARE UPGRADE in progress**
- **SOFTWARE DOWNGRADE**
- **SOFTWARE DOWNGRADE failed**

ODU RELATED ISSUE

- **ODU Lost**
- **ODU not Detecting**
- **ODU Heartbeat not detected**
- **ODU Heartbeat Lost**
 - Check the Connector & cables physically
 - Reboot the PMP port

 - Swap the IF cable to another PMP port
 - Swap the ODU
 - ODU Faulty

RF RELATED ISSUE

- **Check the Antenna Orientation for the problems mention below:**
 - dCINR value is not proper
 - dRSSI value is not proper
 - uCINR value is not proper
 - uRSSI value is not proper

- **SE is working on the problems mention below mean while make sure that the Modulation of the SS should be good and stable.**
 - dCINR value is N/A
 - dRSSI value is N/A
 - uCINR value is N/A
 - uRSSI value is N/A

SS RELATED ISSUE

- **SS not Latched**
 - Check the Configuration on Both side IDU & SS.
 - Check the IDU receiving the MAC request of SS with the help of command:
#show mac-address-table (on IDU)
 - Check the SS Antenna Alignment.
 - Check the ODU status of BS in the logs.

- **SS not Authorized**
 - Check the SS MAC id Provisioned on Provision Server.
 - Check the setting of SS (based on MAC) in NMS.
 - NMS Server & Client Version should be same.
 - Re provision the SS in NMS

- **SS Provisioned with Warnings. (Yellow in NMS)**
 - Check the setting of SS in NMS.
 - Check the SNMP community on both sides should be same.
 - NMS Server & Client Version should be same
 - Re provisioned the SS in NMS
 - Link should be stable.
 - SS should be reachable from NMS.

- **SS not getting IP Address**
 - Check the Admin_stats in BS
 - IF NW_RE_EN : Check whether DHCP server is responding.
 - Debug the SS MAC and check the logs.
 - Check the logs of the particular MAC in Syslog server
 - Check the setting of SS in NMS.
 - Check the SNMP settings on both sides should be same.
 - NMS Server & Client Version should be same
 - Re provisioned the SS in NMS
 - Check the Frequency & Bandwidth on BS & SS
 - Check the Data/Management Cable connected from BS to Backend.
 - Data port may be faulty

Base Station LED Verification

Name	Functionality	Description
SYS LED (GREEN)	Power indicator for the Base Station System	OFF - No Power ON - System powered on (POST completed successfully)
SYS ALARM LED (RED)	Alarm indicator for the Base station	OFF - No Alarm exists in the system ON - Alarm exists in Base station system
PMP1 LED (GREEN)	PMP1 Indicator	OFF - PMP1 Inactive ON - IDU-ODU communication UP and the PMP1 powered on (PMP1 POST completed successfully)
PMP1 ALARM LED (RED)	PMP1 Alarm indicator	OFF - No Alarm exists in PMP1 sub-system ON - Alarm exists in the PMP1 sub-system
PMP2 LED (GREEN)	PMP2 Indicator	OFF - PMP2 Inactive ON - IDU-ODU communication UP and the PMP2 powered on (PMP2 POST completed successfully)
PMP2 ALARM LED (RED)	PMP2 Alarm Indicator	OFF - No Alarm exists in PMP2 sub-system ON - Alarm exists in the PMP2 sub-system
GPS SYNC LED (GREEN)	GPS SYNC Indicator	OFF - GPS Sync Inactive ON - GPS Sync active
GPS SYNC ALARM LED (RED)	GPS SYNC Alarm Indicator	OFF - No Alarm exists in GPS sub-system ON - Alarm exists in the GPS sub-system

SERIAL Embedded LED (ORANGE) (GREEN)	Serial port power indicator	OFF - Serial port down ON - Serial port UP
	Serial port data traffic indicator	Flash - Serial data traffic present Stable - No Serial data traffic
MGMT Embedded LED (ORANGE) (GREEN)	MGMT 10/100 BaseT Ethernet port power indicator	OFF - MGMT 10/100 BaseT port down ON - MGMT port UP
	MGMT port data traffic Indicator	Flash - MGMT port data traffic present Stable - No MGMT port data traffic
DATA Embedded LED (ORANGE) (GREEN)	DATA 10/100 BaseT Ethernet port power indicator	OFF - DATA 10/100 BaseT port down ON - DATA port UP
	DATA port data traffic Indicator	Flash - DATA port data traffic present Stable - No DATA port data traffic

