



The UL packets miss Due to RRU carrier mask

Equipment: T5000

Version:

BBU: 5G NR_ax.tdd.fr1.2.2.3.462_r50381_m435_V3.5SP03

RRU: D.1.1.B13S

1. Issue Description:

There are two cells. Cell 1 is normal, and the UL packets miss is reported in cell 2.

The screenshot shows the 'Home / Running Status' page of the BTI WIRELESS interface. It displays a table with the following data:

Parameter name	Parameter value	Remark
OpState	cell1: normal cell2: normal	
AMF State	normal	
Online UE	cell1: 0; cell2: 0	
UpTime	0:0:18:39	
CurrentAlarm	2	

The screenshot shows the 'Alarm / Query Active Alarm' page. It displays a table with the following data:

SN	AlarmName	AlarmSeverity	AlarmDesc	AlarmID	AlarmTimes	AlarmRaisedTime	AlarmChangedTime
1	HIGH CPU USAGE	Critical	CPU_14 Usage is over 95% of the peak.	19	1	2023-11-14 03:55:52	
2	PHY HAPPEN TIMING BEAT	Major	all UL packets are missed for cell	42	1	2023-11-14 03:54:04	

2. Troubleshooting Procedure:

The configuration parameters are normal and consistent with cell 1. RRU receive and emit is normal. PTP synchronization is normal. Up base band power is normal, down base band power is -60. CBRS is not enabled.

UL packets miss in cell 2 is displayed at the physical layer.

The screenshot shows a log output with the following data:

```
Last login: Tue Nov 14 04:32:25 2023 from 127.0.0.1
[root@realdomain ~]# tail -f /opt/bbu/omw/log/phy.startup
2023/11/14 -05 04:33:45.976183 all UL packets are missed for cell 1 at subframe 2993, bValid: 2953, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:45.984048 all UL packets are missed for cell 1 at subframe 2994, bValid: 2954, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:45.992035 all UL packets are missed for cell 1 at subframe 2995, bValid: 2955, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.000040 all UL packets are missed for cell 1 at subframe 2997, bValid: 2957, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.008018 all UL packets are missed for cell 1 at subframe 2998, bValid: 2958, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.016037 all UL packets are missed for cell 1 at subframe 2999, bValid: 2959, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.023983 gNB UL_rach_task_func: PRACH config of cell 1 proposed to be run at 2999, end at 2999, is in task skip, so give it up at nsFidx, 2999, PrachStatus: 1
2023/11/14 -05 04:33:46.032220 all UL packets are missed for cell 1 at subframe 3001, bValid: 2961, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.040279 all UL packets are missed for cell 1 at subframe 3002, bValid: 2962, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.048263 all UL packets are missed for cell 1 at subframe 3003, bValid: 2963, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.057170 all UL packets are missed for cell 1 at subframe 3004, bValid: 2964, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.065225 all UL packets are missed for cell 1 at subframe 3006, bValid: 2966, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.073296 all UL packets are missed for cell 1 at subframe 3007, bValid: 2967, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.081482 all UL packets are missed for cell 1 at subframe 3008, bValid: 2968, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.089372 all UL packets are missed for cell 1 at subframe 3009, bValid: 2969, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.097708 all UL packets are missed for cell 1 at subframe 3011, bValid: 2971, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.105764 all UL packets are missed for cell 1 at subframe 3012, bValid: 2972, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.112599 all UL packets are missed for cell 1 at subframe 3013, bValid: 2973, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.117568 all UL packets are missed for cell 1 at subframe 3014, bValid: 2974, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.125941 all UL packets are missed for cell 1 at subframe 3016, bValid: 2976, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.135909 all UL packets are missed for cell 1 at subframe 3017, bValid: 2977, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.147093 all UL packets are missed for cell 1 at subframe 3019, bValid: 2978, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.152219 all UL packets are missed for cell 1 at subframe 3019, bValid: 2979, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.160124 gNB UL_rach_task_func: PRACH config of cell 1 proposed to be run at 3019, end at 3019, is in task skip, so give it up at nsFidx, 3019, PrachStatus: 1
2023/11/14 -05 04:33:46.168142 all UL packets are missed for cell 1 at subframe 3021, bValid: 2981, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.176142 all UL packets are missed for cell 1 at subframe 3022, bValid: 2982, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.184193 all UL packets are missed for cell 1 at subframe 3023, bValid: 2983, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.192241 all UL packets are missed for cell 1 at subframe 3024, bValid: 2984, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.200392 all UL packets are missed for cell 1 at subframe 3026, bValid: 2986, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.208374 all UL packets are missed for cell 1 at subframe 3027, bValid: 2987, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.216361 all UL packets are missed for cell 1 at subframe 3028, bValid: 2988, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.224467 all UL packets are missed for cell 1 at subframe 3029, bValid: 2989, NumOfSymb_max: 14, [0,0,0,0]
2023/11/14 -05 04:33:46.232436 all UL packets are missed for cell 1 at subframe 3031, bValid: 2991, NumOfSymb_max: 2, [0,0,0,0]
2023/11/14 -05 04:33:46.240598 all UL packets are missed for cell 1 at subframe 3032, bValid: 2992, NumOfSymb_max: 14, [0,0,0,0]
```

Cause:

The default RRU carrier mask is 15, and the RRU2 carrier mask is 0.

Carrier0BandSectorBitmask	Carrier0BandSectorBitmask	Parameter Description:This parameter indicates the carrier0 mask. From low to high, each bit corresponds to one carrier. Bit0 corresponds to carrier 1, bit2 corresponds to carrier 2, and so on. There are 16 carriers. Bit0 set 1 to enable carrier 1, set 0 to close carrier 1, and so on. GUI Value Range:0~65535 Unit:None Actual Value Range:0~65535 Default Value:None Parameter Relationship Description:None Whether the modification will cause service interruption:Not involved Writable:read-write
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```
%%LST RU4370:DeviceNumber=1:%%
RETCODE = 0    The command was executed successfully.
List RU4370 Configuration Parameters
```

```
-----
DeviceNumber = 1
NumberOfReceivingAntennas = 15
Carrier0BandSectorBitmask = 15
UpDownlinkSwitch = Auto
ULGainCorrection(dBm) = 0
CarrierULEnable = ENABLED
CarrierDLEnable = ENABLED
HeadCompressMode = Uplan with compression head
CbrsSwitch = off
Channel1RFSwitch = on
CH1ULAttenuation(dB) = 0
CH1DLAttenuation(dB) = 0
Channel2RFSwitch = on
CH2ULAttenuation(dB) = 0
-----
```

```
-----
List RU4370 Configuration Parameters
```

```
-----
DeviceNumber = 2
NumberOfReceivingAntennas = 15
Carrier0BandSectorBitmask = 0
UpDownlinkSwitch = Auto
ULGainCorrection(dBm) = 0
CarrierULEnable = ENABLED
CarrierDLEnable = ENABLED
HeadCompressMode = Uplan with compression head
CbrsSwitch = off
Channel1RFSwitch = on
CH1ULAttenuation(dB) = 0
CH1DLAttenuation(dB) = 0
Channel2RFSwitch = on
CH2ULAttenuation(dB) = 0
CH2DLAttenuation(dB) = 0
Channel3RFSwitch = on
-----
```

3. Solution

Change the carrier mask of RRU2 to 15. The alarms are cleared.

```
Last login: Tue Nov 14 04:43:05 2023 from 127.0.0.1
[root@localdomain ~]# tail -f /opt/bbu/om/log/phy.startup
2023/11/14 -05 04:46:17.954025
2023/11/14 -05 04:46:17.980594 Core usage= 5 11 11 11 11 11 10 11 TotalCoreUsage= 81
2023/11/14 -05 04:46:27.161104
2023/11/14 -05 04:46:27.168921 nSfIdx= 4 nReadSf= 4 nTotalActiveDlCell= 2 nTotalActiveUlCell= 2, nActiveDlCell=02, nActiveUlCell=02
2023/11/14 -05 04:46:28.187324
2023/11/14 -05 04:46:28.202173 Core usage= 5 11 11 11 11 11 11 11 TotalCoreUsage= 81
2023/11/14 -05 04:46:37.408802
2023/11/14 -05 04:46:37.408574 nSfIdx= 3 nReadSf= 4 nTotalActiveDlCell= 2 nTotalActiveUlCell= 2, nActiveDlCell=02, nActiveUlCell=02
2023/11/14 -05 04:46:38.426310
2023/11/14 -05 04:46:38.440310 Core usage= 5 11 11 11 11 11 11 11 TotalCoreUsage= 82
2023/11/14 -05 04:46:47.038514
2023/11/14 -05 04:46:47.046327 nSfIdx=20479 nReadSf=20479 nTotalActiveDlCell= 2 nTotalActiveUlCell= 2, nActiveDlCell=02, nActiveUlCell=02
2023/11/14 -05 04:46:48.065322
2023/11/14 -05 04:46:48.079890 Core usage= 5 11 11 11 11 11 11 11 TotalCoreUsage= 82
2023/11/14 -05 04:46:57.888041
2023/11/14 -05 04:46:57.888406 nSfIdx= 3 nReadSf= 3 nTotalActiveDlCell= 2 nTotalActiveUlCell= 2, nActiveDlCell=02, nActiveUlCell=02
2023/11/14 -05 04:46:58.907274
2023/11/14 -05 04:46:58.921512 Core usage= 5 11 11 11 11 11 10 11 TotalCoreUsage= 81
2023/11/14 -05 04:47:08.118706
2023/11/14 -05 04:47:08.126036 nSfIdx=20479 nReadSf= 0 nTotalActiveDlCell= 2 nTotalActiveUlCell= 2, nActiveDlCell=02, nActiveUlCell=02
```

Q Search

Home

Home

General Parameters

Device

Alarm

Performance

Config

Debug

Home / Running Status

Parameter name	Parameter value
OpState	cell1: normal
	cell2: normal
AMF State	normal
Online UE	cell1: 0; cell2: 0
UpTime	0 : 1 : 15 : 32
CurrentAlarm	0

Refresh

Help