# 无线电关闭时，数据包转发器在IXM上不启动

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## 简介

本文档介绍如何解决IXM上的数据包转发器在IXM上LoRa无线电关闭时无法启动的问题。

## 问题

部署新的IXM并安装Activile LRR软件包时，您可以在LRR trace.log中看到以下消息：

```
Gateway#show packet-forwarder log name trace 250
...
03:40:45.990  (00834) [../main.c:954] no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/dyncalib.ini'
03:40:45.990  (00834) [../main.c:979] search
'/tmp/mdm/pktfwd/firmware/lrr/config/channels_eu868_2015.ini'
03:40:45.990  (00834) [../main.c:2127] load default
'/tmp/mdm/pktfwd/firmware/lrr/config/channels_eu868_2015.ini'
03:40:45.990  (00834) [../main.c:951] search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/channels.ini'
03:40:45.990  (00834) [../main.c:954] no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/channels.ini'
03:40:45.991  (00834) [../main.c:2354] lgw thread is started
03:40:45.991  (02398) [../lgw_gen.c:1820] start lrr.x/lgw th=b63a7380 pid=834 count=1 capture=0
03:40:45.993  (02398) [../lgw_x8.c:1053] BOARD1 RADIO cannot be started ret=-1 'Invalid version
number for the top FPGA'
03:40:45.993  (02398) [../lgw_gen.c:1530] enter Idle loop ... waiting for cancelation
03:41:45.980  (00834) [../main.c:5346] no LRC connection during more than 1200sec => revssh
```

数据包转发会停止进一步的初始化，并且不会尝试连接到TPE或TPW LRC。

## 解决方案

错误的原因是IXM上未启动无线电，尽管从错误消息中无法清除。

这称为“开箱即用”。

您可以按如下方式检查：

```
Gateway#show radio
LORA_SN: FOC203310DG
```

```
LORA_PN: 95.1602T00
LORA_SKU: 868
LORA_CALC: <135,123,115,107,99,95,91,87,78,70,62,53,45,41,37,33-
133,120,112,104,96,92,88,84,75,67,59,51,43,39,35,31>
CAL_TEMP_CELSIUS: 34
CAL_TEMP_CODE_AD9361: 90
RSSI_OFFSET: -204.07,-203.78
LORA_REVISION_NUM: A0+
RSSI_OFFSET_AUS:

radio status:
off
```

如您在最后一行中看到的，无线电被标记为关闭。

要打开无线电，请执行以下操作：

```
Gateway#configure terminal
Gateway(config)#no radio off
Gateway(config)#exit
*Aug 06 03:45:28: Configured from console by console
Gateway#copy running-config start
!

Copy 333 bytes took 00:00:01 [hh:mm:ss]
```

然后，重新启动数据包转发器：

```
Gateway#configure terminal
Gateway(config)#packet-forwarder restart
Restarted packet-forwarder
Gateway(config)#exit
*Aug 06 03:46:07: Configured from console by console
```

如您现在在TRACE.log中所看到，数据包转发器能够启动：

```
Gateway#show packet-forwarder log name trace 250
...
#################################################################
### restart(1) : 20160806  03:45:43
### pid=2741 szmax=unlimited (config files not yet read)
#################################################################
03:45:43.479  (02741) Traces activated for startup
03:45:43.515  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/bootserver.ini'
03:45:43.515  (02741) no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/bootserver.ini'
03:45:43.515  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/_system.sh'
03:45:43.515  (02741) load custom '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/_system.sh'
03:45:43.516  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/_parameters.sh'
03:45:43.516  (02741) load custom '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/_parameters.sh'
03:45:43.516  (02741) search '/tmp/mdm/pktfwd/firmware/lrr/config/defines.ini'
03:45:43.516  (02741) load default '/tmp/mdm/pktfwd/firmware/lrr/config/defines.ini'
03:45:43.516  (02741) search '/tmp/mdm/pktfwd/firmware/lrr/config/defines.ini'
03:45:43.516  (02741) load default '/tmp/mdm/pktfwd/firmware/lrr/config/defines.ini'
03:45:43.516  (02741) search '/tmp/mdm/pktfwd/firmware/lrr/config/lrr.ini'
03:45:43.516  (02741) load default '/tmp/mdm/pktfwd/firmware/lrr/config/lrr.ini'
03:45:43.519  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/lrr.ini'
03:45:43.519  (02741) load custom '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/lrr.ini'
03:45:43.519  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/gpsman.ini'
```

```
03:45:43.519  (02741) no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/gpsman.ini'
03:45:43.519  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/custom.ini'
03:45:43.519  (02741) load custom '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/custom.ini'
03:45:43.519  (02741) search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/_state.ini'
03:45:43.519  (02741) no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/_state.ini'
03:45:43.522  (02741) [trace.c:128] TRACE used szmax: 1000000
03:45:43.522  (02741) [../main.c:7781] start lrr.x/main th=b6adc010 pid=2741 sickrestart=0
03:45:43.522  (02741) [../main.c:7782] @(#) Actility lrr 2.4.21 07/09/18 target=ciscoms
host=Ubuntu14-dev
03:45:43.522  (02741) [../main.c:7783] SX1301_AR
03:45:43.522  (02741) [../main.c:7785] HAL 5.1.0
03:45:43.522  (02741) [../main.c:7788] lrrid=68480c3f lrridext=0000 lrridpref=04
03:45:43.522  (02741) [../main.c:979] search '/tmp/mdm/pktfwd/firmware/lrr/config/lowlvlgw.ini'
03:45:43.522  (02741) [../main.c:2020] load default
'/tmp/mdm/pktfwd/firmware/lrr/config/lowlvlgw.ini'
03:45:43.522  (02741) [../main.c:979] search
'/tmp/mdm/pktfwd/firmware/lrr/config/lowlvlgw_ciscoms.ini'
03:45:43.522  (02741) [../main.c:2030] load default
'/tmp/mdm/pktfwd/firmware/lrr/config/lowlvlgw_ciscoms.ini'
03:45:43.523  (02741) [../main.c:979] search
'/tmp/mdm/pktfwd/firmware/lrr/config/lgwx8_eu868_2015.ini'
03:45:43.523  (02741) [../main.c:2041] load default
'/tmp/mdm/pktfwd/firmware/lrr/config/lgwx8_eu868_2015.ini'
03:45:43.523  (02741) [../main.c:951] search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/lowlvlgw.ini'
03:45:43.523  (02741) [../main.c:2065] load custom
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/lowlvlgw.ini'
03:45:43.523  (02741) [../main.c:951] search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/lgw.ini'
03:45:43.523  (02741) [../main.c:954] no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/lgw.ini'
03:45:43.523  (02741) [../main.c:951] search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/dyncalib.ini'
03:45:43.523  (02741) [../main.c:954] no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/dyncalib.ini'
03:45:43.523  (02741) [../main.c:979] search
'/tmp/mdm/pktfwd/firmware/lrr/config/channels_eu868_2015.ini'
03:45:43.523  (02741) [../main.c:2127] load default
'/tmp/mdm/pktfwd/firmware/lrr/config/channels_eu868_2015.ini'
03:45:43.524  (02741) [../main.c:951] search '/tmp/mdm/pktfwd/firmware/usr/etc/lrr/channels.ini'
03:45:43.524  (02741) [../main.c:954] no custom configuration file
'/tmp/mdm/pktfwd/firmware/usr/etc/lrr/channels.ini'
03:45:43.525  (02741) [../main.c:7119] IfaceDaemon disabled
03:45:43.525  (02741) [../main.c:2296] gps thread is started
03:45:43.525  (02741) [../main.c:2354] lgw thread is started
03:45:43.525  (02741) [../shellcmd.c:155] cmd thread is started
03:45:43.525  (02741) [../rttping.c:406] thread itf idx=0 name='eth0' is started
03:45:43.525  (02741) [../main.c:7831] TRACE LEVEL IS SET TO 0
03:45:43.525  (02746) [../rttping.c:342] thread itf idx=0 name='eth0' is looping
03:45:43.526  (02744) [../lgw_gen.c:1820] start lrr.x/lgw th=b62da380 pid=2741 count=1 capture=0
03:45:43.527  (02743) [../gps.c:148] start lrr.x/gps th=b6adb380 pid=2741 count=1
```