

## How to band lock on the Sierra EM7690/9190/9191

Create a band Index

at!band=0D .... Named zero D ( 0D ) ....

Then tell it you want to create or add the rules

at!band=0D,1,..... ( 0 is to delete a rule and 1 is to create or add )

...give it a simple name,

at!band=0D,1,"CUSTOM BANDS",...

...then create a band mask for either LTE, NRSA (Stand Alone) or NRNSA ( Non-Stand Alone )

LTE uses a 1 after the name

at!band=0D,1,"CUSTOM BANDS",1,0000A3E2BB0F38DF,0000000000000042

NRNSA uses a 3 after the name

at!band=0D,1,"CUSTOM BANDS",3,0000010008000017,0000000000007042

NRSA uses a 4 after the name

at!band=0D,1,"CUSTOM BANDS",4,0000010008000017,0000000000007042

( 0 is for "GW", I'm guessing this is 3G/WCDMA)

Once you have the masks created, then set your mask as prior Sierras: AT!BAND=0D

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These are the full stock/default masks for the EM9191 as of update 03.09.11.00:

at!band=?

Index, Name

00, All bands

- 0 - GW: 100600000FC00000
- 1 - LTE: 0000A3E2BB0F38DF 0000000000000042
- 3 - NRNSA: 0000010008000017 0000000000007042
- 4 - NRSA: 0000010008000017 0000000000007042

01, Europe 3G

- 0 - GW: 0002000000400000
- 1 - LTE: 0000000000000000 0000000000000000
- 3 - NRNSA: 0000000000000000 0000000000000000
- 4 - NRSA: 0000000000000000 0000000000000000

02, North America 3G

- 0 - GW: 0000000004800000
- 1 - LTE: 0000000000000000 0000000000000000
- 3 - NRNSA: 0000000000000000 0000000000000000
- 4 - NRSA: 0000000000000000 0000000000000000

06, Europe

- 0 - GW: 0002000000400000
- 1 - LTE: 00000000000800C5 0000000000000000
- 3 - NRNSA: 0000000000000000 0000000000000000
- 4 - NRSA: 0000000000000000 0000000000000000

07, North America

- 0 - GW: 0000000004800000
- 1 - LTE: 000001000301385A 0000000000000042
- 3 - NRNSA: 0000000000000000 0000000000000000

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4 - NRSA: 0000000000000000 0000000000000000

08, WCDMA ALL

0 - GW: 100600000FC00000

1 - LTE: 0000000000000000 0000000000000000

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

09, LTE ALL

0 - GW: 0000000000000000

1 - LTE: 0000A3E2BB0F38DF 0000000000000042

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

0C, NR5G ALL

0 - GW: 0000000000000000

1 - LTE: 0000000000000000 0000000000000000

3 - NRNSA: 0000010008000017 0000000000007042

4 - NRSA: 0000010008000017 0000000000007042

Available:

0 - GW:

1000000000000000 - B19 (850)

0004000000000000 - B9 (1700)

0002000000000000 - B8 (900)

0000000008000000 - B6 (800)

0000000004000000 - B5 (850)

0000000002000000 - B4 (1700)

0000000001000000 - B3 (1700)

0000000000800000 - B2 (1900)

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000000000400000 - B1 (2100)

1 - LTE:

1/0000800000000000 - B48

1/0000200000000000 - B46

1/0000020000000000 - B42

1/0000010000000000 - B41

1/0000008000000000 - B40

1/0000004000000000 - B39

1/0000002000000000 - B38

1/0000000200000000 - B34

1/0000000080000000 - B32

1/0000000020000000 - B30

1/0000000010000000 - B29

1/0000000008000000 - B28

1/0000000002000000 - B26

1/0000000001000000 - B25

1/0000000000800000 - B20

1/0000000000400000 - B19

1/0000000000200000 - B18

1/0000000000100000 - B17

1/0000000000020000 - B14

1/0000000000010000 - B13

1/0000000000008000 - B12

1/0000000000000800 - B8

1/0000000000000040 - B7

1/0000000000000010 - B5

1/0000000000000008 - B4

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1/0000000000000004 - B3

1/0000000000000002 - B2

1/0000000000000001 - B1

2/0000000000000040 - B71

2/0000000000000002 - B66

3 - NRNSA:

1/0000010000000000 - n41

1/0000000080000000 - n28

1/0000000000000010 - n5

1/0000000000000004 - n3

1/0000000000000002 - n2

1/0000000000000001 - n1

2/0000000000004000 - n79

2/0000000000002000 - n78

2/0000000000001000 - n77

2/0000000000000040 - n71

2/0000000000000002 - n66

4 - NRSA:

1/0000010000000000 - n41

1/0000000080000000 - n28

1/0000000000000010 - n5

1/0000000000000004 - n3

1/0000000000000002 - n2

1/0000000000000001 - n1

2/0000000000004000 - n79

2/0000000000002000 - n78

2/0000000000001000 - n77

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2/0000000000000040 - n71

2/0000000000000002 - n66

OK

This is with our new custom bands setup:

at!band=0D,1,"CUSTOM BANDS",1,0000A3E2BB0F38DF,0000000000000042

OK

at!band=0D,1,"CUSTOM BANDS",3,0000010008000017,00000000000007042

OK

at!band=?

Index, Name

00, All bands

0 - GW: 100600000FC00000

1 - LTE: 0000A3E2BB0F38DF 0000000000000042

3 - NRNSA: 0000010008000017 00000000000007042

4 - NRSA: 0000010008000017 00000000000007042

01, Europe 3G

0 - GW: 0002000000400000

1 - LTE: 0000000000000000 0000000000000000

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

02, North America 3G

0 - GW: 0000000004800000

1 - LTE: 0000000000000000 0000000000000000

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3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

06, Europe

0 - GW: 0002000000400000

1 - LTE: 0000000000800C5 0000000000000000

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

07, North America

0 - GW: 0000000004800000

1 - LTE: 000001000301385A 0000000000000042

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

08, WCDMA ALL

0 - GW: 100600000FC00000

1 - LTE: 0000000000000000 0000000000000000

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

09, LTE ALL

0 - GW: 0000000000000000

1 - LTE: 0000A3E2BB0F38DF 0000000000000042

3 - NRNSA: 0000000000000000 0000000000000000

4 - NRSA: 0000000000000000 0000000000000000

0C, NR5G ALL

0 - GW: 0000000000000000

1 - LTE: 0000000000000000 0000000000000000

3 - NRNSA: 0000010008000017 0000000000007042

4 - NRSA: 0000010008000017 0000000000007042

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0D, CUSTOM BANDS

0 - GW: 0000000000000000  
1 - LTE: 0000A3E2BB0F38DF 0000000000000042  
3 - NRNSA: 0000010008000017 0000000000007042  
4 - NRSA: 0000000000000000 0000000000000000

Set the modem to use the "CUSTOM BANDS":

at!band=0D

OK

at!band?

Index, Name

0D, CUSTOM BANDS,

0 - GW: 0000000000000000  
1 - LTE: 0000A3E2BB0F38DF 0000000000000042  
3 - NRNSA: 0000010008000017 0000000000007042  
4 - NRSA: 0000000000000000 0000000000000000

OK

**Example use case:** Modify only the LTE bands set to B66 only:

at!band=0D,1,"CUSTOM BANDS",1,0000000000000000,0000000000000002

OK

at!band?

Index, Name

0D, CUSTOM BANDS,

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0 - GW: 0000000000000000

1 - LTE: 0000000000000000 0000000000000002

3 - NRNSA: 0000010008000017 0000000000007042

4 - NRSA: 0000000000000000 0000000000000000

OK

Set bands back to default, ALL BANDS:

at!band=00

OK

at!band?

Index, Name

00, All bands,

0 - GW: 100600000FC00000

1 - LTE: 0000A3E2BB0F38DF 0000000000000042

3 - NRNSA: 0000010008000017 0000000000007042

4 - NRSA: 0000010008000017 0000000000007042

OK

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