

Radiated Power - EIRP / ERP

In accordance with FCC **KDB 412172 D01 Determining ERP and EIRP v01r01** please find below our calculations for determining the ERP and EIRP for the combination of module and host device covered under the scope of this C2PC filing.

The maximum output powers from the tune-up procedure are:

Mode/band	Max Output power	
WCDMA Band II	24.5 dBm	0.282 W
WCDMA Band IV	24.5 dBm	0.282 W
WCDMA Band V	24.5 dBm	0.282 W
LTE B2 (1900MHz)	24 dBm	0.251 W
LTE B4 (1700MHz)	24 dBm	0.251 W
LTE B5 (850MHz)	24 dBm	0.251 W
LTE B7 (2600MHz)	24 dBm	0.251 W
LTE B12 (700MHz)	24 dBm	0.251 W
LTE B13 (750MHz)	24 dBm	0.251 W
LTE B14 (750MHz)	24 dBm	0.251 W
LTE B17 (700MHz)	24 dBm	0.251 W
LTE B25 (1900MHz)	24 dBm	0.251 W
LTE B26 (850MHz)	24 dBm	0.251 W
LTE B38 (2600MHz)	24 dBm	0.251 W
LTE B41 (2600MHz)	24 dBm	0.251 W
LTE B48 (3500MHz)	19.7 dBm	0.093 W
LTE B66 (1700MHz)	24 dBm	0.251 W
LTE B71 (600MHz)	24 dBm	0.251 W
NR n2 (1900MHz)	24.5 dBm	0.282 W
NR n5 (850MHz)	24.5 dBm	0.282 W
NR n41 (2600MHz)	24.5 dBm	0.282 W
NR n66 (1700MHz)	24.5 dBm	0.282 W
NR n71 (600MHz)	24.5 dBm	0.282 W
NR n77 (3500MHz)	24.5 dBm	0.282 W

The Antenna gain of the FZ-40 host system is as follows;

* LTE Band 71/ NR n71 (600MHz) :	.....	-0.68 dBi	(-2.83 dBd)
* LTE Band 12, 17 (700MHz) :	.....	0.26 dBi	(-1.89 dBd)
* LTE Band 13 (750MHz) :	.....	0.11 dBi	(-2.26 dBd)
* LTE Band 14 (750MHz) :	.....	-0.57 dBi	(-2.72 dBd)
* WCDMA Band V / LTE Band 5, 26 / NR n5 (850MHz) :	.....	-0.09 dBi	(-2.24 dBd)
* WCDMA Band IV / LTE Band 4, 66 / NR n66 (1700MHz) :	...	1.48 dBi	
* WCDMA Band II /LTE Band 2, 25 / NR n2 (1900MHz) :	....	1.99 dBi	
* LTE Band 7 (2600MHz) :	.....	1.97 dBi	
* LTE Band 38, 41 / NR n41 (2600MHz) :	.....	2.29 dBi	
* LTE Band 48/NR n77 (3500MHz) :	.....	1.40 dBi	

Note: LTE Band30 is disabled when the module is installed in the FZ-40 host system at the factory.

The ERP/EIRP values for the module in this host system can be calculated using option 2.1 of the KDB referenced above:

$$\text{ERP/EIRP} = P_T + G_T - L_c \text{ in this host are}$$

Mode/band	ERP/EIRP	Conducted Power	Antenna gain	ERP/EIRP	
WCDMA Band II (1900)	EIRP	24.5 dBm	1.99 dBi	26.49 dBm	0.446 W
WCDMA Band IV (1700)	EIRP	24.5 dBm	1.48 dBi	25.98 dBm	0.396 W
WCDMA Band V (850)	ERP	24.5 dBm	-2.24 dBd	22.26 dBm	0.168 W
LTE B2 (1900MHz)	EIRP	24 dBm	2.75 dBi	26.75 dBm	0.473 W
LTE B4 (1700MHz)	EIRP	24 dBm	1.99 dBi	25.99 dBm	0.397 W
LTE B5 (850MHz)	ERP	24 dBm	-2.24 dBd	21.76 dBm	0.150 W
LTE B7 (2500MHz)	EIRP	24 dBm	1.97 dBi	25.97 dBm	0.395 W
LTE B12 (700MHz)	ERP	24 dBm	-1.89 dBd	22.11 dBm	0.163 W
LTE B13 (750MHz)	ERP	24 dBm	-2.26 dBd	21.74 dBm	0.149 W
LTE B14 (750MHz)	ERP	24 dBm	-2.72 dBd	21.28 dBm	0.134 W
LTE B17 (700MHz)	ERP	24 dBm	-1.89 dBd	22.11 dBm	0.163 W
LTE B25 (1900MHz)	EIRP	24 dBm	1.99 dBi	25.99 dBm	0.397 W
LTE B26 (850MHz)	ERP	24 dBm	-2.24 dBd	21.76 dBm	0.150 W
LTE B38 (2600MHz)	EIRP	24 dBm	2.29 dBi	26.29 dBm	0.426 W
LTE B41 (2600MHz)	EIRP	24 dBm	2.29 dBi	26.29 dBm	0.426 W
LTE B48 (3500MHz)	EIRP	19.7 dBm	1.40 dBi	21.10 dBm	0.129 W
LTE B66 (1700MHz)	EIRP	24 dBm	1.48 dBi	25.48 dBm	0.353 W
LTE B71 (600MHz)	ERP	24 dBm	-2.83 dBd	21.17 dBm	0.131 W
NR n2 (1900MHz)	EIRP	24.5 dBm	1.99 dBi	26.49 dBm	0.446 W
NR n5 (850MHz)	ERP	24.5 dBm	-2.24 dBd	22.26 dBm	0.168 W
NR n41 (2600MHz)	EIRP	24.5 dBm	2.29 dBi	26.79 dBm	0.478 W
NR n66 (1700MHz)	EIRP	24.5 dBm	1.48 dBi	25.98 dBm	0.396 W
NR n71 (600MHz)	ERP	24.5 dBm	-2.83 dBd	21.67 dBm	0.147 W
NR n77 (3500MHz)	EIRP	24.5 dBm	1.40 dBi	25.90 dBm	0.389 W