

## Product Specification

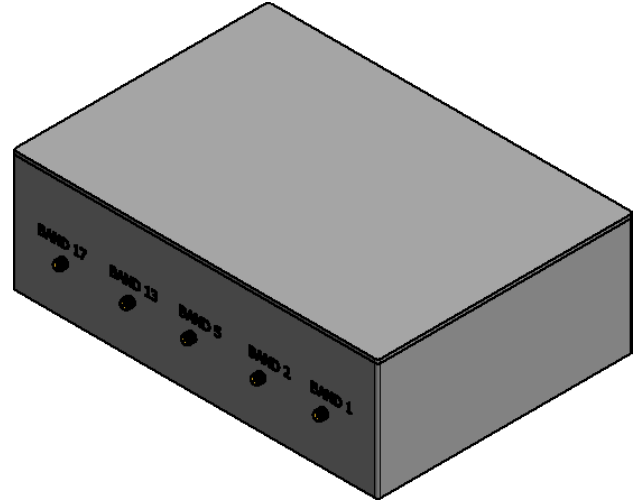
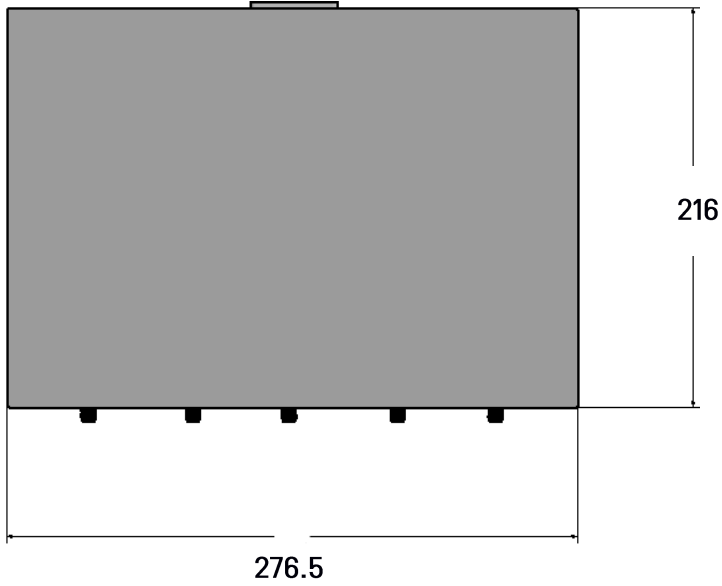
### CMIINV-5BT2-RM Band 1/Band 2/Band 5/Band 13/Band 17 Receive Module

Electrical Specifications		Band 1 (LTE2100)
Frequency Range Band 1 Down-link		2110 to 2170 MHz
Frequency Range Band 1 Up-Link		1920 to 1980 MHz
Band 1 Up-Link/Down-Link Isolation		50dB min
Band 1 Rejection		50dB min DC – 1880 MHz, 2300 – 3000 MHz
		Band 2 (PCS-1900)
Frequency Range Band 2 Down-link		1930 to 1990 MHz
Frequency Range Band 2 Up-Link		1850 to 1910 MHz
Band 2 Up-Link/Down-Link Isolation		50dB min
Band 2 Rejection		50dB min DC – 1750 MHz, 2100 – 3000 MHz
		Band 5 (GSM 850)
Frequency Range Band 5 Down-link		869-894 MHz
Frequency Range Band 5 Up-Link		824-849 MHz
Band 5 Up-Link/Down-Link Isolation		50dB min
Band 5 Rejection		50dB min DC – 724 MHz, 1000 – 3000MHz
		Band 13 (Upper 700MHz)
Frequency Range Band 13 Down-link		746 to 756 MHz
Frequency Range Band 13 Up-Link		777 to 787 MHz
Band 13 Up-Link/Down-Link Isolation		50dB min
Band 13 Rejection		50dB min DC – 650 MHz, 900 – 3000MHz
		Band 17 (lower 700MHz)
Frequency Range Band 17 Down-link		734 to 746 MHz
Frequency Range Band 17 Up-Link		704 to 716 MHz
Band 17 Up-Link/Down-Link Isolation		50dB min
Band 17 Rejection		50dB min DC – 600 MHz, 850 – 3000MHz

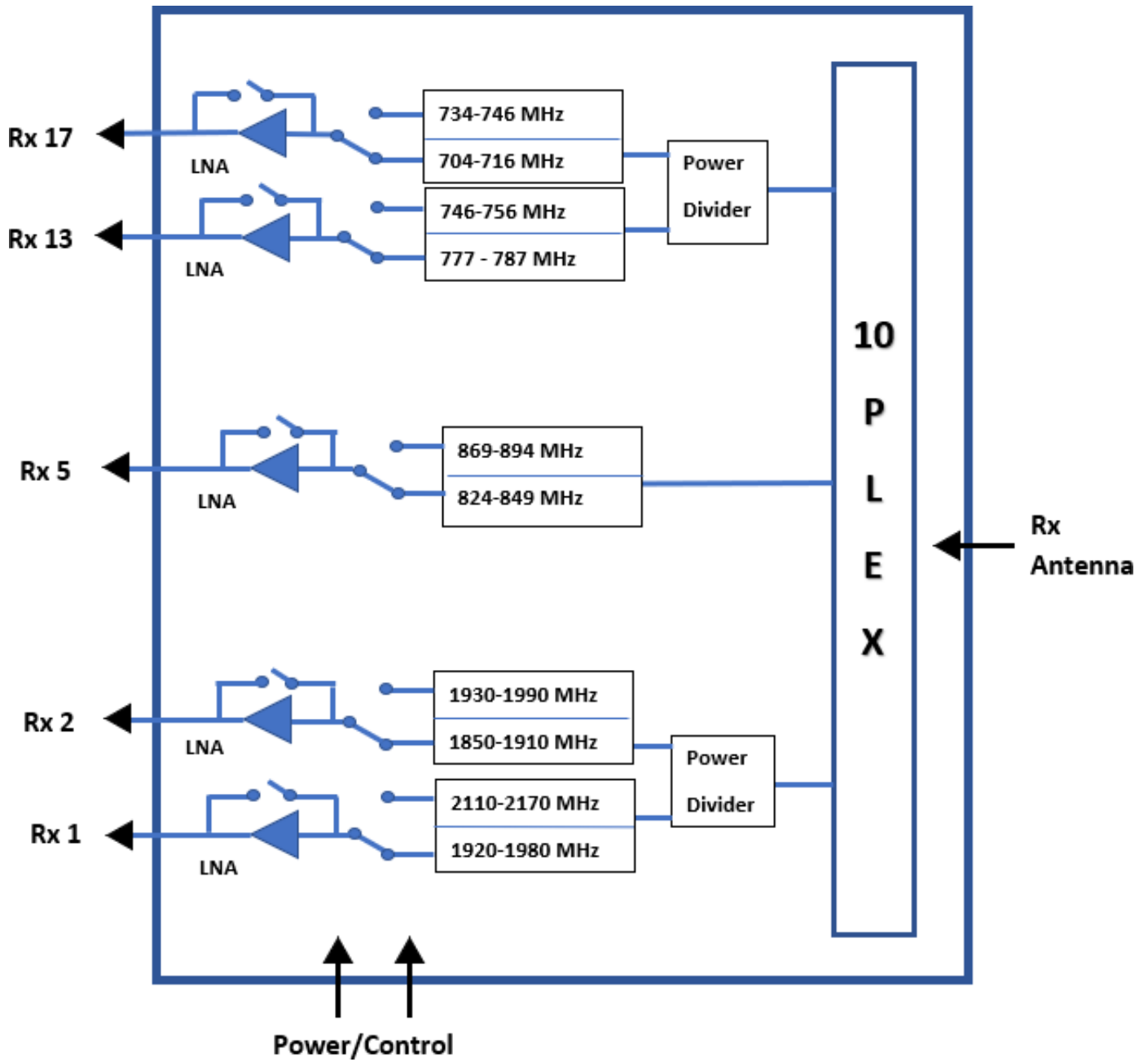
Electrical Specifications Continued	
Insertion Loss, all bands (Antenna to RX port)	-13dB max (LNA Bypass Mode) +19dB min (LNA Enable Mode)
LNA Noise Figure	0.7 dB typ.
Return Loss	10 dB min
RF Input Power	+30dBm Max In-Band RF Power at Ant (LNA Disabled) +40Bm Max Out-of-Band RF Power at Ant -30dBm LTE/UMTS Signal (LNA Enabled) +30dBm No Damage (LNA Enabled)
RF Input / Output Connectors	SMA-Female
Impedance	50 $\Omega$
DC Input Power	12 Volts +/-10% 300mA max
Switching and Bypass Control	RS-422
DC Power and Control Connector	25 Pin Female D-SUB Connector
Operating Temperature	-20° C to +50° C
Dimensions	276.5 mm x 216 mm x 84 mm

## Overall Dimensions

Note: All dimensions are in mm



# Block Diagrams



## Connector Pin Out

Pin #	Function
1, 2	+12VDC Power
3, 4	Power Return
5	Band 1 Tx/Rx Select +
6	Band 1 Tx/Rx Select -
7	Band 1 LNA Bypass Control +
8	Band 1 LNA Bypass Control -
9	Band 2 Tx/Rx Select +
10	Band 2 Tx/Rx Select -
11	Band 2 LNA Bypass Control +
12	Band 2 LNA Bypass Control -
13	Band 5 Tx/Rx Select +
14	Band 5 Tx/Rx Select -
15	Band 5 LNA Bypass Control +
16	Band 5 LNA Bypass Control -
17	Band 13 Tx/Rx Select +
18	Band 13 Tx/Rx Select -
19	Band 13 LNA Bypass Control +
20	Band 13 LNA Bypass Control -
21	Band 17 Tx/Rx Select +
22	Band 17 Tx/Rx Select -
23	Band 17 LNA Bypass Control +
24	Band 17 LNA Bypass Control -
25	No Connect

## Truth Tables

UL/DL Select +	UL/DL Select -	State
1	0	DL Band Connected to Antenna
0	1	UL Band Connected to Antenna

LNA Bypass Control +	LNA Bypass Control -	State
1	0	LNA Bypassed
0	1	LNA Enabled

Controls for Bands 1, 2, 5, 13 and 17 are identical