

# Broadband Wireless Specifications

## GENERAL

Standard Coverage	10 km radius with 25 km option	25 km
Frequency Band	10 to 10.5 GHz	3.6 to 4.2 GHz
Frequency Separation	350 MHz	Typically 100 MHz
Availability	Up to 99.99%	
EMC and radio compliance	EN 301 489-1, EN 301 489-4 & EN 301 021	
Environmental compliance	ETS 300 019-1-4, ETS 300 019-2-4 Class 4.1	
Antenna compliance	Base Stn EN 302 085 CS Class 1, CPE EN 302 085 TS4 Range 3	

## 10.5 GHz SYSTEM

## 3.5 GHz SYSTEM

## CPE WIRELESS UNIT

<b>General</b>	Output freq to modem	469 to 497MHz	380MHz nominal
	Input freq from modem	14.5 to 42.5 MHz	
	Frequency error	<20 kHz	
	Phase noise	<-77 dBc/Hz at 10 kHz	
	Out of Band Spurious	<-40 dBm on RF ports	
	Beacon detection range	<-100 dBm to > -45 dBm	No beacon
<b>Receiver</b>	Noise Figure	<5 dB (3.5 dB typical)	
	Gain	28 dB nominal +/-6 dB	
	Gain flatness	<4 dB total, <2 dB over 6 MHz	
	In band spurious	Below noise in 100 kHz band	
	1 dB compression	-20 dBm at output	
<b>Transmitter</b>	Gain	22 dB nominal +/-6 dB	
	Gain flatness	<5 dB total, <2 dB over 3 MHz	
	1 dB compression	>17dBm	>23dBm
<b>Antenna</b>	Beamwidth	<20deg	<40/80 deg
	Nominal Gain	20/22 dBi , 32 dBi option	11 dBi
	Polarisation	Vert up, Hor down (or vice versa)	
<b>Power</b>	Voltage	12V+/-5% with 40m of CT100	
	Current drain	< 600 mA	
<b>Physical</b>	Operating Temp	-20 to +55 degree C	
	Water and dust	IP66 (without drain hole)	
	Connector	Single 75 ohm F-type Female	
	Weight	<2.5 kg	
	Size	21 x 22 x 5 cm	

## BASE STATION TRANSCIVER

<b>General</b>	Output freq to Router	14.5 to 42.5 MHz
	Input freq from Router	466 to 494 MHz
	Frequency error	<2 kHz
	Phase noise	<-80 dBc/Hz at 10 kHz
	Out of Band Spurious	<-50dBm on RF ports
<b>Receiver</b>	Noise Figure	<4.0 dB
	Gain	40 dB nominal +/-3 dB
	Gain flatness	<4 dB total, <3 dB over 6 MHz
	In band spurious	Below noise in 100 kHz band
	1 dB compression	-5 dBm at output
<b>Transmitter</b>	Input power range	23 to 38 dBmV
	Output 1 dB comp	>35dBm
	Transmit power	26dBm nominal
	Power variation	<1.5 dB over temperature
<b>Antenna</b>	Beamwidth	90 deg in azimuth cosecant <sup>2</sup> in elevation
	Nominal Gain	19 dBi
	Polarisation	Vert upstream, Hor down (or vice versa)
<b>Power</b>	Voltage	-48 V +/-5%
	Current drain	< 1.25A
<b>Physical</b>	Operating Temp	-20 to +55 degree C
	Water and dust	IP66
	Connectors	2 75 Ohm N Type Female + 1 Multipole for power and BIT
	Built in Test	Single Contact closure pair for oscillators & output powers
	Weight	20 kg approx
	Size	50 x 35 x 35 cm