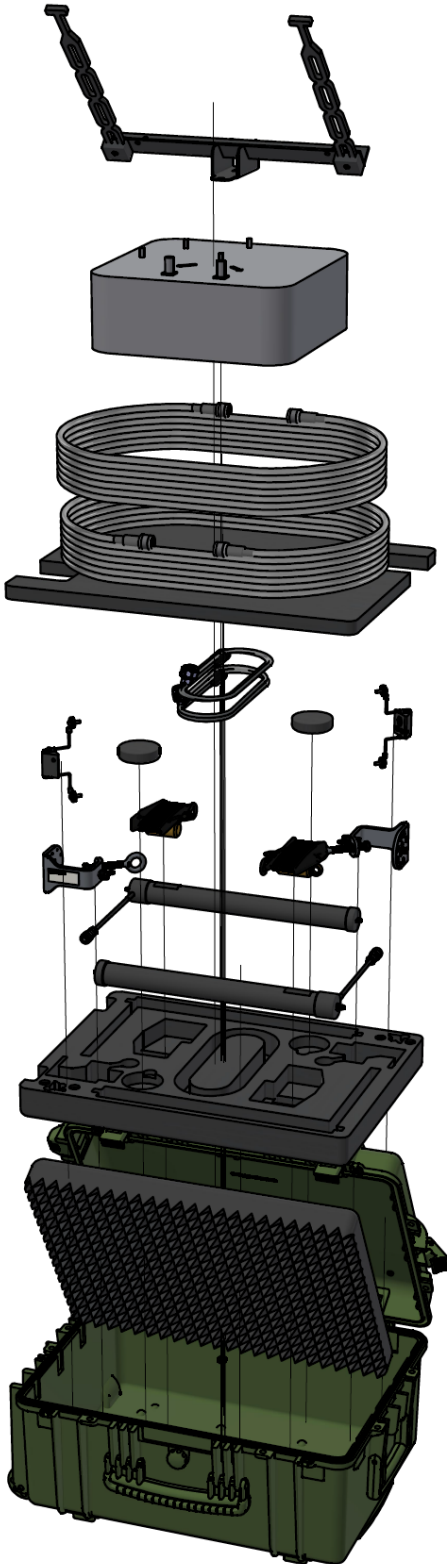


Technical Description

COMRE-HVTKN is a highly configurable range extender kit for 4G/LTE mobile modems consisting of directional and omnidirectional antennas, cables, and versatile mounting brackets.

- Designed to improve 4G/LTE range in areas with poor 4G coverage
- Dual polarized dual band directional panel antenna 698-960 MHz, 1710-2700 MHz
- 2 x omnidirectional antennas 700-2700 MHz
- Universal brackets for wall, pole, magnet, and mast mounting
- Throwing cords for hoisting omnidirectional antennas
- 4 x 0.5 m jumper cables.
2 x N(f) to SMA(m). 2 x N(f) to N(m)
- 2 x 12m LMR400 feed cables
- Kit stored in a single hard case - 620w x 500d x 290t (mm)
- Optional 18m LMR600 feed cables (x2)



Dual Polarised Dual-Band Panel Antenna



Pole mounted using rubber straps



Wall mounted using magnet mounts



2 x magnet mounts and 2 x jumper cables attached

Electrical Specification

Frequency range	698-960 MHz, 1710-2700 MHz
Impedance	50 Ohm
Polarisation	Dual Polarised: +/- 45 deg
Gain	8 dBi (nominal)
Beamwidth	Azimuth: 80 deg Elevation: 55 deg
Isolation	>22 dB

Mechanical Specification

Dimensions	304.8 x 304.8 x 111.8 mm 12" x 12" x 4.4" in
Weight	0.91 kg (2 lbs)
Finish	Self colour polycarbonate housing

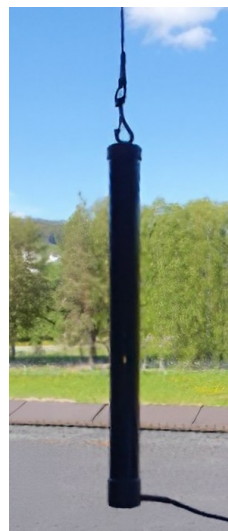
Omnidirectional Antenna (x2)



Pole mounted



Magnet mounted



Hoisted with
throwing cord

Electrical Specifications

Frequency range	700-2700 MHz
Impedance	50 Ohm
Polarisation	Linear
Gain	3 dBi (nominal)
Radiation Pattern	Omnidirectional

Mechanical Specifications

Dimensions	380mm (15 in) Ø37mm (1.5 in)
Weight	0.2 kg (0.44 lbs)
Finish	Polyurethane lacquer - black

Deployment Overview

COMRE-HVTKN can be setup in two configurations using either the directional panel antenna or two omnidirectional antennas. If the direction of the mobile base station is known, it is recommended to use the directional panel antenna. If the direction of the base station is not known, the two omnidirectional antennas should be used. Both installations support 2 x MIMO modems.

Deployment using the Directional Panel Antenna (PLTE7027M)

The directional panel antenna can be used when you know the approximate direction to the nearest or strongest mobile base station. The antenna should be mounted vertically or horizontally, pointing in the direction of the base station. The antenna has two ports, with +45 deg and -45 deg polarization. For the best performance, the antenna must have as few physical obstacles between the front of the antenna and the base stations as possible. Best performance is achieved the higher above the ground it is mounted.

If a vertical or horizontal pole is available, the antenna can be mounted using the panel antenna bracket and rubber bands. The V-bracket will locate the antenna and the rubber bands will hold it securely in place. If a metallic surface is available, the magnetic mounts can be used.

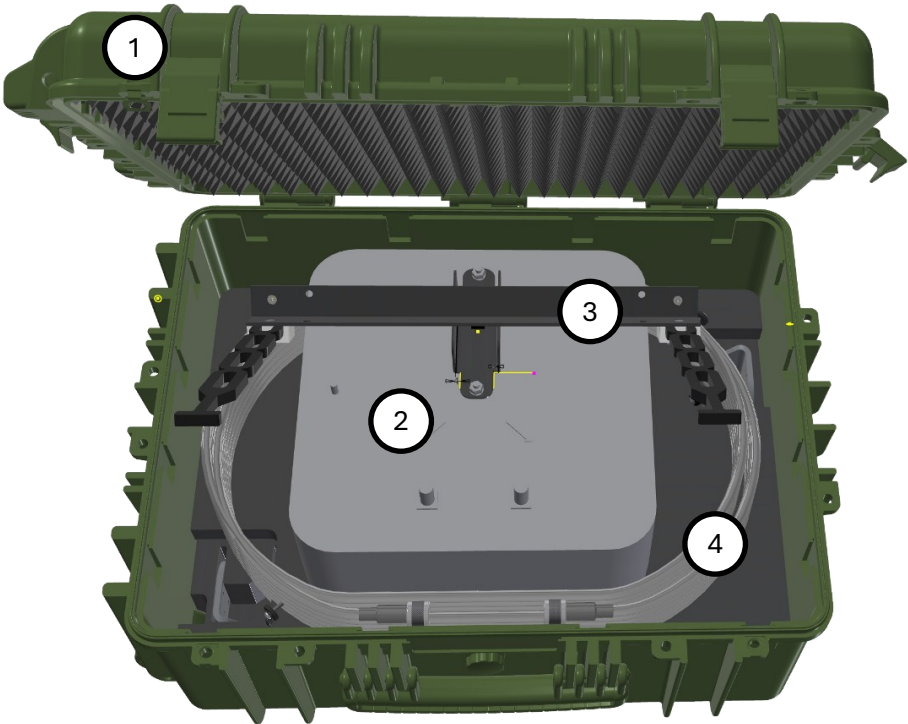
Deployment using omnidirectional Antennas (UHF727MP)

The omnidirectional antennas should be used when the location of the base station isn't known. Antennas can be vertical or horizontal pole mounted using the supplied bracket and magnet mount. They can also be mounted onto any horizontal metallic structure that allows the antenna to sit vertically in free space. To ensure optimal performance, the antennas should be spaced a minimum of 0.5m apart.

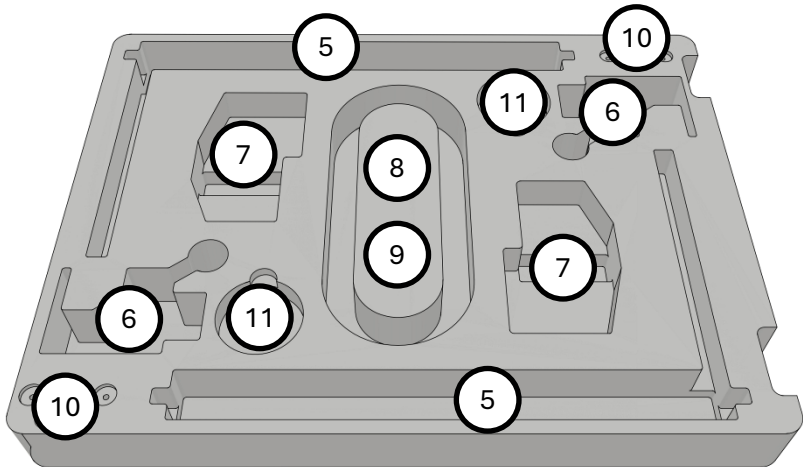
Nominal performance using 12m and optional 18m feed cables

700 MHz						
Cable type	Cable loss (dB)	Max. Gain UHF727MP (dB)	Signal margin UHF727MP antenna (dB)		Max. Gain PLTE7027M (dB)	Signal margin PLTE7027M antenna (dB)
12m LMR 400	-1.8	2.7	1.1		8.2	6.4
18m LMR600	-2.7		0			5.5
18m+12m	-4.5		-1.8			3.7
2100 MHz						
12m LMR 400	-3.3	4.8	1.5		8	4.7
18m LMR600	-4.9		-0.1			3.1
18m+12m	-8.2		-3.4			-0.2

Kit Contents



Lower Foam Contents



Item	Description	Qty	NSN
1	Transport Case	1	5985-25-163-6746
2	Panel Antenna, PCTEL, PLTE7027M	1	5985-25-163-6744
3	Magbase Bracket	1	5985-25-163-6743
4	Cable LMR400, 12m	2	5995-25-163-0796
5	Omnidirectional Antenna UHF727MP	2	5985-25-163-6106
6	Magnet Base Pole Clamp	2	5340-25-162-3467
7	Throwing Cord and Weight	2	5985-25-146-9146
8	Jumper Cable 0.5m N(f)/SMA(m)	2	5985-25-163-6741
9	Jumper Cable 0.5m N(f)/N(m)	2	5985-25-163-6740
10	Magbase Adaptor	2	5985-25-163-6742
11	Magnet Base, 60mm	2	5985-25-163-6107
-	User Manual	1	-

Option	Cable LMR600, 18m	2	5995-25-163-6747
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