

Unlicensed Transmitters: Approved Antennas List

<i>Manufacturer</i>	<i>Antenna</i>	<i>Description</i>	<i>Type</i>	<i>Peak Gain (dBi)</i>	<i>Min Cable loss (dB)</i>	<i>Ω</i>	<i>Connector Type</i>	<i>Notes</i>
PCTEL	Z3182	908-958 MHz Mobile Whip Antenna	Vertical Omnidirectional	5.0	0	50	1-1/8" M-Mount	(1)
PCTEL	2328	1575.42 MHz GPS Antenna	Right-Hand Circular	3.0 (at antenna)	0	50	Male SMA (GPS) Male TNC (Mobile)	(2) (3)
PCTEL (MAXRAD)	MP9027XFPT	902-928 MHz Side Looker Receive Antenna	Linear Directional Panel	9.1	0	50	Male TNC	(4)

Notes:

- 1) The Mobile whip antenna must be mounted on the Mobile Antenna Mount.
- 2) The GPS antenna is integrated in the Mobile Antenna Mount that attaches to the vehicle (by magnetic or permanent mounting). The GPS antenna has 3 dBi of gain from 1574-1576 MHz. An LNA in the Mobile Antenna Mount provides an overall amplified gain of 26 dB for the GPS.
- 3) The Mobile Antenna Mount has two coax cables that connect to the Mobile Collector: one for the GPS antenna and one for the Mobile whip antenna.
- 4) The Side Looker antenna array assembly uses two identical panels. Used only by MC3 and MC4Max models with optional radio receiver boards.

This list applies to the following FCC IDs:

EO9DCU5310
EO9DCU53103
EO9DCU5310C
EO9DCU53104C

Antenna Specifications and Photos:

PCTEL p/n Z3182: 908-958 MHz Mobile Whip Antenna

Operating frequency:	908-958 MHz
Radiation pattern:	Omnidirectional
Polarization:	Vertical
Peak antenna gain:	5.0 dBi
Input impedance :	50 Ohm
Connector type:	1-1/8" M-Mount
Dimensions:	26.5" long

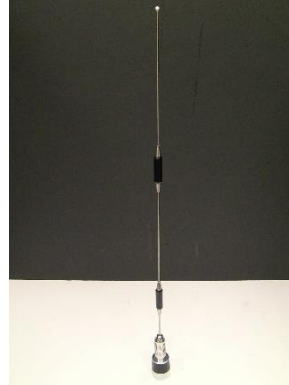


Figure 1: 908-958 MHz Mobile Whip Antenna

PCTEL p/n 2328: 1575.42 MHz GPS Antenna in Mobile Antenna Mount

Operating frequency:	1574-1576 MHz (1575.42 MHz center)
Radiation pattern:	Omnidirectional
Polarization:	Right-hand circular polarization
Peak antenna gain:	3.0 dBi
Amplified gain:	26.0 dB
Input impedance :	50 Ohm
Connector type:	Male SMA (for GPS) Male TNC (for Mobile Antenna)
Cable Type:	RG174 (for GPS antenna) RG58/U (for Mobile Antenna)
Dimensions:	2.25" wide x 4.25" long x 1.25" high



Figure 2: GPS Antenna in Mobile Antenna Mount

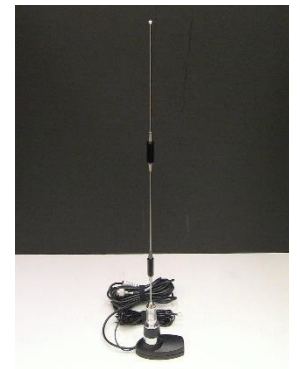


Figure 3: Mobile Antenna Mount with attached Mobile Whip Antenna

PCTEL (MAXRAD) p/n MP9027XFPT: 902-928 MHz Side Looker Receive Antenna

Operating frequency:	902-928 MHz
Radiation pattern:	Directional
Polarization:	Linear
Peak antenna gain:	9.1 dBi
Input impedance:	50 Ohm
Input return loss:	14 dB minimum (1.5:1 VSWR)
Maximum input power:	20 Watts
Connector type:	Male TNC (for Mobile Antenna)
Cable Type:	Pro-Flex-195
Dimensions (per panel):	8.8" long x 8.1" high x 1.6" wide



Figure 4: Side Looker Receive Antenna array



Figure 5: Vehicle with installed GPS Antenna, Mobile Whip Antenna, and Side Looker Receive Antenna array