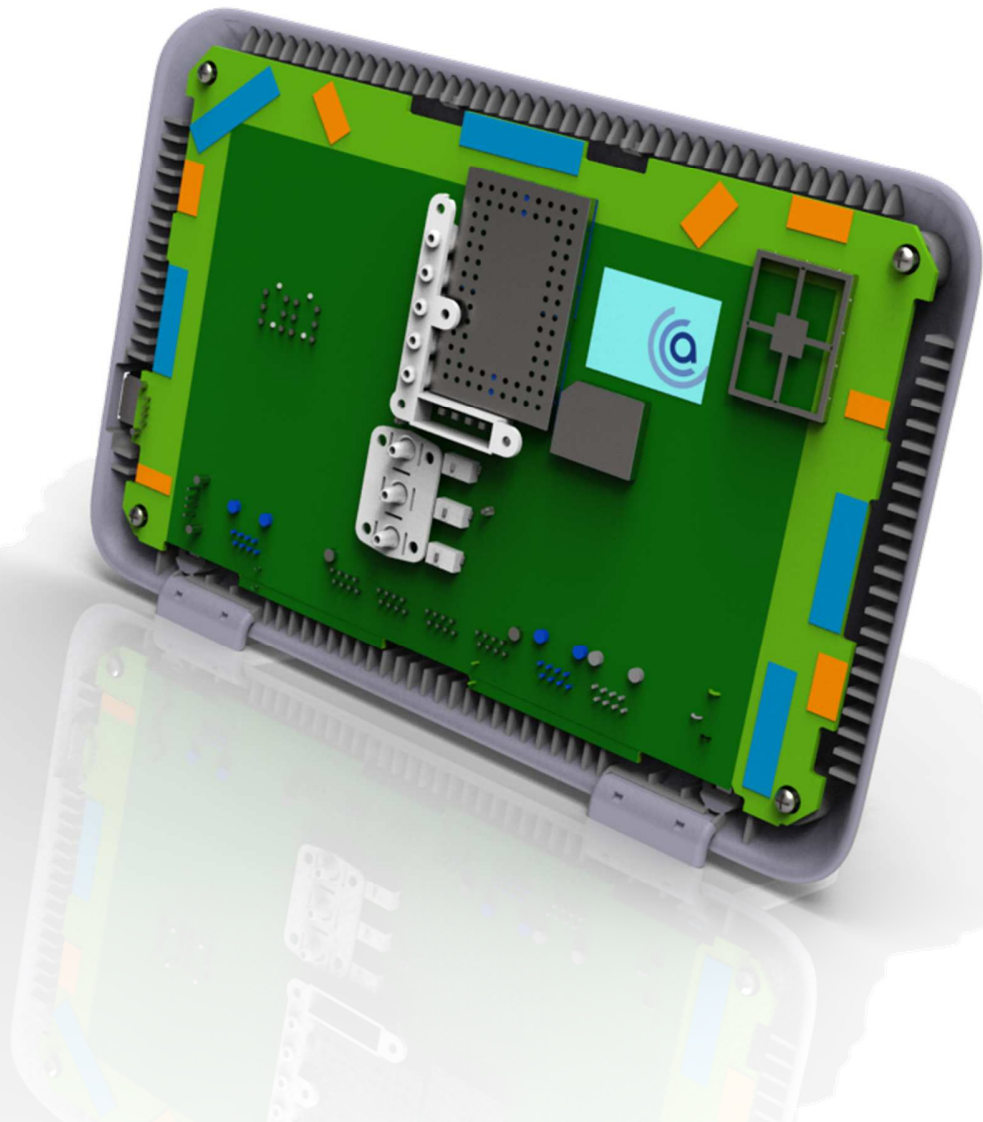




Adant *SMART-AG*

DATA SHEET

THE LOWEST COST SMART ANTENNA SOLUTION
FOR ACCESS GATEWAY



ADANT SMART-AG

SMART is a family of low-cost concurrent dual band beamsteering antenna solution for wireless access point. The antenna is designed for 2x2, 3x3 and 4x4 MIMO systems with beamsteering both on the 5 GHz and 2.4 GHz bands.

SMART is compact, easy to integrate in book-like and table top consumer access gateways and can be effectively used with Adant proprietary drivers in MIMO WLAN devices to deliver up to 2X throughput improvement with respect to standard internal antennas, optimal wireless coverage, and up to 4-5X capacity improvement in presence of interference.

SMART is fully compatible with Adant's library of unique added-value software features, such as advanced wireless intruder detection and precise location services

Features

- 2.4 GHz and 5 GHz beamsteering
- Compatible with 802.11a/b/g/n/ac/ax standard
- Isotropic coverage: 4π steradians coverage

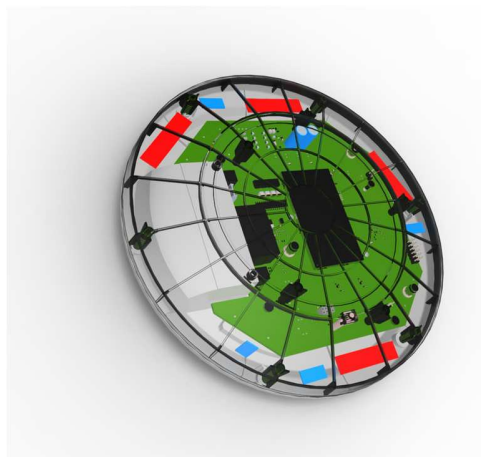
Applications

- Book-like consumer access gateway
- Table top consumer access gateway

Key Features	
Frequency	2.4-2.5 GHz / 5.1-5.85 GHz
Polarization	Linear
Operating temperature	-30°C to 85°C
Max Power	2 W
Input impedance	~ 50 Ω
Return Loss	>10 dB
RF Connections	I-PEX
Gain max 5GHz	4 dBi
Gain max 2.4GHz	4 dBi
Front to Back directional mode	> 10dB
Beam steering	Each antenna has 2 beams + 1 omni



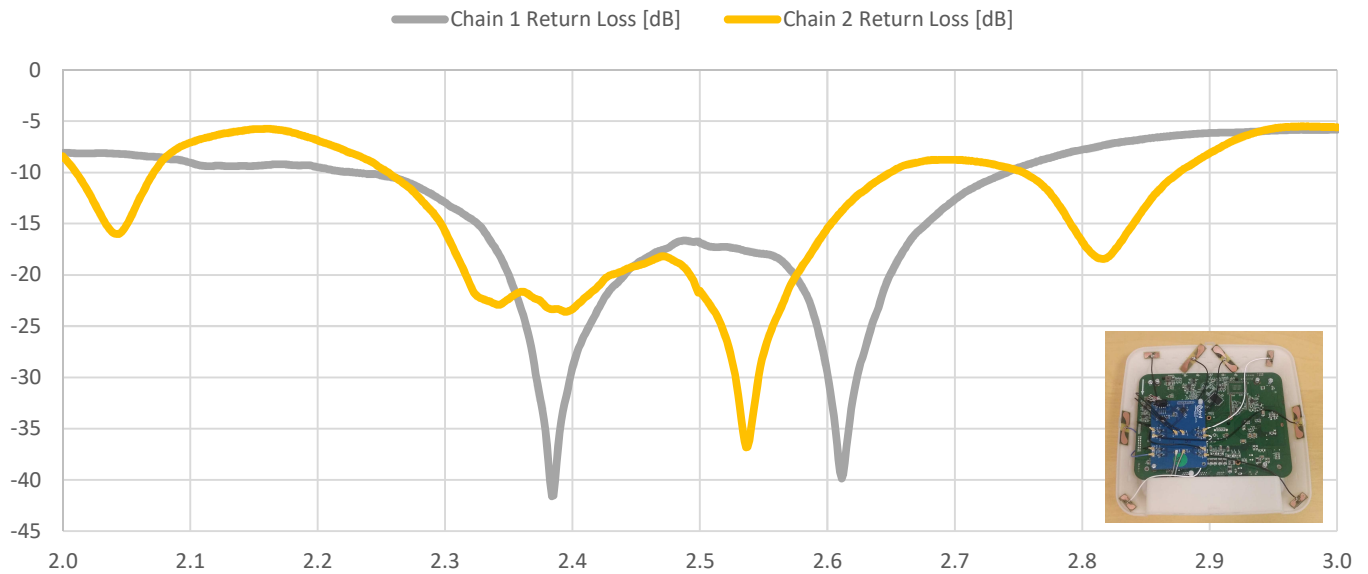
SMART-AG
(built-in antennas)



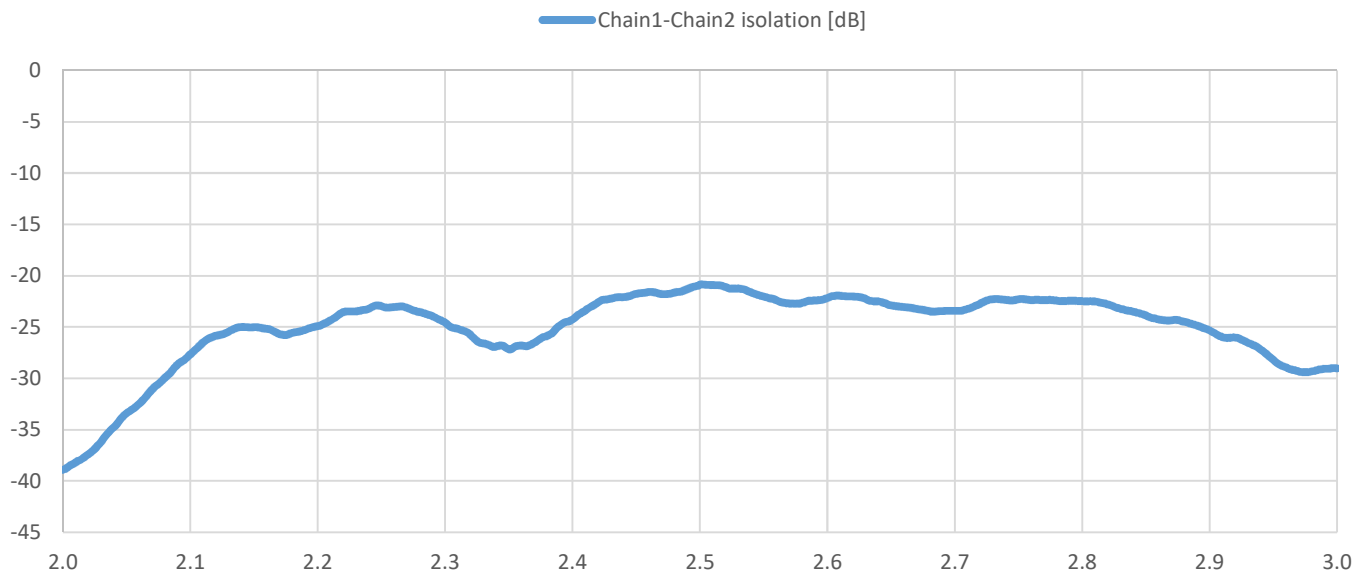
SMART-AG
(PCB antennas)

2.4 GHz antennas S-parameters

2x2 Access Gateway System. Return Loss of 2.4G RF Chains

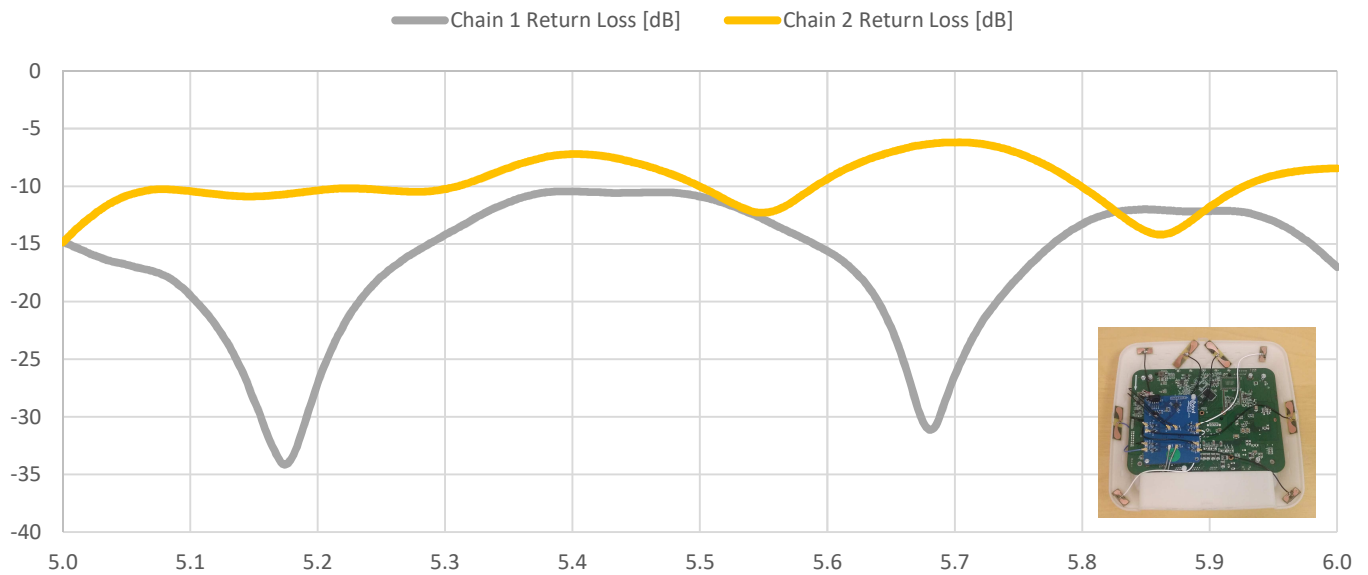


2x2 Access Gateway System. Isolation of 2.4G RF Chains

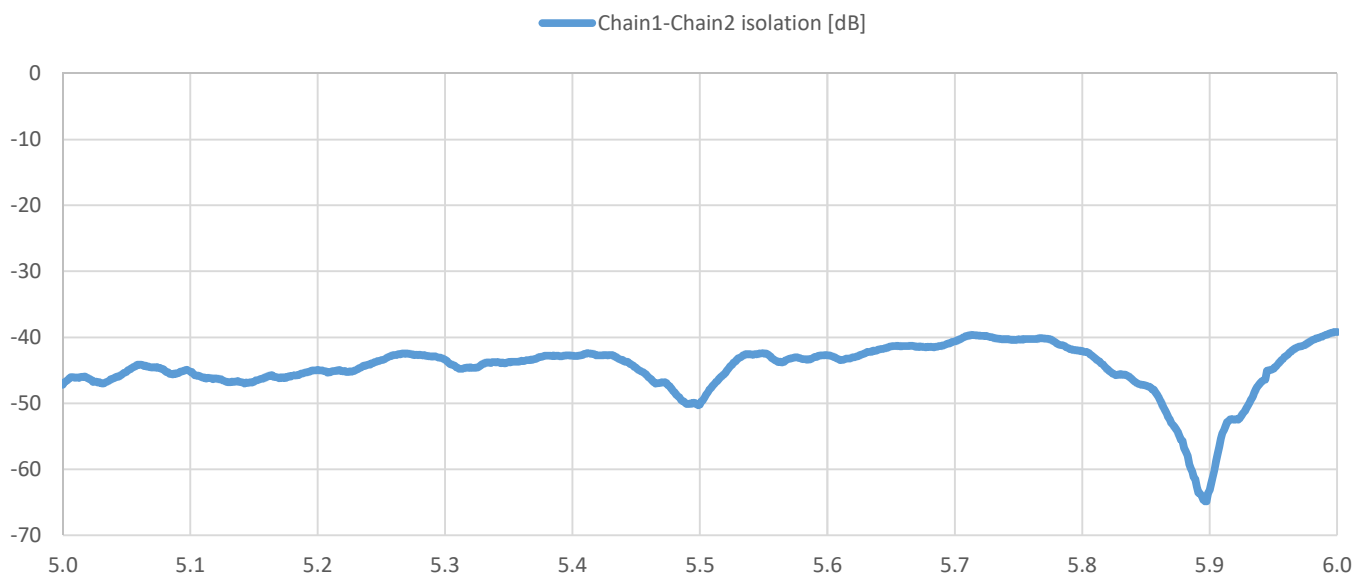


5 GHz antennas S-parameters

2x2 Access Gateway System. Return Loss of 5G RF Chains

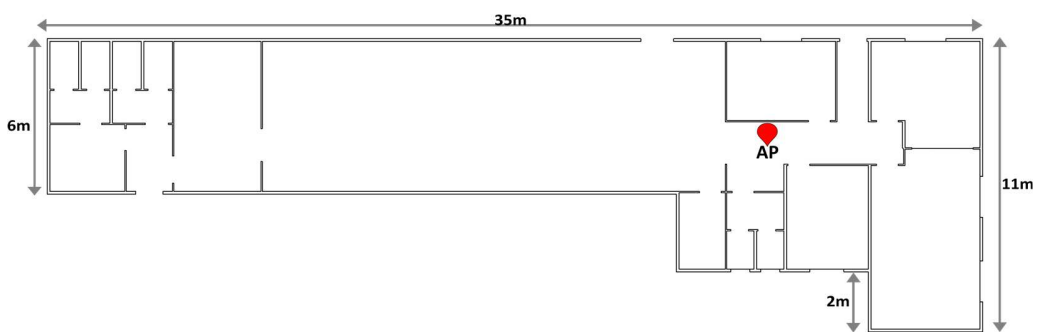


2x2 Access Gateway System. Isolation of 5G RF Chains

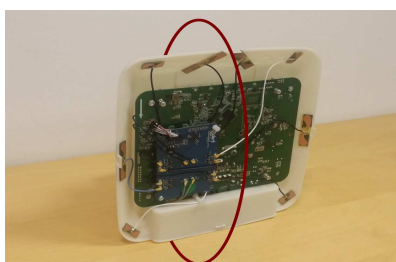


Typical capacity enhancement

Average Throughput Improvement vs. internal antennas				
	5 GHz		2.4 GHz	
	MID/LOW TP (<150 Mbps)	MID/HIGH TP (>150 Mbps)	MID/LOW TP (<100 Mbps)	MID/HIGH TP (>100 Mbps)
ELEVATION CUT (multi floor)	38%	5%	49%	29%
AZIMUTH CUT (same floor)	28%	5%	53%	33%
OVERALL	33%	5%	50%	31%



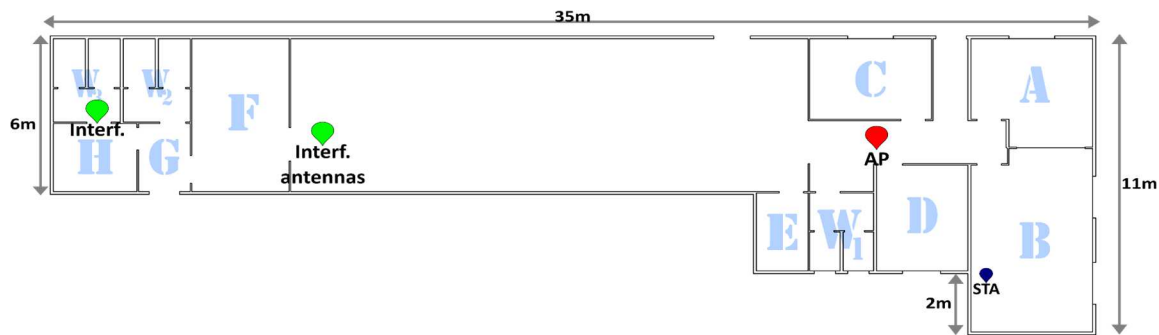
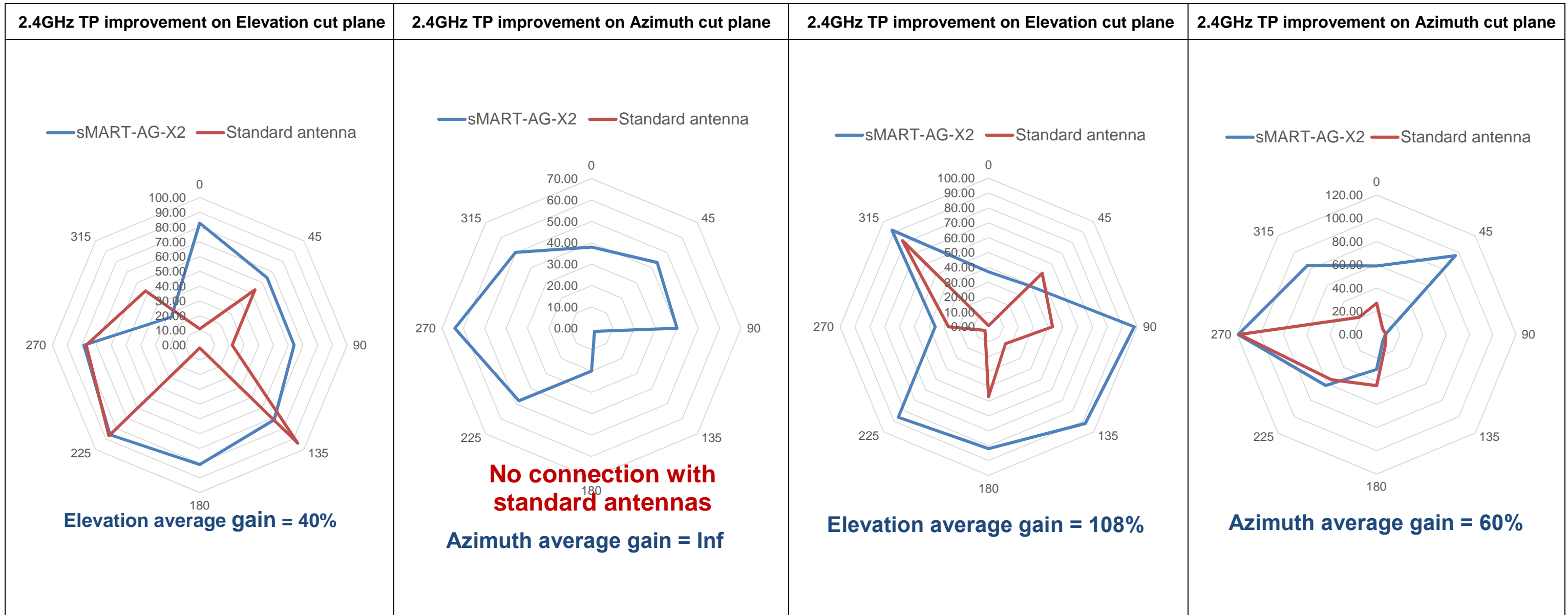
Elevation plane



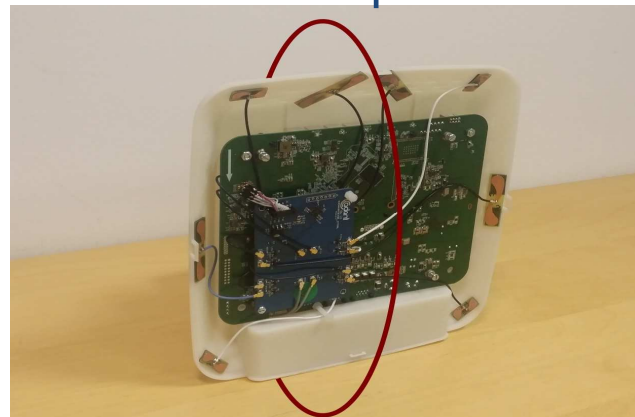
Azimuth plane



Typical interference mitigation TP improvements vs. standard antenna system



Elevation plane

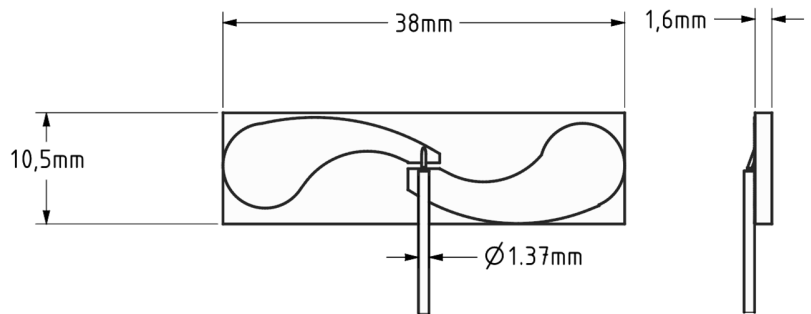
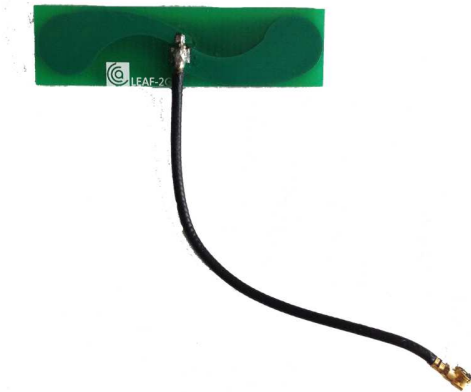


Azimuth plane



Typical PCB antenna for *SMART-AG*

LEAF 2.4GHz antenna (2 elements needed per chain)



LEAF 5GHz antenna (2 elements needed per chain)

