

# In-Building Cellular RF Bidirectional Amplifier connected to indoor dome antenna

NOTE: 1900MHz cellular frequency band shown here E.g Sprint PCS. For 800MHz see note 3 for alternates. To determine what frequency band your carrier is using in your area contact their tech support or see [www.wirelessadvisor.com](http://www.wirelessadvisor.com)

Demarc. (exterior wall or raceway/ conduit entry)

5-element Yagi Ant. Gain=10dBi @ 1900MHz, 10W

14.4"

Lightning surge protector DC-3GHz, N-Fem, 50Ω. Ground appropriately.

Dualband dome antenna (Vertically polarized)

9913-eq. low loss cable, N-Male, 50Ω

802.11b/g WiFi

WWAN ROUTER (CELL)

3G Cell Modem

CAT5E/6E to LAN

Single Band Wireless Cell RF BDA, 1900MHz, Gainmax=60 dB, N-Female

## Bill of Materials (BOM) – example only. Contact us for alternates.

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	CL301124	1900 MHz Yagi Antenna (w/ N-Fem)
2	1	CL859902	Lightning surge protector DC-3GHz, IL<0.2dB
3	2	CL951106	50' 9913-eq. Low loss coaxial cable, N-male
4	1	CL801306	60dB Wireless 1900MHz Amp. (N-female)
5	1	CL301121	Dualband Dome Antenna, Vert pol.
6	1	CLS720	Sprint Novatel S720 EVDO RevA Modem
7	1	CLLC2-411	Proxicast LAN Cell-2 WWAN 3G Cell Router



Maintain 45-75FT max separation between outside antenna and inside antenna unless sufficient RF shielding exists



Max distance between dome and cellphone/ datacard is limited by  
i) outside RSS  
ii) coaxial cable length  
E.g for 10ft cables and -90dBm at outside gives ~50ft. Less if through walls!!!



For 800MHz replace Item 1 w/ CL301129 800MHz Yagi antenna & Item 4 w/ CL801106 60dB 800MHz amplifier



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DRAWN BY: RT (Engr)  
APPROVED BY:

FREQ(s): 800MHz, 1.9 GHz PCS, 2.4GHz ISM

Generic WWAN, RF-BDA Conn

Wireless Sprint PCS 1900MHz Cellular Amp & Directional Yagi Antenna outdoor roofmounted (may need attenuators if signal too strong)

SIZE	LIC NO	DWG NO	REV
	AZ ROC# 253407	BW-00000000	2A
SCALE	NO SCALE	FRN: 0018086041	SHEET 1 OF 1