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

(800MHz cellular frequency band as shown. For 1900MHz e.g Sprint PCS see note 3 on alternates. For dualband contact us or see www.rfwel.com/signal_improvement)

8-element Yagi Ant. Gain=13dBi @ 806-939MHz, 50W

32.5"

Demarc. (exterior wall or raceway/ conduit entry)

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

Dualband dome antenna (Vertical polarized)

LMR400-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, 824-894MHz, Gainmax=60 dB, N-Female

Bill of Materials (BOM)

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	CL301111	806-939 MHz 8-Element 13dBi Yagi Antenna (w/ N-Fem)
2	1	CL859902	Lightning surge protector DC-3GHz, IL<0.2dB
3	3	952310	10' LMR-400 equivalent Low loss coax, N-male, Att<0.1dB
4	1	CL801106	60dB Wireless 800MHz 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
8	1	GENERIC-BOOST	Cellular Booster Antenna for 3G/4G Modems (select pigtail)

1 Maintain 45-75FT max separation between outside antenna and inside antenna unless sufficient RF shielding exists. Add attenuator if can't meet requirement.

2 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!!!

3 For PCS 1900MHz e.g Sprint replace Item1 w/ CL301124 1900MHz Yagi antenna & Item 4 w/ CL801306 60dB 1900MHz amplifier



1616 S. Stapley Dr. Ste 103, Mesa, AZ, 85204, U.S.A
www.rfwel.com | 480.218.1877

Generic WWAN, RF-BDA Connection. Solution to overcome poor cellular in-building coverage.

Wireless 800MHz Cellular Repeater & Outdoor directional Yagi Antenna.

DRAWN BY: RT (Engr)
APPROVED BY:

SIZE

LIC NO

DWG NO

REV

AZ ROC# 253407

BW-0000000

2A

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

SCALE

NO SCALE

FRN: 0018086041

SHEET

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