



TOWERIQTM
SIGNAL WHERE IT MATTERS

GuardianA Class A Public Safety BDA

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FEATURES

- Improves coverage for Public Safety Band 14 Cellular Network Frequencies: (UL: 788-805, 806-816 & DL: 758-775 851-861)
- Class A, 32 channel independently controlled channels per band with Auto Gain Control (AGC) for each channel
- 90 dB gain, 2-Watt system
- Meets the code for NFPA 72/1221 and IFC 510
- NEMA-4 rated amplifier housing
- Ethernet port with built-in TowerIQ Sentry™ remote monitoring hardware
- Integrated dry contact 9-pin alarming
- UPS port for external battery backup
- Automatic gain control (AGC) and Oscillation Detection
- Energy-saving operation allows bands to remain dormant when not in use
- A/C 110V or D/C 24- 30 V power option
- Independently adjustable frequency attenuation for uplink and downlink
- (Reduce gain in -1 dBm increments)
- Industry leading 3-year warranty available

TowerIQ's GuardianA Public Safety Band signal booster enhances in-building coverage for crucial communications, delivering consistent signal for First Responders and other public safety officials who rely on two-way radio communication inside large buildings.

GuardianA is a Class A, 2-Watt, bi-directional amplifier with a maximum gain of 90 dB supporting both the 700 and 800 MHz Public Safety frequency bands.

In the majority of cases, newly constructed buildings with considerable size, or existing buildings that increase capacity by expanding the building footprint are required to have signal strength of -95 dBm or better in designated critical areas – elevators, stairwells, etc. – in order to receive a certificate of occupancy. GuardianA meets the code for NFPA 72/1221 and IFC 510 and features a NEMA-4 rated amplifier housing.

Additionally, the GuardianA comes equipped with dry contact 9-pin alarming compatibility, UPS and Ethernet port enabled remote monitoring. TowerIQ provides an industry leading 3-year warranty.



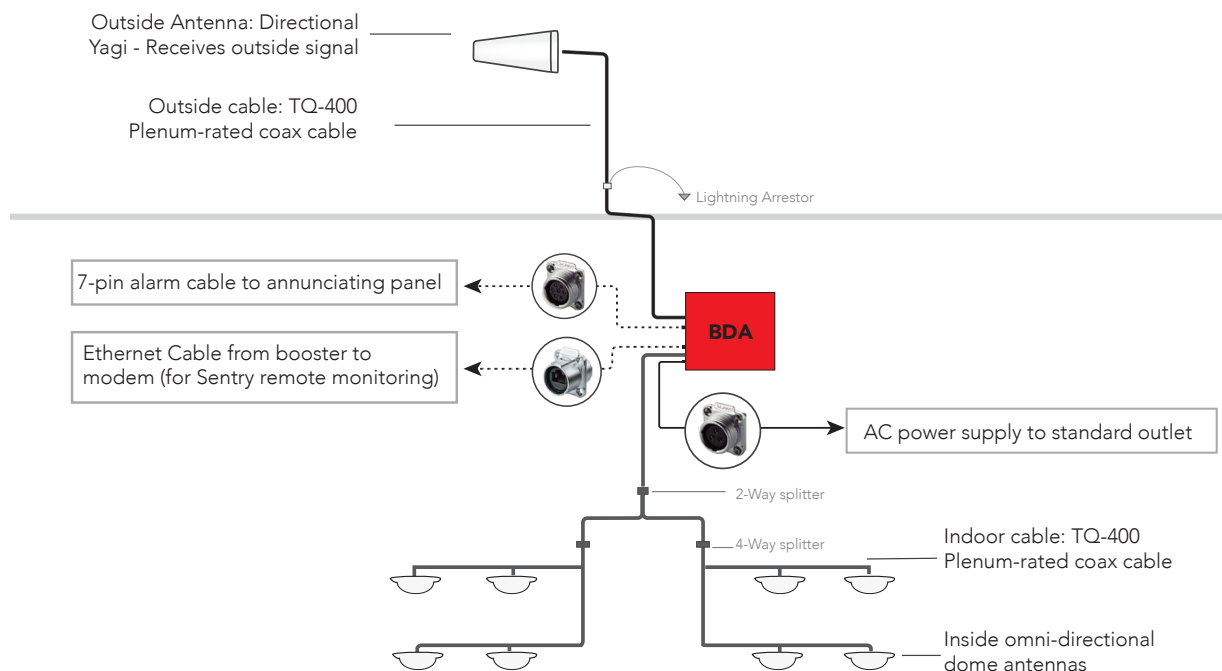
Electrical Specifications

Electrical	700 MHz	800 MHz
Frequency Range, Uplink	788 – 805 MHz	806 – 816 MHz
Frequency Range, Downlink	758 – 775 MHz	851 – 861 MHz
Channel Bandwidth	12.5 / 25 / 75 + 10 MHz (LTE, US)	12.5 / 25 / 75 MHz
Number of Channels	32	32
Total Output Power, Uplink	27 dBm	27 dBm
Total Output Power, Downlink	33 dBm	33 dBm
Maximum System Gain	90 dB	90 dB
Gain Adjustment Range (1 dB step)	0-50 dB	0-50 dB
Pass Band Ripple, p-p	≤5 dB	≤5 dB
Uplink Noise Figure	≤5 dB	≤5 dB
System Group Delay	≤35 usec	≤35 usec
Intermodulation	≤-13 dBm	≤-13 dBm
Spurious	9 kHz to 1 GHz	FCC Compliance
	1 GHz to 12.75 GHz	FCC Compliance
Absolute Maximum RF Input Power	-10 dBm	-10 dBm
Impedance	50 Ω	50 Ω

Technical Specifications

Certifications	FCC: ID 2AXVJPSBG-2A Part 90
Dimensions	21.2 x 17.2 x 8.0 in
Enclosure cooling	Convection
Environmental Class	NEMA4
Operating Humidity	95%
Operating Temperature	-27 to +140°F (-33 to +60°C)
Power Consumption	Single band: 60W Dual band: 80W
Power Supply	AC: 100-240/50-60 Hz DC: 24-30 V
RF Connections	N Female
Weight	45.9 lbs (53 lbs shipped)

Example Building Component Layout





Additional Required Components:

Note: Some component options are listed in table below. Not all accessories are listed.

- One External antenna ^a (directional Yagi)
- Multiple Inside antennas ^b (omnidirectional domes and/or directional panels)
- Cable splitter for inside antennas ^c
- Sufficient TQ-400 ultra-low loss interior/exterior cable, 50 ohm ^d
- Lightning protector
- Grounded surge suppressor for DC power supply

Included Components:

- Guardian4 bi-directional amplifier with NEMA-4 rated housing and mounting kit
- Alarm cable and connector
- Ethernet connector
- AC power cable
- DC power cable and connector

^a Outdoor Antenna Options

TQ-230W	Directional Wide Band 50 Ω Yagi Antenna (698 - 2700 MHz)	N-Female connectors	10 to 11 dBi
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^b Inside Antenna Options

TQ-528W	Omni Wide Band Dome 50 Ω Antenna (698 -2700 MHz)	N-Female connectors	3 to 4 dBi
TQ-248W	Directional Wide Band Panel 50 Ω Antenna (698-2700 MHz)	N-Female connectors	7 to 10 dBi

^c Splitters and Couplers

Wide Band Couplers (698-2700 MHz)
Wide Band Splitters (698-2700 MHz)

^d Ultra Low-Loss Coaxial Cable

TQ-400	Low-Loss Coax
TQ-600	Ultra Low-Loss Coax
TQ-PL	Ultra Low-Loss Coax Plenum Fire-Rated Coax UL-rated for plenum ceilings (UL E473791)

⚠ WARNING

THIS IS NOT A CONSUMER DEVICE. IT IS DESIGNED FOR INSTALLATION BY FCC LICENSEES AND QUALIFIED INSTALLERS. USERS MUST HAVE AN FCC LICENSE OR THE EXPRESS CONSENT OF AN FCC LICENSEE TO OPERATE THIS DEVICE.

UNAUTHORIZED USE MAY RESULT IN SIGNIFICANT FORFEITURE PENALTIES, INCLUDING PENALTIES IN EXCESS OF \$100,000 FOR EACH CONTINUING VIOLATION.

Part 90 Signal Boosters. THIS IS A 90.219 CLASS A DEVICE.

Ordering Information

Model	Description	Stock No.
GuardianA	PublicSafety Band Class-A Signal Booster BDA	3996113