## The **RF** Experts

## SIGNAL BOOSTER Digital 700, 800 MHz

# **SBIII 613-8 SERIES**

## **True Filter Flexibility**

The 613-8 Series Digital Signal Booster provides Public Safety grade signal reliability and coverage in disadvantaged RF locations minimizing noise and interference. This model operates in the 700/800 MHz range with up to 14 pairs of programmable digital filters for both uplink and downlink per band. Filter center frequency and characteristics are fully programmable to meet the demands of various systems and signals. Digital filtering provides amplification of several individual channels of narrow bands frequencies-amplifying only the desired spectrum – while preventing interference to other signals.

Components are protected by a NEMA 4 style enclosure to meet the demands of the NFPA requirements.



### **PRODUCT FEATURES**

- Precision oscillation detection and user programmable system handling based on conditions.
- Single and dual band models available.
- Intuitive web browser user interface allows for local and network access.
- Highly secure SNMP (v. 3.0) to trap and send messages to an SNMP Manager.
- Digital filtering bandwidth is user programmable from 6.25 kHz to 15 MHz.
- The built-in pilot signal offers system coverage assessment with a 1 kHz FM modulated carrier that allows simple SINAD qualification testing.
- NFPA/IFC options include all battery backup configuration options to comply with standards.
- Able to be used as a head-end booster for a system that is donored "off the air" in an RF congested area.
- Can be connected to any number of SBII+ broadband boosters.
- Custom models available.

#### **NFPA/IFC OPTIONS**



 NFPA Digital SB
 Painted a Public Safety red



6160-110-24-NR
6160-220-24-NR

110 or 220 Amp-hour, minimum 12 or 24 hour battery backup units



## SIGNAL BOOSTER DIGITAL 700, 800 MHZ

## **SBIII 613-8 SERIES**

## **Specifications**

#### **SYSTEM**

9 MHz. Custom filters are user-configuralMaximum Gain95 dBOutput Power34 dBmLow Power22 dBmMaximum Input Level-20 dBmRF Input/Output Impedance50 Ohms nominalPower90-250 VAC, 50/60 Hz and 24 VDCControl & MonitoringIntuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP TrapsAlarmsForm-C Contacts (NO or NC)					
Interior14 downlink filters per bandFrequency Range 700 Band764 to 776, 794 to 806 MHz800 Band806 to 824, 851 to 869 MHzBandwidthProgrammable standard filters includeFilter Bandwidth12.5 kHz, 12.5 kHz low delay, 25 kHz, 3 M 9 MHz. Custom filters are user-configuralMaximum Gain95 dBOutput Power High Power34 dBm 22 dBmMaximum Input Level-20 dBmRF Input/Output Impedance50 Ohms nominalPower90-250 VAC, 50/60 Hz and 24 VDCControl & MonitoringIntuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP TrapsAlarmsForm-C Contacts (NO or NC)	Filtors	14 uplink filters per band			
700 Band764 to 776, 794 to 806 MHz800 Band806 to 824, 851 to 869 MHzFilter BandwidthProgrammable standard filters include12.5 kHz, 12.5 kHz low delay, 25 kHz, 3 M9 MHz. Custom filters are user-configuralMaximum Gain95 dBOutput Power34 dBmLow Power22 dBmMaximum Input Level50 Ohms nominalPower90-250 VAC, 50/60 Hz and 24 VDCControl & MonitoringForm-C contacts (NO or NC)CONNECTORSForm-C Contacts (NO or NC)	Titters	14 downlink filters per band			
800 Band806 to 824, 851 to 869 MHz800 Band806 to 824, 851 to 869 MHzFilter BandwidthProgrammable standard filters include 12.5 kHz, 12.5 kHz low delay, 25 kHz, 3 M 9 MHz. Custom filters are user-configuralMaximum Gain95 dBOutput Power34 dBm 22 dBmLow Power22 dBmMaximum Input Level-20 dBmPower90-250 VAC, 50/60 Hz and 24 VDCControl & MonitoringIntuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP TrapsAlarmsForm-C Contacts (NO or NC)	Frequency Range				
Filter BandwidthProgrammable standard filters include 12.5 kHz, 12.5 kHz low delay, 25 kHz, 3 M 9 MHz. Custom filters are user-configuraMaximum Gain95 dBOutput Power High Power34 dBm 22 dBmMaximum Input Level-20 dBmRF Input/Output Impedance50 Ohms nominalPower90-250 VAC, 50/60 Hz and 24 VDCControl & MonitoringEthernet connection, local individual module status LED's, SNMP TrapsAlarmsForm-C Contacts (NO or NC)	700 Band	764 to 776, 794 to 806 MHz			
Filter Bandwidth       12.5 kHz, 12.5 kHz low delay, 25 kHz, 3 M         9 MHz. Custom filters are user-configural         Maximum Gain       95 dB         Output Power       34 dBm         High Power       22 dBm         Maximum Input Level       -20 dBm         RF Input/Output Impedance       50 Ohms nominal         Power       90-250 VAC, 50/60 Hz and 24 VDC         Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)	800 Band	806 to 824, 851 to 869 MHz			
9 MHz. Custom filters are user-configura         Maximum Gain       95 dB         Output Power       34 dBm         High Power       22 dBm         Maximum Input Level       -20 dBm         RF Input/Output Impedance       50 Ohms nominal         Power       90-250 VAC, 50/60 Hz and 24 VDC         Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)		Programmable standard filters include			
Maximum Gain       95 dB         Output Power       34 dBm         High Power       22 dBm         Maximum Input Level       -20 dBm         RF Input/Output Impedance       50 Ohms nominal         Power       90-250 VAC, 50/60 Hz and 24 VDC         Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)	Filter Bandwidth	12.5 kHz, 12.5 kHz low delay, 25 kHz, 3 MHz			
Output Power     34 dBm       High Power     34 dBm       Low Power     22 dBm       Maximum Input Level     -20 dBm       RF Input/Output Impedance     50 Ohms nominal       Power     90-250 VAC, 50/60 Hz and 24 VDC       Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps       Alarms     Form-C Contacts (NO or NC)		9 MHz. Custom filters are user-configurable			
High Power     34 dBm       Low Power     22 dBm       Maximum Input Level     -20 dBm       RF Input/Output Impedance     50 Ohms nominal       Power     90-250 VAC, 50/60 Hz and 24 VDC       Control & Monitoring     Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps       Alarms     Form-C Contacts (NO or NC)	Maximum Gain	95 dB			
Low Power22 dBmMaximum Input Level-20 dBmRF Input/Output Impedance50 Ohms nominalPower90-250 VAC, 50/60 Hz and 24 VDCControl & MonitoringIntuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP TrapsAlarmsForm-C Contacts (NO or NC)	Output Power				
Maximum Input Level       -20 dBm         RF Input/Output Impedance       50 Ohms nominal         Power       90-250 VAC, 50/60 Hz and 24 VDC         Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)	High Power	34 dBm			
RF Input/Output Impedance       50 Ohms nominal         Power       90-250 VAC, 50/60 Hz and 24 VDC         Control & Monitoring       Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)	Low Power	22 dBm			
Power       90-250 VAC, 50/60 Hz and 24 VDC         Control & Monitoring       Intuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)	Maximum Input Level	-20 dBm			
Control & MonitoringIntuitive web browser interface over an Ethernet connection, local individual module status LED's, SNMP TrapsAlarmsForm-C Contacts (NO or NC)CONNECTORS	RF Input/Output Impedance	50 Ohms nominal			
Control & Monitoring       Ethernet connection, local individual module status LED's, SNMP Traps         Alarms       Form-C Contacts (NO or NC)         CONNECTORS       Alarma and and and and and and and and and an	Power	90-250 VAC, 50/60 Hz and 24 VDC			
module status LED's, SNMP Traps       Alarms       Form-C Contacts (NO or NC)		Intuitive web browser interface over an			
Alarms Form-C Contacts (NO or NC) CONNECTORS	Control & Monitoring	Ethernet connection, local individual			
CONNECTORS		module status LED's, SNMP Traps			
	Alarms	Form-C Contacts (NO or NC)			
xternal RF Connectors N (f)	CONNECTORS				
	External RF Connectors	N (f)			

PHYSICAL			
Size Single Band Dual Band	24 in x 16 in x 8 in 30 in x 20 in x 10 in		
Weight Single Band	70 lb		
Dual Band	95 lb		
Enclosure	Modified NEMA 4 w/o Fans		
ENVIRONMENTAL			
Operating Temperature	-30 °C to 60 °C		
CERTIFICATIONS			
FCC	EZZ6138 - Class A Type Booster Equipment Authorization under FCC Rules Part 90		
Industry Canada	1940A-6138 - Canada Certification Part RSS-131		
NFPA OPTIONS			
6160-110-24-NR	110 Amp-hour, minimum 12 hour battery backup unit		
6160-220-24-NR	220 Amp-hour, minimum 24 hour battery backup unit		

### **PRODUCT SELECTION GUIDE**

613-8

Example: 613-83B-AHH-G1A-N (Single Band) = Digital Signal Booster III, 764 to 806 MHz, 1-14 Filters, High Power Up/Downlinks, Red NEMA 4 Case, NFPA, Single Band Note: Not all combinations are valid. If assistance is needed consult the factory to define the model that is right for you.

Product Type	Frequency Band	No. of Channels	Channel Power	NEMA 4 Enclosure	<b>Options</b> (blank for no options)
613-8	3B = 764 to 806 MHz (Single Band)	A = 1-14 (700 or 800 MHz) Filter (Single Band)	HH = High Power Uplink and Downlink	G1A = Painted Steel Enclosure G2A = Stainless Steel Enclosure	N = NFPA/IFC Configuration
	9A = 806 to 869 MHz (Single Band)	AA = 1-14 (700 or 800 MHz) Filter (Dual Band)	HL = High Power Uplink and Low Power Downlink		
	3E = 764 to 869 MHz (Dual Band)		LH = Low Power Uplink and High Power Downlink		
			LL = Low Power Uplink and Downlink		H = Dual Port (Head End)
			FH = High Power Fiber Remote		R = Dual Port (Remote End)
			FL = Low Power Fiber Remote		1 - 3 MHz Preselector NPSPAC Pre-Rebanding (866 to 869 MHz)
			HF = High Power Fiber Head-end		2 - 3 MHz Preselector NPSPAC Post-Rebanding (851 to 854 MHz)
			LF = Low Power Fiber Head-end		3 - 10 MHz Preselector (851 to 861 MHz

Please Contact Factory for non-standard configurations with custom frequency, windows and bandwidth. Frequencies MUST be provided with order.

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