



The VA-8600c is a digital networked multi-channel amplifier for use in Vocia systems. The VA-8600c is CobraNet® enabled and features eight channels of modular amplification and DSP with optional channel-to-channel or device-to-device failover. It can support up to eight amplifier cards that are individually software configurable from 100–600 Watts for up to 2400 Watts of power per chassis. 70V, 100V and low-impedance outputs are software selectable per card. The on-board DSP provides comprehensive fixed-chain digital-signal processing within the device, including volume control, ducking, equalization, compressor/limiter, speaker crossover, delay, and output gain. Emergency messages for life-safety compliant systems are stored in non-volatile memory within the VA-8600c. Intuitive software provides audio system design via PC. Two RJ45 connectors on the rear panel of the VA-8600c provide redundant connectivity to control data and audio over a single Ethernet cable. As part of the Vocia system, the VA-8600c meets EN 54-16 certification for facilities of all sizes.

### FEATURES

- Modular based design
- Amplification modules have software configurable power levels/load options
  - 8 amplification modules per frame with 100 to 600 Watts per module (maximum of 2400W per chassis)
  - 70V or 100V with direct drive capability, or low-impedance (4 or 8Ω) operation
  - Maximum of 2400 Watts of power in a device
- Failover capability between channels and amplifiers
- Local non-volatile storage of emergency messages
- LED Indication:
  - Amplifier failure
  - Clip present
  - Fan stuck-rotor
  - Heat sink temperature fault
  - Signal Peak
  - Signal present
- Software Monitoring Features:
  - Amplifier failure
  - Excessive clipping
  - Fan stuck rotor
  - Heat sink temperature fault
  - Peak present
  - Short circuit on output
- Software-configurable signal processing including volume control, filters, compressor/limiting, delay, speaker equalization, and output sensitivity
- CobraNet audio and control data over a single Ethernet cable
- Dual Ethernet ports for redundancy
- Heavy duty removable terminal block connectors for speaker line connections
- Rotary switches for unit identification
- Rack mountable (3RU)
- **CE** marked, **UL** listed & **RoHS** compliant
- Covered by Biamp Systems' warranty

### ARCHITECTS & ENGINEERS SPECIFICATION

The modular amplifier shall be designed exclusively for use with Biamp® Vocia systems. The amplifier shall be modular and support software configurable power levels/load options of 8 amplification modules per frame with 100 to 600 Watts per module (maximum of 2400W per chassis) and 70V or 100V with direct drive capability, or low-impedance (4 or 8Ω) operation. The amplifier shall provide control data and digital audio over CobraNet®. The amplifier shall provide dual Ethernet ports for redundant network connection. The amplifier shall provide front-panel LED identification of amplifier and card failure, signal present, clip present, fan stuck rotor fault, heat sink temperature fault and provide additional software monitoring features including short circuit on output fault. The amplifier shall be rack mountable (3RU) and feature software-configurable signal processing including volume control, filters, compressor/limiting, delay, speaker equalization, and output sensitivity. The amplifier shall support channel-to-channel and chassis-to-chassis failover. The amplifier shall be EN54-16 CE certified, UL listed and shall be compliant with the RoHS directive. Warranty shall be five years.

The amplifier shall be a Vocia VA-8600c.

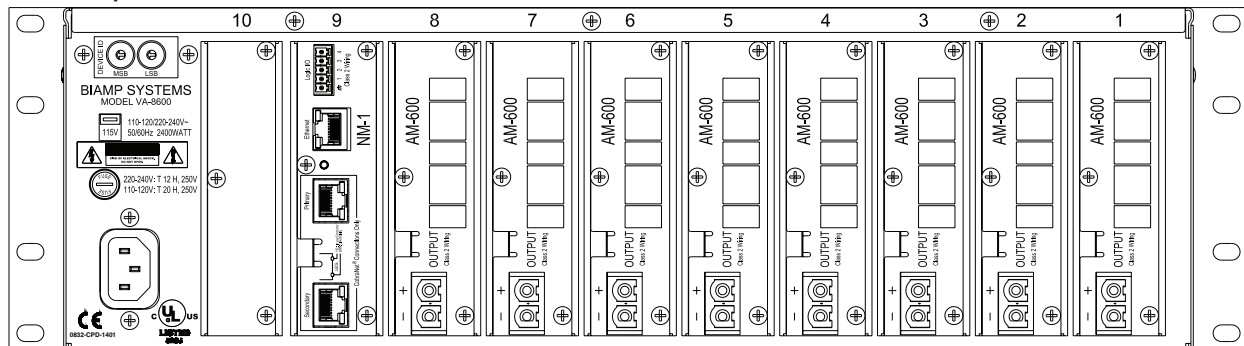
## Vocia Amplifier 8600c SPECIFICATIONS

Memory:	5.625 MB	Power:	110-120 & 220-240VAC 50/60Hz
Inputs:	20 bits, 48 kHz, 5-1/3 ms (fixed)	Overall Dimensions:	Height: 5.25 inches (133mm) Width: 19 inches (483mm) Depth: 17.25 inches (438mm)
Connection:	RJ45 with shielded Ethernet/PoE cable (CAT5, CAT5e, CAT6 or CAT7)	Weight:	Chassis: 50 lbs. (22.68 kg) AM 600 card: 1.25 lbs. (0.57 kg)
Total Output Power:	2400W maximum per chassis (Burst Mode only. Protective thermal limiting will reduce long-term power output)	Compliance:	EU Directive 2002/95/EC, RoHS Directive UL listed CE marked
Environment			
Ambient Operating Temperature Range:	18-107 degrees F (-8 – 42° C)		
Ambient intake humidity:	0 – 100% non-condensing		
Altitude:	0 – 10,000 Feet MSL		

## AM-600/AM-600c Card SPECIFICATIONS

Supported Loads:	4Ω, 6Ω, 8Ω, 70-Volt or 100-Volt Line direct drive	Frequency response:	20 Hz – 20 kHz frequency response flat +/-1 dB																												
Continuous operation: in chassis with fans running normally and unrestricted intake and exhaust	600 W: 1 kHz continuous sine wave indefinitely	Distortion and Noise:	≤0.3% THD+N (20 Hz – 20 kHz) all loads and power levels																												
Signal-to-Noise Ratio: (unweighted over 22 Hz – 20 kHz)	<table border="1"> <thead> <tr> <th></th> <th>Low-impedance</th> <th>70V</th> <th>100V</th> </tr> </thead> <tbody> <tr> <td>100W</td> <td>&gt;95 dB</td> <td>&gt;100 dB</td> <td>&gt;101 dB</td> </tr> <tr> <td>200W</td> <td>&gt;98 dB</td> <td>&gt;101 dB</td> <td>&gt;102 dB</td> </tr> <tr> <td>300W</td> <td>&gt;99 dB</td> <td>&gt;101 dB</td> <td>&gt;102 dB</td> </tr> <tr> <td>400W</td> <td>&gt;101 dB</td> <td>&gt;102 dB</td> <td>&gt;103 dB</td> </tr> <tr> <td>500W</td> <td>&gt;102 dB</td> <td>&gt;102 dB</td> <td>&gt;103 dB</td> </tr> <tr> <td>600W</td> <td>&gt;102 dB</td> <td>&gt;103 dB</td> <td>&gt;104 dB</td> </tr> </tbody> </table>		Low-impedance	70V	100V	100W	>95 dB	>100 dB	>101 dB	200W	>98 dB	>101 dB	>102 dB	300W	>99 dB	>101 dB	>102 dB	400W	>101 dB	>102 dB	>103 dB	500W	>102 dB	>102 dB	>103 dB	600W	>102 dB	>103 dB	>104 dB	Intermodulation distortion (SMPTE):	<0.2%
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600W	>102 dB	>103 dB	>104 dB																												
		Inter-channel Isolation:	>75 dB (20 Hz-20 kHz, full power out)																												
		DC offset:	<10mV																												

## Vocia Amplifier 8600c BACK PANEL



## Vocia Amplifier 8600c BLOCK DIAGRAM

