



Description

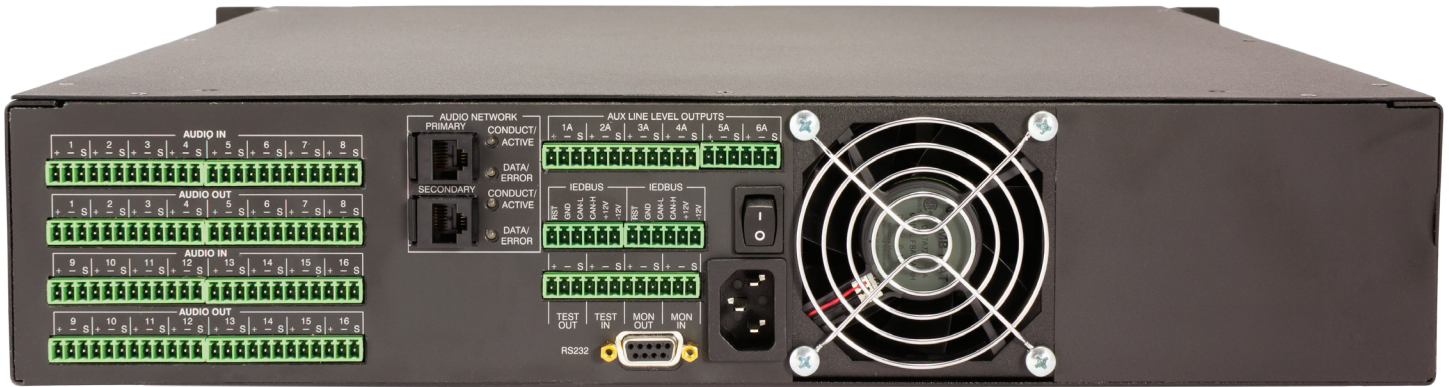
The T9116 Zone Output Processor mainframe provides digital audio network connections, utilizing CobraNet® technology, to an IED audio network controller such as a 500 Series Announcement Control System or GLOBALCOM vACS®. Local program or background music (BGM) inputs can connect to analog connections located on the back of the mainframe. Digital Signal Processing is provided on each of 16 output channels and includes input level controls, paging routing, automatic ducking of background music, equalization (up to 9 parametric bands per amplifier channel), signal delay, and IED's patented technology for ambient analysis-based automatic level control. The mainframe contains integrated supervision that monitors the each signal path and reports any failures to the IED fault reporting system.

The mainframe requires 2 rack units (3.5") of vertical space in a 19" equipment rack/cabinet. All cooling is front to back, so no additional vertical space is required in the rack for cooling. All input and output connections are provided on the back using plug-in lugless compression-type screw terminals.

Optional collector units are available to support advanced features such as Ambient Analysis or enhanced supervision. The T9032NS Ambient Analysis Sensor Collector used to interface with up to 32 IED 540S ambient sensors. Each sensor reports the ambient noise level at its location and that information is used by the T9116 to automatically adjust the output level as the ambient noise level changes. The T9040NLR is a collector unit that includes a combination of logic inputs, relay outputs, and noise sensor inputs.

When additional supervision points are required, the T9032MT Monitor/Test Collector can be used to add an additional 32 test points to be used by the system. The T9032MT can be used with optional 596SGFI modules to monitor current and ground faults in loudspeaker lines. These add-on options are linked via the Ethernet connection.

Audio signals enter the T9116 Mainframe using the local analog program/BGM connections or through the Ethernet connection using CobraNet® technology. The combination of the Titan Series T9116 Mainframe System, GLOBALCOM® controller, 1000 vACS®, IED 500ACS with IED 510N Digital Audio Network card, and IED 524 or 528 digital microphone stations comprises a completely digital/network connected audio/paging system.



Specifications

Capacities

Maximum Number of Local Program/BGM Inputs.....	16
Maximum Number of Paging Zones Assignable to Frame	16
Maximum Number of Outputs	16

Connectors

Program/Background Music Inputs	16
<i>plug-in lugless compression-type screw terminals</i>	
Zone Outputs	16
<i>plug-in lugless compression-type screw terminal blocks</i>	
Aux Line Level Outputs	6
<i>plug-in lugless compression-type screw terminal blocks</i>	
Ethernet	
Network Audio and Control	2 - 100Base-T modular RJ-45
<i>For redundant networks</i>	
Test Signal Out, Test In, Monitor Out and Monitor In	4
<i>plug-in lugless compression-type screw terminals</i>	
AC Power Cord	
T9116L for 120VAC Operation.....	(2) Belden/Volex 17250
T9116H for 240VAC Operation	(2) Belden/Volex 17850

Digital Signal Processing Functions

Level Controls	16 Program, 16 BGM, 16 Overall Channel Levels
Equalization Bands	9 Parametric per Channel (16)
Signal Delay Range	0 to 2 Seconds in 1 msec steps
Ambient Analysis	Up to four 540S sensors per Channel
<i>automatic or slaved modes</i>	
Built-in Testing	
Automated multi-frequency and 20kHz testing of all channels.	
Monitoring	
Capability to listen to any test point plus additional monitor-only points in the mainframe locally or via the network at another location.	

Electrical

All of the following specifications apply with program input via the network (CobraNet®), or with direct inputs.

Frequency Response.....	±0.2 dB, 20 Hz - 20 kHz
Total Harmonic Distortion. THD	<0.01%, 20 Hz - 20 kHz
Signal-to-Noise Ratio, S/N	>93 dB, 22 Hz - 22 kHz, weighted
Maximum Input	+14 dBu
Maximum Output	+14 dBu

Gain

Via the network	Unity
Direct Input.....	25 dB, Max
Background Music.....	25 dB, Max
Analog-to-Digital Converter, A/D.....	24 bit
Digital-to-Analog Converter, D/A.....	24 bit
Internal processing	32-bit, floating point
Sample Rate.....	48 k
Latency.....	<1 ms
Crosstalk	< -75 dB, f = 2 kHz

AC Power Requirements

Quiescent power.....	83 W
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Mechanical

Size, overall	
Width, with ears	(48.3 cm) 19"
Height.....	(8.9 cm) 3.5"
Depth	(43.2 cm) 17"
Mounting Depth (rack depth)	(44.2 cm) 17.4"
<i>for proper fan operation add a minimum of 2" (5.1 cm) clearance</i>	
Weight	
With supplied rack ears	(5.44 kg) 12.0 lbs
Extra rear rack ears.....	(0.68 kg) 1.5 lbs
Cooling fans	
For digital electronics	1
Mounting Ear Location Options.....	3 (front, rear, bottom)

Environmental

Operating Temperature Range	(+32 °F - +122 °F) 0 °C - +50 °C
Storage Temperature Range	(-40 °F - +158 °F) -40 °C - +70 °C