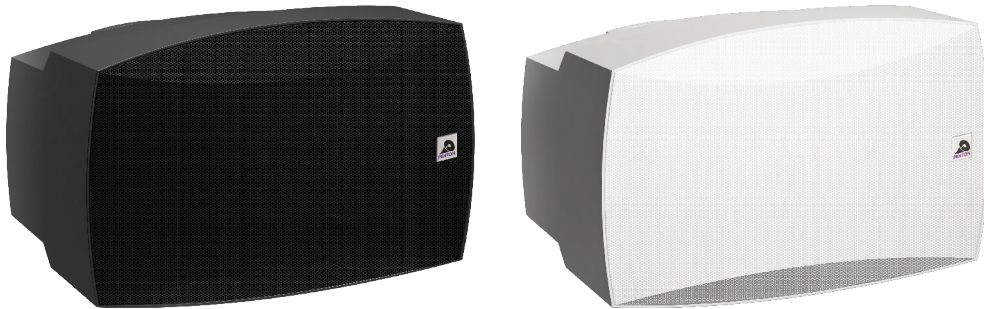


FORMAT

PROFESSIONAL CABINET LOUDSPEAKER



The FORMAT series, FORMAT 20 and FORMAT 40 are professional loudspeakers offering excellent quality audio for commercial applications. The coaxial cabinet loudspeaker can reproduce bright midrange, silk-like, high frequencies with an extended Q bass sound.

The FORMAT are available in low impedance or 70 V/100 V line systems or IP versions. The IP version of the FORMAT features an IP amplifier module with 20 W/40 W output, a high sensitivity microphone for SIP intercom applications. The IP amplifier module can be powered from a PoE/PoE+ network switch or an external AC/DC power adaptor. The module features abundant audio DSP functions to further enhance the sound in the specific environment and functions over SIP and OnVIF for easy integration with Video CCTV system platforms.

The high sensitivity microphone with the RAPIDO™ AEC algorithm and Active Noise Reduction (ANR) enables hands-free long-distance intercom over IP. The optional RAC 5/8 controller lets users select various audio sources from the network and adjust speaker volume using the 3 control inputs.

With excellent audio quality, voice clarity, and quick and easy installation, FORMAT combines the functions of background music, intercom, and message broadcasting in one speaker. It is suitable for applications including shops, schools, restaurants, hotels, public houses, and offices.

VERSIONS

- Low impedance: integrates an 8 ohm driver, designed for linear frequency
- 70 V/100 V line: integrates 70 V or 100 V line transformers for high voltage PA/VA sound system
- IP over network: integrates a POE+ IP DSP amplifier module, can play audio from IP network
- 70 V/100 V line and IP over network: integrate the characteristics of the 70 V/100 V line and IP versions

FEATURES

- 70 V/100 V line transformer integrated for PA/VA sound system or Low impedance in 8 ohms

IP version:

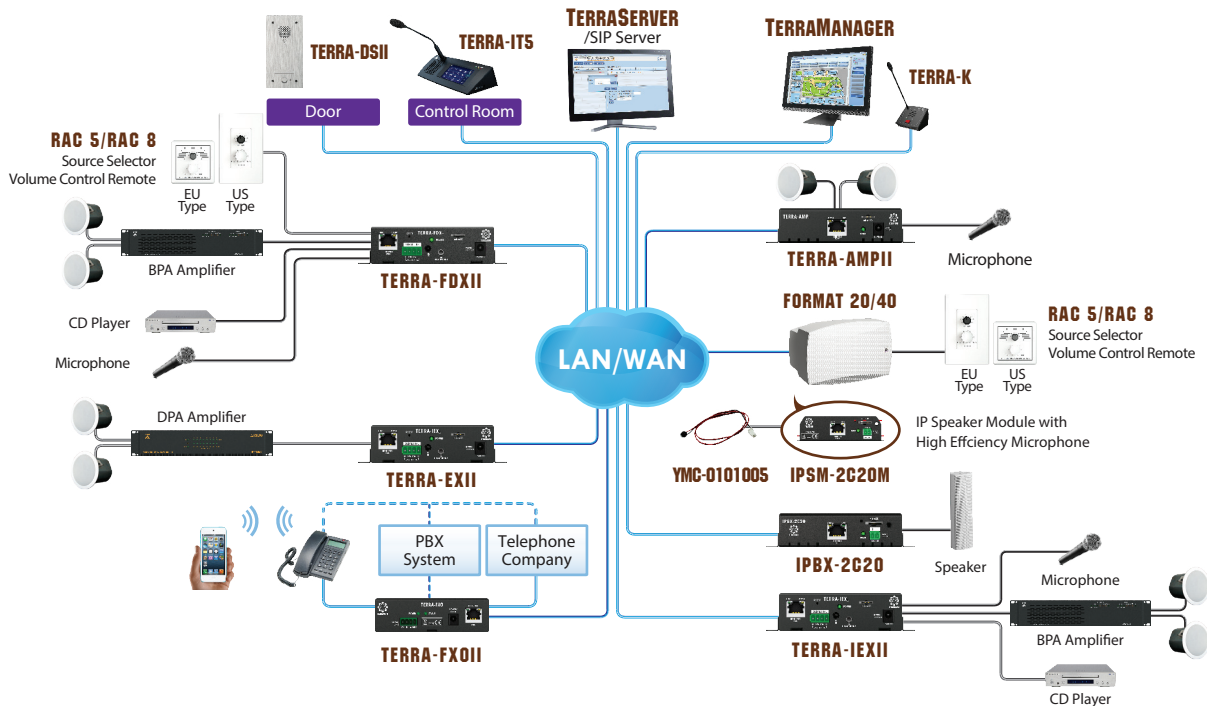
- 20 W x 2 or 40 W high efficiency Class-D audio amplifier built-in IP DSP amplifier module
- Optional high sensitivity microphone and input module for hand-free duplex intercom
- Audio DSP includes AEC, ANR and AGC for intercom application, also PEQ Hi/Low pass filters, compressor/Limiter
- Supports audio codecs G.711 ulaw, G.711 alaw, G.722, PCM16K, G726-32, G727-32, G729, MP3
- Internal memory (200M) plus micro SD card of up to 512 GB available for message or music files storage
- Digital encryption with AES 128/256 and TLS digitally encrypted over IP network
- 3 control inputs is designed for volume control and audio CCTV VMS platform
- 3rd party control
- Supports SIP client for IP-PBX, Onvif for video CCTV VMS platform and 3rd party control over IP network
- Cost effective of easy installation with one CAT5/6 net cable.
- Convenient management, configure, control, BGM/Paging streaming and status monitoring via standard IP network
- Supports PoE/PoE+ power or powered from an optional external AC/DC with 24 ~ 27 VDC power adaptor



FORMAT

PROFESSIONAL CABINET LOUDSPEAKER

SYSTEM DIAGRAM



TECHNICAL SPECIFICATIONS

ELECTRICAL

- Power handling
 - FORMAT 20: Rated 20 W, max 35 W
 - FORMAT 40: Rated 40 W, max 60 W
- Tappings 70 or 100 volt line
 - FORMAT 20: 20/10/5/2.5 W
 - FORMAT 40: 40/20/10/5 W
- Transformer impedance
 - FORMAT 20
 - 70V: 250/500/1k/2k ohms
 - 100V: 500/1k/2k/4k ohms
 - FORMAT 40
 - 70V: 125/250/500/1k ohms
 - 100V: 250/500/1k/2k ohms
- High/low driver impedance
 - FORMAT 20: 8 ohms/8 ohms
 - FORMAT 40: 8 ohms/8 ohms
- Effective frequency range (BSEN60268-5)
 - FORMAT 20: 76 Hz (fo) ~ 20k Hz
 - FORMAT 40: 55 Hz (fo) ~ 20k Hz
- S.P.L. @ 1m, 1 watt, dB, test signal bandwidth 100 Hz ~ 10k Hz
 - FORMAT 20: 85 dB
 - FORMAT 40: 87 dB
- S.P.L. @ 1m, full power, test signal bandwidth 100 Hz ~ 10k Hz
 - FORMAT 20: 98 dB
 - FORMAT 40: 103 dB

MECHANICAL

- Dimensions (W x H x D)
 - FORMAT 20: 265 x 175 x 160 mm
 - FORMAT 40: 365 x 240 x 210 mm
- Weight
 - FORMAT 20: 2.4 kgs
 - FORMAT 40: 3.4 kgs
- Colour (unless specified): White/Black
- Materials: High impact moduled ABS housing with UV inhibitor
- Mounting: Die-cast aluminum swivel arm and fiber PP plastic

ENVIRONMENTAL

- Min/max amb temp: -25 °C ~ +70 °C (+ 23 °F ~ +122 °F)
- Relative humidity: ≤ 95 %

IP SPEAKER MODULE

AUDIO CHARACTERISTICS (AMPLIFIED OUTPUT)

- Rated output power: 20 W x 2 CH
- Frequency response: 20 Hz ~ 20k Hz (±3 dB) @ 0 dBu
- THD+N @ full power: < 0.5% @1k Hz
- SNR: 85 dB

AUDIO CHARACTERISTICS (MIC INPUT)

- Phantom power: 2.5 V
- Frequency response: 20 Hz ~ 20k Hz (±1 dB) @ 0 dBu
- Input impedance (balanced): 50k ohm
- EIN (Equivalent Input Noise): < -90 dBra @ 0 dB gain
- THD+N: 0.1 %

AUDIO CHARACTERISTICS (YMC0101-005 MIC CAPSULE)

- Directional characteristic: Omni-directional
- Sensitivity: -42 (±2) dBu @ 1k Hz (0 dBu=1Vpa)
- Impedance: 2.2k (max.)
- S/N ratio (A-weighted): 60 dB
- Maximum SPL: 110 dB
- Frequency response: 50 Hz ~ 20k Hz (±3 dB) @ 0 dBu

SUPPORTED PROTOCOLS

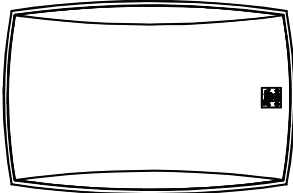
- SIP 2.0 (peer and proxy)
- IETF SIP (RFC3261)
- IETF IGMP version 2 (RFC2236)
- IETF RTP (RFC1889)
- Switch requirements (minimum request)
 - Transmission rate: 10/100M bps
 - Communication mode: full-duplex
 - IP protocls: IPv4, TCP/IP
- Manual or Dynamic Host Conguration Protocol (DHCP) IP address setup
- Time and date synchronization using NTP
- VMS of OnVIF protocol
 - Happytime
 - MileStone Xprotect
 - DSS Express
 - NX Witness



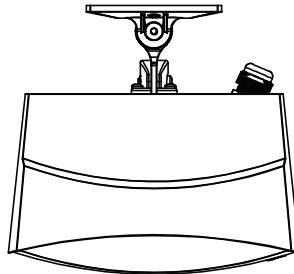
FORMAT

PROFESSIONAL CABINET LOUDSPEAKER

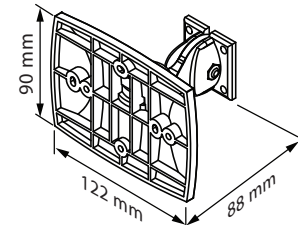
FRONT PANEL



TOP PANEL

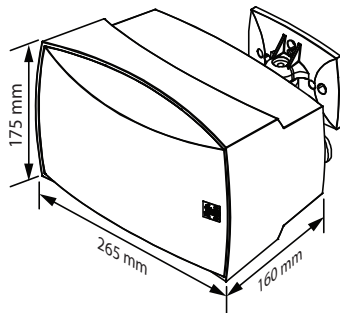


MOUNTING BRACKET

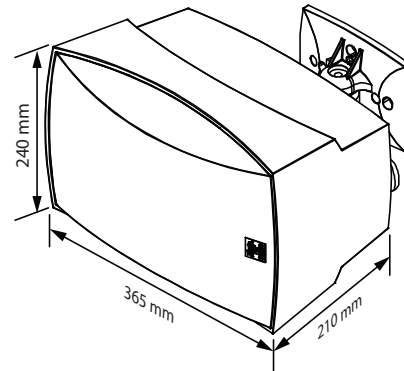


SIDE VIEW

FORMAT 20

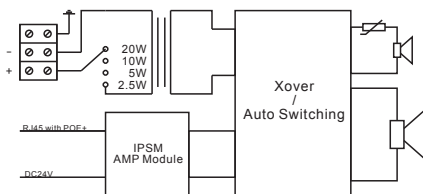


FORMAT 40

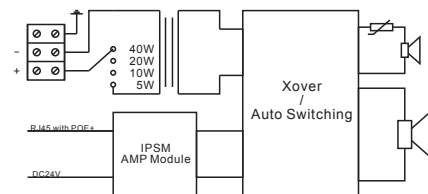


CIRCUIT DIAGRAM

FORMAT20/TB(W)-IPM



FORMAT40/TB(W)-IPM



FORMAT

PROFESSIONAL CABINET LOUDSPEAKER

WITH TRANSFORMER

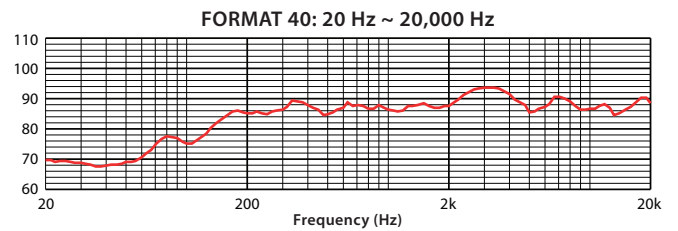
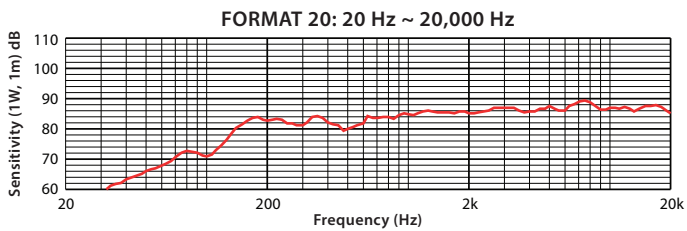
70 V line

FORMAT 20				
70 V	10 W	5 W	2.5 W	1.25 W
IMP.(Ω)	500	1K	2K	4K
FORMAT 40				
70 V	20 W	10 W	5 W	2.5 W
IMP.(Ω)	250	500	1K	2K

100 V line

FORMAT 20				
100 V	20 W	10 W	5 W	2.5 W
IMP.(Ω)	500	1K	2K	4K
FORMAT 40				
100 V	40 W	20 W	10 W	5 W
IMP.(Ω)	250	500	1K	2K

EFFECTIVE FREQUENCY RANGE



ORDERING INFORMATION

Model No.	Step 1	Step 2	Step 3	Step 4	Step 5	Description of Model
FORMAT	Driver Handing	Line Transformer	Colour	- IP Speaker Module	Microphone	Music Cabinet Co-Speaker
Driver Handing						
	20					Driver Handing 20 W
	40					Driver Handing 40 W
Line Transformer						
						IP Speaker Module Only
		L				Low Impedance Only*1
		/T				100 V Line
		/T7				70 V Line
Colour						
			B			Black
			W			White
IP Speaker Module						
						None
				IP		IP Speaker Module
Microphone						
						None
					M	Mic Input Module & Capsule

*1 If model number contain this option, it means this speaker is not include IP speaker module.

