TERRACOM™

Audio and Control over IP

CATALOGUE

Audio and Control over IP Solutions

An Audio over IP solution has become more commonly used nowadays, therefore by introducing such features as contact closures, relays, event management, scheduler, priority management, TerraManager integrated GUI control software and TerraServer management software, the TERRACOM family of products will have the solutions you require. We hope to deliver you the most suitable products and the most flexible solutions to meet the need of your projects.

APPLICATIONS

Medium-Sized Systems
 Stores (Restaurant, Shopping Malls)
 Office/Industrial Buildings
 University Campus
 Education Institution

Fully Integrated Large-Scale Systems
 Transportation (Railways, Subways, Airport)
 Hotels/Churches/Arenas
 Museums/ Theme Parks
 High-Rise Buildings

CONTENTS

TERRACOM SYSTEM

TERRACOM is our audio over IP terminal range, with a wide variety of devices that offer a solution to multiple markets. We offer a cost effective solution which utilises a standard network or the Internet for live audio paging, intercom, music streaming, routing, background music playing, control input/output trigger, and monitoring.

TERRACOM FAMILY

AUTOMATION

TERRA-IO is a programmable network I/O device with serial port (RS232/RS485), adapted to automation and monitoring applications.

APPLICATION SOFTWARE FOR PA/VA & BGM

The intuitive and powerful audio distribution software TerraManager and TerraServer is capable of handling the announcement, background music, zone paging, audio routing, bell scheduler, priority management, monitoring and so on.

CONSOLES AND ACCESSORIES

TERRACOM SYSTEM

The TERRACOM Audio over IP system is a range of products designed to transmit live audio paging, stored messaging, background music, 2-way intercommunications, control input/output triggers, and audio monitoring over TCP/IP. The TERRACOM supports PoE (Power over Ethernet), and/or can be powered locally with external 24VDC power supply. TERRACOM also communicates with traditional phone and IP phone systems over a network.

A built-in web browser interface allows simplified control and configuration of the TERRACOM devices, with the option of using TerraManager or TerraServer for more complex applications.

FEATURES

- Power supplied via PoE and/or 24VDC power adaptor
- Paging with unicast, multicast and broadcast
- Protocols TCP, UDP, SIP, RTP, IGMP, DHCP, ICECAST, HTTP, NTP and SNMP management
- G.711, G.722, G.726, G.727, G.729, MP3 audio codec and AAC+ decoder
- Acoustic Echo Cancellation and Noise Reduction
- Integrated graphic user software-TerraManager for monitoring and fault reporting of all system components
- TerraServer management software for site redundant
- Event scheduler for audio program, messages and controls
- ''Integration Automation with Home & Office Appliances'' can be integrated with logic control for light, curtain, TV or air conditioning on/off via RS232, RS485 or Ethernet
- Web browser interface for device control and monitoring
- Logic input
  - Pre-defined call, a contact output activation
  - RS232 serial string generation, an alarm

Why IP?
Nowadays, almost all buildings are equipped with a network infrastructure, therefore audio over IP technology has the huge advantage of utilising existing networks and crossing routers for ease of integration.

Where to use it?
From the standard applications like shopping malls, hotels, museums, theme parks, hospitals and schools, to more bespoke and specialised projects, IP networks exist nearly everywhere and thus IP offers such integration flexibility.

Benefits
The TERRACOM is a competitive pricing solution for your application needs. By using the standard network and PoE technology, installation and maintenance is simplified.

Powerful Platform
The TERRACOM devices have a powerful processor which provides a list of remarkable features, including priority management, event management, bell scheduling, local channel and volume control, paging, Acoustic Echo Cancellation and Noise Reduction.

Professional Audio
Instead of non-professional connectors, the TERRACOM have balanced audio on terminal block connectors for the Pro Audio market.

Audio Streaming
The TERRACOM offers the possibility for audio streaming using standard RTP protocol in unicast, multicast or broadcast. For In-Store applications, The TERRACOM streams using shoutcast/icecast protocols.

SIP Benefits
All TERRACOM devices use SIP technology, which gives you the benefit of having a standard session protocol with inherent simplicity. Therefore, it is compatible with IP PBX and softphone which helps with the complex management of the IP address world.

PoE Benefits
Most TERRACOM devices support PoE (Power Over Ethernet), therefore the constraint of having AC power outlets is eliminated. This provides flexibility in placing the TERRACOM devices in various locations. Optimal placement leads to more efficient network designs and superior application performance. The network installation can be accomplished easier, faster and for less cost. It is also safer because you can centralise the power management and protect it with a UPS (Uninterruptable Power Supply). Lastly, by using a manageable PoE network switch via web browser or SNMP allows the networking devices to be reset or shut down remotely, which saves time and expense of an on-site technician.

Management
All TERRACOM devices embed a web browser interface that enables you to control the TERRACOM through your favourite internet browser. For larger systems, you can use SNMP protocol. For more complex systems, the TerraServer will be your supervisor and management solution of your installation (Firefox web browser is suggested).

TERRACOM FAMILTY

WHICH TERRACOM DEVICE FITS YOUR PROJECT BEST?

	PPM-IT5	TERRA-EX	TERRA-EXA	TERRA-IEX	TERRA-FDX	TERRA-AMP	TERRA-DS	TERRA-FXO	TERRA-IO	TERRA-K
Audio Interface										
Gooseneck mic (unidirectional)	✓									✓
Mic-Line in/stereo line in				2/1	2/1	2/1	1/0			1/0
Headphone out (mono/stereo)		2/1		2/1						
Mono/or stereo line out		2/1		2/1	2/1	2/1				
Amplifier			20W x 2 8 ohm			15W x 2 8 ohm				
Internal loudspeaker (5 W)	1									
Internal loudspeaker (2.5 W)							1			1
Telephone line (TERRA-FXO)								2		
Telephone set interface								2		
Other Interface										
RS232/RS485		1*		1	1	1		1	1	
Contact input		3	3	3	3	3	4	3	4 In x 4 Out (TERRA-4IO)	
Contact output		1	1	1	2	2	2		8 In x 8 Out (TERRA-8IO)	
USB 2.0		1*		1*	1	1				
Push button	3						1/2/3/4			1
Power Supply										
24 VDC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PoE	✓	✓		✓	✓	✓**	✓	✓	✓	✓
Software										
Embedded web browser interface	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
G.711/G.722/G.726/G.727/G.729 codec	✓	Decoding only	Decoding only	✓	✓	✓	✓	✓		✓
AAC+ decoder	✓	✓	✓	✓	✓	✓	✓	✓		✓
MP3 codec	✓	Decoding only	Decoding only	✓	✓	✓	✓	✓		✓
Icecast - shoutcast		✓	✓	✓	✓	✓		✓		
SIP/IGMP/DHCP/NTP/SNMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DTMF								✓		
Acoustic Echo Cancellation	✓					✓	✓	✓		
Built-in scheduler	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Noise Reduction	✓						✓			✓
Matrix with priority management		✓	✓	✓	✓	✓		✓		
1 to group paging	✓	Receiving	Receiving	✓	✓	✓	✓	✓		✓
1 to 1 intercom	✓	Receiving	Receiving	✓	✓	✓	✓	✓		✓

*= Optional, see Ordering Information chapter for details.

**= Maximum 6W x 2 when locating by the PoE switch.

TERRA-EX

IP AUDIO DECODER

TERRA-EX

Cost-Effective IP Audio Decoder

TERRA-EX is an IP audio decoder, and is equipped with an optional USB flash interface for playlist backup or prerecorded announcements.

The TERRA-EX device is proposed as the most cost-effective output device which comes with 2 independent balanced line outputs, 1 contact output, 3 contact inputs.

The TERRA-EX will be your ideal IP solution for any application where you need a simple balanced audio output with I/O contacts & replays.

Thanks to the scheduler and the music/message management via optional USB interface, the TERRA-EX is also the perfect solution for in-store applications. The volume and channel can be modified by connecting to RAC remote source selector.

TERRA-EX CHARACTERISTICS

2 balanced line outputs (1 stereo or 2 mono)
1 stereo line input (3.5 mm mini-jack) for headphone
Frequency response: 20 Hz ~ 20 kHz
Maximum input/output level: 5 dBu
Single STP CAT5/6 cable connectivity for audio and control
PoE or 24 VDC power supply (if PoE is not available)
Web browser interface for device management and monitor
SNMP (Simple Network Management Protocol) for device management on IP networks
Optional USB 2.0 interface for music/message storage, playback and recording (TERRA-EXU, TERRA-EXU2 and TERRA-EXU4)
Power LED and Status LED
3 contact inputs and 1 contact output
Optional RS232 or RS485 for 3rd party control
Power consumption: 2W
Weight: 0.95 lbs (433g)
Dimensions (D x H x W): 4" x 1-1/4" x 4-3/10" (104 x 32 x 109 mm)

TERRA-EXA CHARACTERISTICS

20W x 2 (8 ohm) amplifier outputs
Frequency response: 20 Hz ~ 20 kHz
Single STP CAT5/6 cable cable connectivity for audio and control
Power supply via 24VDC power input (max. 2A), PoE not available
Web browser interface for device management and monitor
SNMP (Simple Network Management Protocol) for device management on IP networks
Power LED and Status LED
3 contact inputs and 1 contact output
Power consumption: 48W
Weight: 1 lb (453g)
Dimensions (D x H x W): 4" x 1-1/2" x 2-3/4" (103 x 37 x 70 mm)

TERRA-EXA

Cost-Effective IP Audio Decoder with Amplifier Built-In

The TERRA-EXA comes with 20W x 2 amplifier outputs for the IP terminal, 8 ohm speakers, 3 contact outputs and 1 contact input.

SUPPORTED AUDIO CODEC (TERRA-EX & TERRA-EXA)	
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
SHOUTcast / icecast	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K, MP3, AAC+
Stream	G.711 ulaw, G.711 alaw, G.722, WAVE, MP3, PCM16K
Record	G.711 ulaw, G.711 alaw, G.722, WAV, MP3

Audio Distribution over IP

TERRA-IEX / TERRA-AMP

IP ENCODER / DECODER

TERRA-IEX CHARACTERISTICS

| |
|---|
| 2 Mic/line balanced input |
| 2 balanced line outputs (1 stereo or 2 mono) |
| 1 stereo line input (3.5 mm mini-jack) for headphone |
| Frequency response: 20 Hz ~ 20 kHz |
| PoE or 24 VDC power supply (if PoE is not available) |
| Web browser interface for device management and monitor |
| SNMP (Simple Network Management Protocol) for device management on IP networks |
| Optional USB 2.0 interface for music/message storage, playback and recording (TERRA-IEXU and TERRA-IEXU4) |
| Power LED and Status LED |
| 3 contact inputs and 1 contact output |
| RS232 or RS485 for 3rd party control |
| Power consumption: 3W |
| Weight: 0.95 lbs (433g) |
| Dimensions (D x H x W): 4" x 1-1/4" x 4-3/10" (104 x 32 x 109 mm) |

TERRA-AMP CHARACTERISTICS

1 mic/line balanced input
2 balanced line outputs (1 stereo or 2 mono)
15W x 2 (8 ohm) amplifier outputs (6W x 2 by PoE)
1 stereo line input (3.5 mm mini-jack) for headphone
Frequency response: 20 Hz ~ 20 kHz
Maximum input/output level: 5 dBu
Single STP CAT5/6 cable connectivity for audio and control
PoE or 24 VDC power supply (if PoE is not available)
Full duplex intercom with AEC (Acoustic Echo Cancellation) and NR (Noise Reduction)
Web browser interface for device management and monitor
SNMP (Simple Network Management Protocol) for device management on IP networks
One USB 2.0 interface for recording, message and music files
Power LED and Status LED indicators
3 contact inputs and 2 contact outputs
RS232 or RS485 for 3rd party control
Power consumption: 30W
Weight: 1 lb (460g)
Dimensions (D x H x W): 4" x 1-1/4" x 4-3/10" (104 x 32 x 109 mm)

TERRA-IEX
Full Duplex IP Audio Encoder/Decoder

The TERRA-IEX is a 2 channel audio over IP encoder/decoder which operates as an audio source for an IP network. It comes with 2 independent balanced line outputs for full duplex communication for paging and broadcasting.

By using the optional USB interface, the playlists shall be used as a backup of the decoded stream or as a source for the IP streaming.
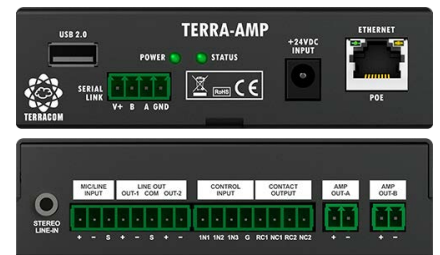
TERRA-AMP
Amplified IP Terminal (15W x 2)

TERRA-AMP is an IP audio terminal which delivers 15 watts/channel into 8 ohm. Each device comes with 2 channels and 15W independent outputs with external power.

TERRA-AMP model features mic/line inputs that can be played locally as a source for network streaming. Playlist backups or prerecorded announcement are achieved via USB flash memory interface, which offers an ideal solution for commercial audio & also public address systems.

SUPPORTED AUDIO CODEC (TERRA-IEX & TERRA-AMP)	
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
SHOUTcast / icecast	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K, MP3, AAC+
Stream	G.711 ulaw, G.711 alaw, G.722, WAVE, MP3, PCM16K
Record	G.711 ulaw, G.711 alaw, G.722, WAV, MP3

TERRA-K

IP BASED INTERCOM MICROPHONE

A new level of inter-company security and communication systems.

TERRA-K CHARACTERISTICS

High quality gooseneck microphone and built-in loudspeaker (2.5W)

Web browser interface for device management and monitor

PoE or 24 VDC power supply (if PoE is not available)

Automatic gain control on microphone input

Paging to pre-defined zones

Pre-recorded announcement and dynamic zone paging via TerraManager

Full duplex intercom

Push-to-talk button, Talk LED and Power LED

Power consumption: 3.12W

Weight: 1.76 lbs (800g)

Dimensions (D x H x W): 5" x 13-4/5" x 5-3/10" (125 x 350 x 135 mm)

SUPPORTED AUDIO CODEC

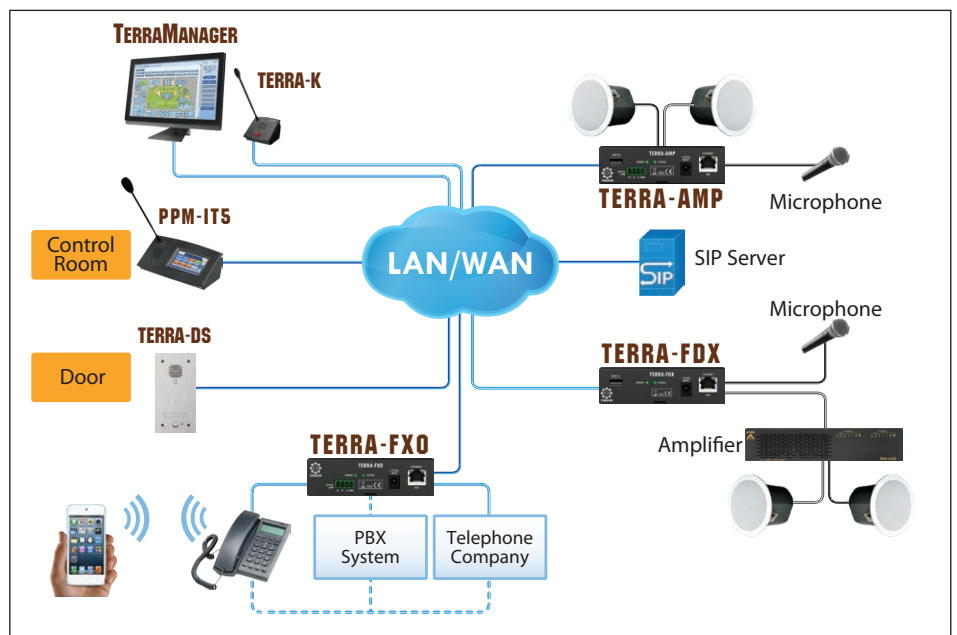|	
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
SHOUTcast icecast	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K, MP3, AAC+
Stream	G.711 ulaw, G.711 alaw, G.722, WAVE, MP3, PCM16K
Record	G.711 ulaw, G.711 alaw, G.722, WAV, MP3

TERRA-K

IP Based Intercom Microphone

The TERRA-K is a multi-function IP based microphone which is designed for full-duplex intercom and paging (Unicast/Multicast/Broadcast) over LAN/WAN. The TERRA-K can also be used with TerraManager to perform a recording function. Its pre-chime and post-chime can be configured via the web browser interface. It also has 2 LED indications and one button on the front panel, which displays device status and triggers certain functions.

By using the TerraManager integrated control software, paging (Unicast/Multicast/Broadcast), full-duplex intercom, music streaming, audio routing, message playing, Scheduler functions, TTS SVE (Text To Speech - Synthetic Voice Engine), device I/O monitoring and volume control (3rd party) can be achieved. Remote Intercom with a PPM-IT5 through a SIP Server can be achieved via TERRA-FXO and web browsers, which increases its flexibility and integration with other TERRACOM products in adapting to various situations.

TERRA-FDX / TERRA-DS / TERRA-FXO

TERRACOM INTERCOM FAMILY

TERRA-FDX
Full Duplex IP Terminal for Intercom

The TERRA-FDX is designed for paging and full duplex intercom, and it offers the possibility to create bidirectional IP links for high audio quality and data transmission. Thanks to the standard SIP protocol, calls can be done by IP phones (AVAYA, CISCO, 3COM…).

TERRA-FDX CHARACTERISTICS

2 Mic/line balanced inputs
2 balanced line outputs (1 stereo or 2 mono)
Frequency response: 20 Hz ~ 20 kHz
Maximum input/output level: 5 dBu
Single STP CAT5/6 cable connectivity for audio and control
PoE or 24 VDC power supply (if PoE is not available)
Web browser interface for device management and monitor
SNMP (Simple Network Management Protocol) for device management on IP networks
Message storage for playback and recording
USB 2.0 interface for music, message storage and recording
Power LED and Status LED indicators
3 contact inputs and 2 contact outputs
RS232 or RS485 for 3rd party control
Power consumption: 2.66W
Weight: 0.95 lbs (430g)
Dimensions (D x H x W): 4" x 1-1/4" x 4-3/10" (104 x 32 x 109 mm)

TERRA-DS
Flush-Mount SIP/IP Door Station

The TERRA-DS vandal-proof SIP/IP door station is an indispensable device for intercom solutions, featuring high quality hands-free SIP/IP communication. Additionally, the contact inputs/outputs on TERRA-DS allows for electronic door/gates lock down.

TERRA-DS CHARACTERISTICS

Full duplex intercom with Noise Reduction
Web browser interface for device management and monitor
SNMP (Simple Network Management Protocol) for device management on IP networks
Stainless steel front panel
Built-in condenser microphone
Built-in loudspeaker (2.5W)
1 to 4 push-to-talk buttons on the front panel TERRA-DS1 = one-key button TERRA-DS2 = two-key buttons TERRA-DS3 = three-key buttons TERRA-DS4 = four-key buttons
Support SIP based call
4 contact inputs and 2 contact outputs
PoE or 24 VDC power supply (if PoE is not available)
Power consumption: 3.12W
Weight: 1.77 lbs (808g)
Dimensions (D x H x W): 1-3/8" x 8-3/5" x 4-3/10" (35 x 220 x 110 mm)

TERRA-FXO
Full Duplex IP Terminal to Telecom Gateway

The TERRA-FXO offers full duplex communication for IP intercom and telephone, it comes with 2 sets of telephone interfaces and DTMF management for receiving calls or broadcasting.

TERRA-FXO CHARACTERISTICS

SNMP (Simple Network Management Protocol) for device management on IP Networks
PoE or 24 VDC power supply (if PoE is not available)
2 sets of telephone lines interface
Full duplex with Acoustic Echo Cancellation and Noise Reduction
Web browser interface for device management and monitor
Internal 80MB storage for recoding, message storage
RS232 or RS485 for 3rd party control
Power LED and Status LED indicators
Power consumption: 2.66W
Weight: 0.95 lbs (430g)
Dimensions (D x H x W): 4" x 1-1/4" x 4-3/10" (104 x 32 x 109 mm)

| SUPPORTED AUDIO CODEC (TERRA-FDX & TERRA-DS)	
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
SHOUTcast / icecast	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K, MP3, AAC+
Stream	G.711 ulaw, G.711 alaw, G.722, WAVE, MP3, PCM16K
Record	G.711 ulaw, G.711 alaw, G.722, WAV, MP3

SUPPORTED AUDIO CODEC (TERRA-FXO)	
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
Record	G.711 ulaw, G.711 alaw, G.722, WAV, MP3

Audio Distribution over IP

TERRA-IO

AUTOMATION
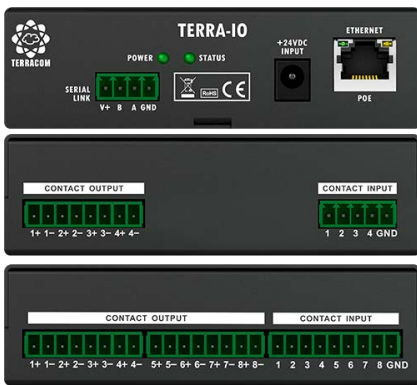
TERRA-IO
Contact I/O Terminal over IP

The TERRA-IO is a TERRACOM device without the audio inputs & outputs. It comes with either 8 contact inputs and 8 contact outputs or 4 contact inputs and 4 contact outputs which shall be used in audio applications which require lots of analogue I/O such as industrial & home automation applications or monitoring contact closures. The RS232 and RS485 interface shall be used for IP tunneling between a PC and a device such a sensor for tele-monitoring.

TERRA-IO CHARACTERISTICS

Available for two options
- TERRA-4IO: Contact In x 4 and Contact Out x 4
- TERRA-8IO: Contact In x 8 and Contact Out x 8

Web browser interface for device management and monitor

SNMP (Simple Network Management Protocol) for device management on IP networks

RS232 or RS485 for 3rd party control

PoE or 24 VDC power supply (if PoE is not available)
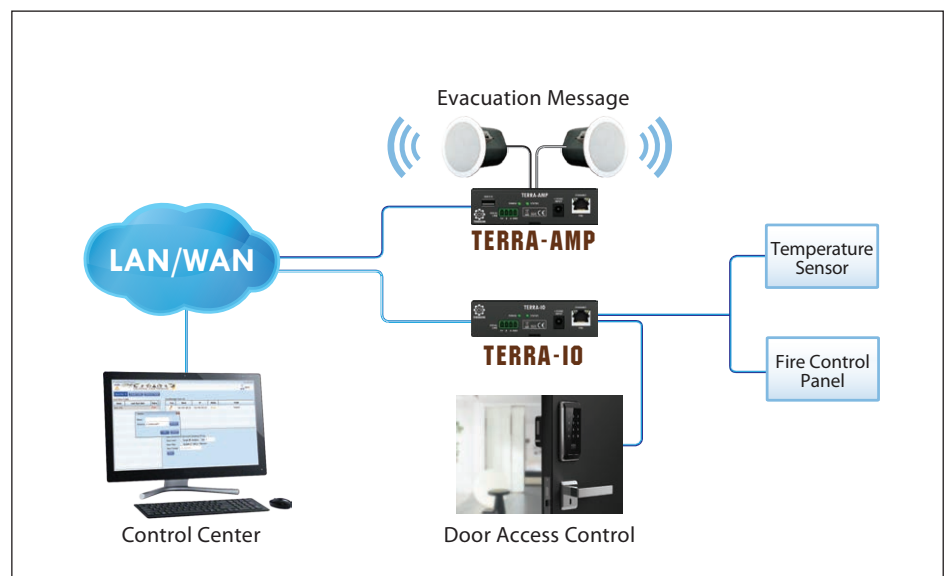
Power LED and Status LED

Power consumption: 2W

Weight: 0.92 lbs (420g)

Dimensions (D x H x W): 4" x 1-1/4" x 4-3/10"
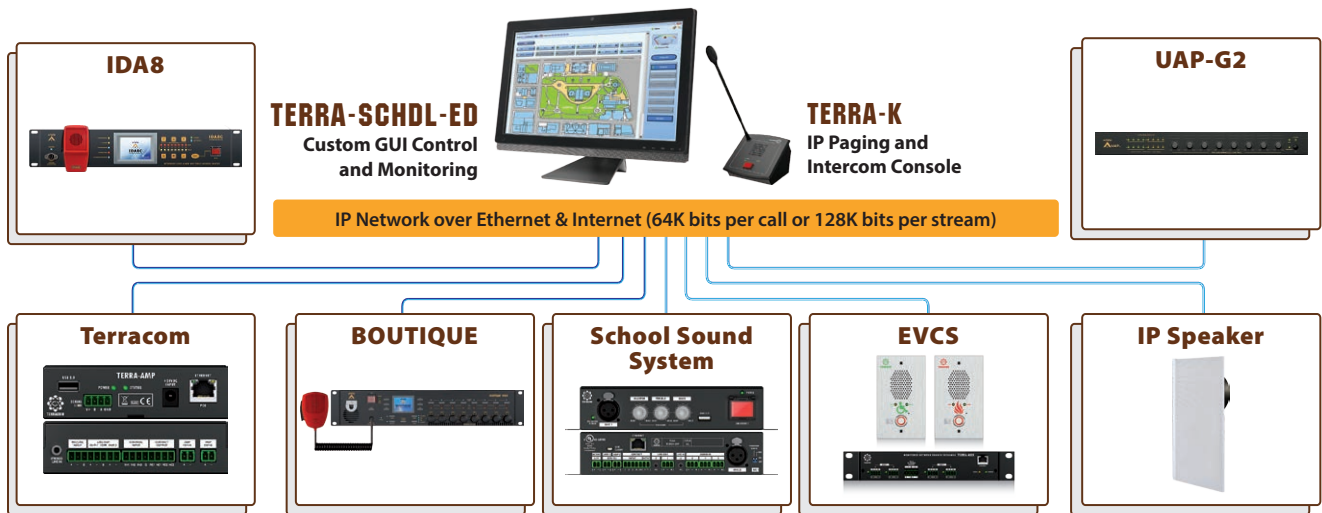(104 x 32 x 109 mm)

Application of Alarm Automation

In this example schematic, the TERRA-IO is used as an access controller to detect intruders and to trigger alarms. The temperature sensor is connected to RS232 on the TERRA-IO and will send its status to a server which allows the control centre to activate procedures when errors occur. The serial link can be used for IP tunneling between a PC and a device like a sensor for tele-monitoring. With the contact I/Os and serial link, the TERRA-IO is the ideal platform for monitoring contact closures and integration with home and office appliances.

TERRAMANAGER

INTEGRATED GUI CONTROL SOFTWARE

IDA8	TERRA-SCHDL-ED		TERRA-K	UAP-G2
	Custom GUI Control and Monitoring		**IP Paging and Intercom Console**	

IP Network over Ethernet & Internet (64K bits per call or 128K bits per stream)

Terracom	BOUTIQUE	School Sound System	EVCS	IP Speaker

The easy-to-use TerraManager software is an integrated and flexible Windows-based GUI platform, providing GUI components and buttons to control and monitor the products from ATEÏS and TERRACOM such as IDA8, BOUTIQUE, EVCS, TERRACOM system and other ATEÏS processors etc..

TerraManager can perform network paging (Unicast/Multicast/Broadcast), IPS (Internet Paging Service), full duplex intercom, music streaming, background music routing, message playing, recording, event, bell scheduling, device I/O monitoring, TTS SVE (Text To Speech - Synthetic Voice Engine), volume control and other numerous control functions. Meanwhile, the TerraManager can monitor all zones, list the logs/faults/evac and display the status of the current paging sources.

Logical Model Description

TerraManager is an independent application program which operates on any PC/Laptop that support Java Virtual Machine (JVM).

TerraManager provides user interface switching between "Edit Mode" for function adding or parameter adjustments, and "User Mode" for operating. The system defines "zone" as an area or region which is used as an audio output. The zone can be an output from an IDA8, BOUTIQUE, Terracom or other ATEÏS processor/device. A "source" means an audio source. The audio source is similar to the output, which comes from one of the inputs from an ATEÏS product.

TerraManager supports a configurable control panel layout, priority and parameters preset, protocol selections and remote device management including volume, threshold and network interfacing. Highly secured system design features include a password login/logout setting, auto data storage and back up for devices/users. Support Multi-language, including English, Chinese, German and French etc..

FEATURES

- Support TCP, UDP, SIP, RTP and IGMP protocols
- Various zone buttons selections, including single zone, group zones or message broadcasting
- Support paging (Unicast/Multicast/Broadcast) and full-duplex intercom
- Support adjustable pre-chime/post-chime and panel layout configuration
- Monitoring device status, such as online/offline
- Configurable prerecorded audio sources for zone broadcasting and bell scheduler arrangement
- 3rd party control via UDP, TCP and Modbus protocols for real-time remote control
- Parameters preset, storage or backup for each device
- Support Text to Speech-Synthetic Voice Engine broadcasting
- Support remote device management in volume, threshold, network interface, etc.
- Four kinds of license version on TerraManager, Basic (Free), BGM, Paging and Intercom

SYSTEM REQUIREMENTS
CPU: > 2.5 GHz, Dual Core
Memory: > at least 4GB RAM   * reserve at least 2GB for TerraManager application
Hard-Disk: > 500GB   * reserve 100GB for TerraManager application and log
Java Runtime: Java 8 update 191
64-Bit OS: Windows 7 SP1/8.1/10

VGA Card	NVIDIA: GeForce100 series or higher
	ATI: Radeon HD 4000 or higher
	Intel: GMA 4500 or higher
Others	Network Card
	Network bandwidth: > 100Mbps

SUPPORTED AUDIO CODEC	
SIP	G.722, MP3, PCM16K
Record	G.722, MP3, PCM16K
Message	G.722, MP3, PCM16K
Route	G.722, PCM16K, G.711ulaw
Music stream	G.722, MP3, PCM16K
Music SHOUTcast	MP3

TERRAMANAGER

INTEGRATED GUI CONTROL SOFTWARE

The easy-to-use TerraManager software is a flexible Windows-based GUI platform that can configure as a matrix programmable and customizable soft buttons on the screen – or dynamic buttons can be actual graphic images of imported map layout of the physical building, campus, or geographical area – overlayed on image to coincide with the actual page/intercom zones for easy identification and activation. Virtually unlimited panels or screens can be created and navigation is via drop-down menu, "Quick-Link" function buttons and/or programmable Panel Link buttons that can be placed and customized anywhere within the design.
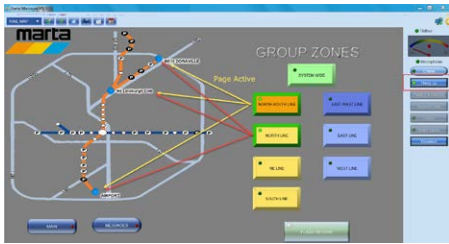
GUI Buttons

The highly customized and flexible button can be configured as various functions including zone selection, message/music playing, background music routing, source selection, 3rd party command string, device logic I/O control and monitor. The zone button displays the status of the fault and evacuation, multiple buttons on one page represents a global view of an area such as a building or a terminal of the airport. If a zone has been occupying a source, its name will be displayed on the graphic of the button even the user can identify if it is a higher priority source or lower priority source of its color. Furthermore, the text and color of device I/O button LEDs can be customized.

Paging (Unicast/Multicast/Broadcast)

TerraManager performs live paging and recording functions in the control panel page. Users can easily select the desired paging locations with a mouse click. With the system, background music playing and pre-chime/postchime functions are supported when preforming unicast/multicast paging or broadcasting over LAN/WAN.
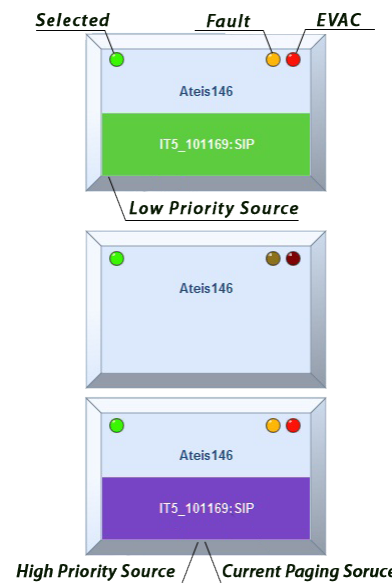
Intercom

Full duplex intercom can be achieved among TERRACOM devices over LAN/WAN. For larger applications, zone buttons provide quick access for users in selecting desired locations.

### Device I/O Monitoring & Control

The system enables users to monitor or manage device status with a mouse click. When having considerable quantities of devices, the TerraManager displays all the device information on a table view such as online/offline, line occupied/line-available and parameter adjustments, as well as providing central control including preset scheduler, group paging, real-time 3rd party control capabilities for users.

Preset Scheduler

Advanced scheduler management in the system enables users to run multiple sources in different timing/zones without interrupting each other. Month, week, day, hour, repeat times and starting time are adjustable depending on users' needs.

Background Music and Audio Routing

The TerraManager allows you to perform message/background music routing to other channels/devices with a few mouse clicks. The input sources can either be music/radio that come from other devices, or pre-recorded messages based on the users requirements. Routing offers users with real-time notification ability or alerts for certain events/situations.
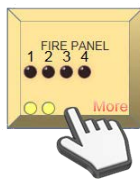
TERRASERVER

INTEGRATED MANAGEMENT SOFTWARE

FEATURES

- Music streaming
- Recording streams from IDA8, BOUTIQUE, TERRACOM devices etc.. or other streams via RTP protocol
- Scheduler management for BGM and pre-recorded messages
- File synchronization including text, MP3, WAV etc. with TerraManager
- Multiple devices management & monitoring for TERRACOM, TerraManager, TerraServer and ATEÏS products, including IDA8, BOUTIQUE, ECS, UAP
- Support to upload the audio files into the IDA8 processor, and download the files from IDA8 processor to your PC remotely
- Record logs for the whole system
- Ethernet, TCP/IP, VLAN compliant
- Up to 49 priority level on Scheduler

TerraServer is a Windows-based integrated and operation management software, it can handle multi-channel music streaming, record streaming, manage numerous audio files, playlists and devices, device firmware update, monitoring, file synchronization with TerraManager etc.. TerraServer also has an advanced scheduler for playing pre-recorded messages and message priority announcements.
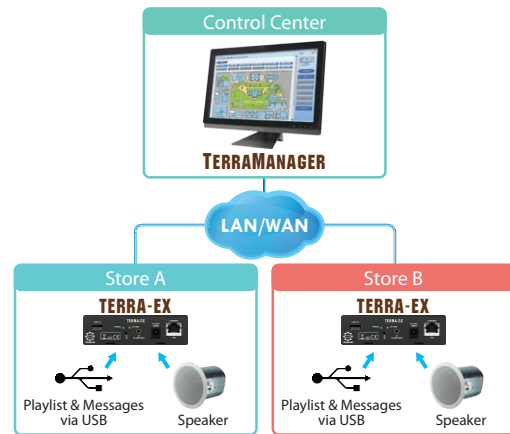
Sync File
Support the files stored in TerraManager to be synchronized with the files in TerraServer.
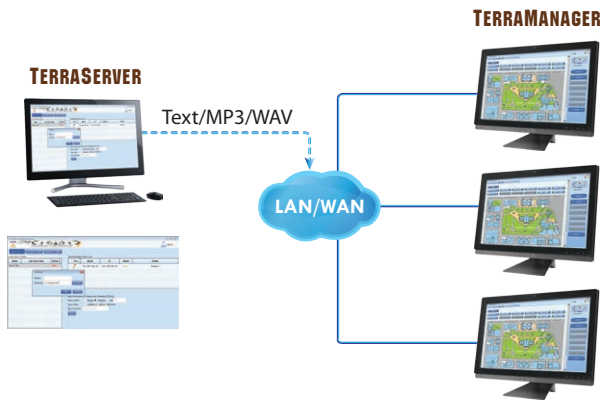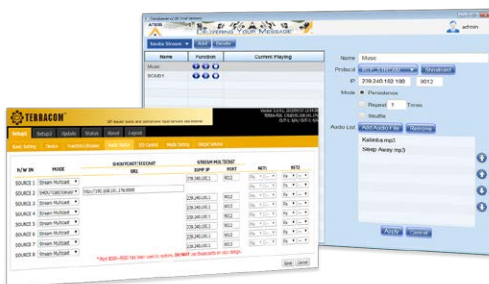

Sync Store
Support to upload the audio files from IDA8 processor and download them to your PC remotely.
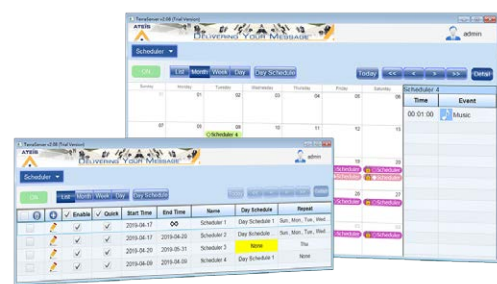

Steaming
Music streaming to TERRACOM devices through the Internet.

Scheduler
Support to schedule the events such as messages playing in dierent timing/zones without interrupting each other. Month, week, day, hour, repeat times and starting time are adjustable depending on users' needs.

Audio Distribution over IP

TERRASERVER

INTEGRATED MANAGEMENT SOFTWARE

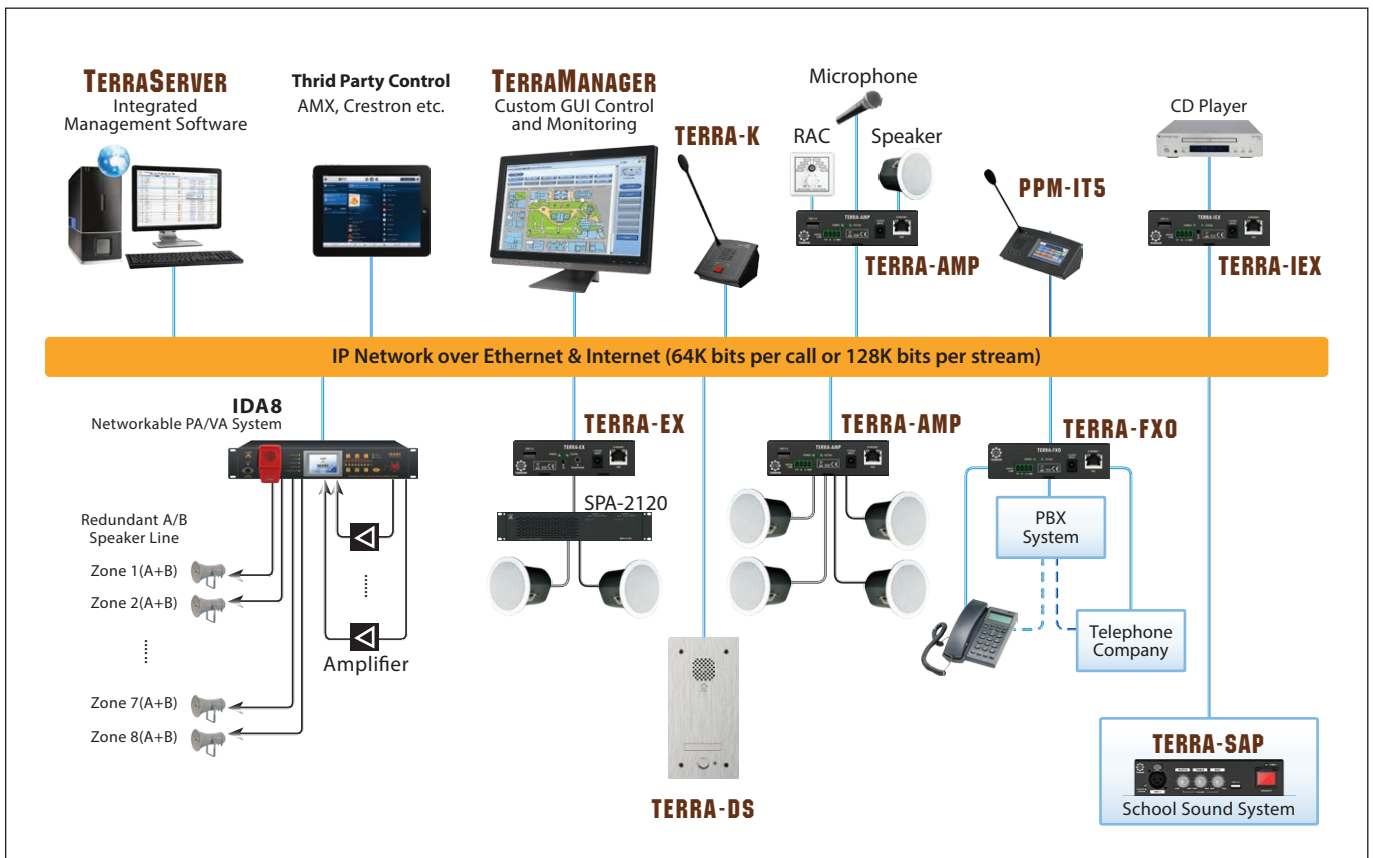### CONFIGURATION & USER INTERFACE

The software can also be installed on multiple computers on the clients side at the same time, associating with TERRA-K/PPM-IT5 paging console, IDA8/BOUTIQUE processor and TERRACOM audio IP terminal. This PC server is also used for system conguration settings and logging which can be linked to a back-up server system.

DEVICE MANAGEMENT

The BOUTIQUE, IDA8 and TERRACOM device can be easily integrated with TerraServer via LAN/WAN for control and monitor. Any device on the network can be discovered and be listed in the device management window automatically. The table-structured layout provides the user a clear view of the whole system and monitor the status of each device eciently.
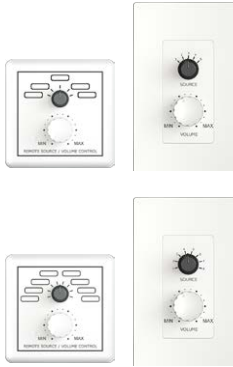

PA/VA COFINFIGURATION

PPM-IT5 / RAC 5 / RAC 8 / URC-200

PROGRAMMABLE PAGING CONSOLE, REMOTE CONTROLLER

RAC 5 / RAC 8

5/8 Steps Level and Source Selector

The RAC 5/RAC 8 can be used to adjust audio level or switch audio channel remotely. The 5/8 steps knobs on RAC 5/RAC 8 can be programmed via TERRACOM web browser. The RAC 5/RAC 8 is available for US and EU type, and is powered by 24VDC.

MECHANICAL
Weight: 0.22 lbs (100g)
Dimension (W x L x H): 2" x 3-3/10" x 3-3/10"
(52 x 84 x 84 mm)

URC-200

Ethernet Universal Programmable Remote Controller

The URC-200 is a programmable remote controller (TCP/IP) which is powered over IP and can be easily integrated with room control such as light turn on/off, curtain, audio control to create smart homes and offices.

The full colour display is easy to read and has a low-power consumption, it features a scalable knob, 2 buttons for "enter" and "back".

MECHANICAL
Weight: 0.77 lbs (350g)
Dimension (W x L x H): 5-1/2" x 4-1/4" x 1-3/10"
(140 x 108 x 34 mm)

**Programmable IP Paging Console
with Colour Touch Screen
& Gooseneck Microphone**

PPM-IT5
Programmable Paging Microphone

The PPM-IT5 console comes with a 5" TFT touch screen interface which allows for intercom with the entire TERRACOM range, as well as call-paging, messages broadcasting and DSP matrix parameter control. Its back-lit touch screen is designed for simple and user-friendly operation. Thanks to powerful echo cancellation, the PPM-IT5 delivers clear sound for full duplex communication. The 3 hardware keys can be freely assigned within the system control software. The PPM-IT5 is a versatile device that fits well in a commercial shopping centre where paging over IP networking brings flexibility and easy access.

Programmable Functions
All the paging parameters needed for site operation can be programmed within the PPM-IT5, such as assigning zones to the various buttons, naming of zones, groups of zones, messages triggering or event control. There are a total of 168 keys over 14 pages for zone or group of zones selections. The pre-recorded messages and chime can be stored within the PPM-IT5 console. A built-in web browser interface allows simplified control and configuration of the PPM-IT5. The device can also be used to control other 3rd party devices over IP.

PPM-IT5 CHARACTERISTICS

5" TFT LCD full colour touch panel
Zone selection, paging and control
Ethernet interface including PoE (Power Over Ethernet)
Half or full duplex intercom with AEC (Acoustic Echo Cancellation) and NR (Noise Reduction)
High quality gooseneck microphone and built-in loudspeaker (5W)
Web browser interface for management and monitor
PoE or 24 VDC power supply (if PoE is not available)
Automatic gain control on microphone input
SNMP (Simple Network Management Protocol) for device management on IP networks
3 user-defined hardware keys on front panel (Power/Fault/EVAC)
RJ9 for telephone headset and 2 mini-jack plugs for headset
Dimensions (D x H x W): 9-7/8" x 3-1/5" x 5-1/2" (250 x 80 x 140 mm)
Microphone flex length: 11" (280 mm)
Weight: 2.4 lbs (1098g)
Colour: RAL7016

SUPPORTED AUDIO CODEC

|	
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
SHOUTcast / icecast	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K, MP3, AAC+
Stream	G.711 ulaw, G.711 alaw, G.722, WAVE, MP3, PCM16K
Record	G.711 ulaw, G.711 alaw, G.722, WAV, MP3

APPLICATIONS

PUBLIC ADDRESS-BACKGROUND MUSIC

The live announcements will be broadcast with a dedicated PPM-IT5 IP paging console, or microphone plugged into the TERRACOM device, such as TERRA-IEX, TERRA-AMP or TERRA-FDX. The selection of the announcement destination is done directly on the touch screen of PPM-IT5 console, or on a PC with a TerraServer client management software. The background music is stored on the TerraServer, or alternatively on another source such as a CD player connected to a TERRA-IEX.

For the output, the TERRA-EX shall be used as a terminal, or use the TERRA-EXA if you need amplified outputs. Additionally, you could use the outputs of the TERRA-IEX & TERRA-FDX if you need outputs at the same place as the inputs. The priority management is controlled by the TerraServer. The priority management is controlled by the TERRACOM devices themselves, if you are not using the TerraServer solution.
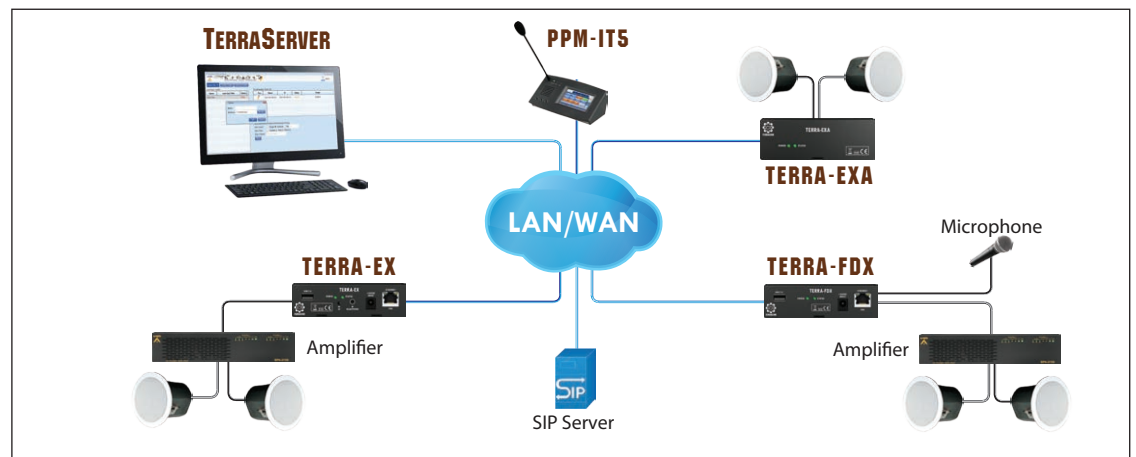
PUBLIC ADDRESS-VOICE ALARM FOR TRANSPORTATION

The TERRACOM range interfaces with the ATEÏS Public Address & Voice Alarm systems such as the IDA8, offering a powerful solution for transport applications such as subways and tramways. In each station, the IP matrix of the IDA8 would handle the streaming. The TERRA-EX can also deliver a decoded audio stream, plus a serial link (RS233 or RS485) to control another standard matrix. The TERRA-FXO is capable of linking to a traditional telephone system with the IP system.
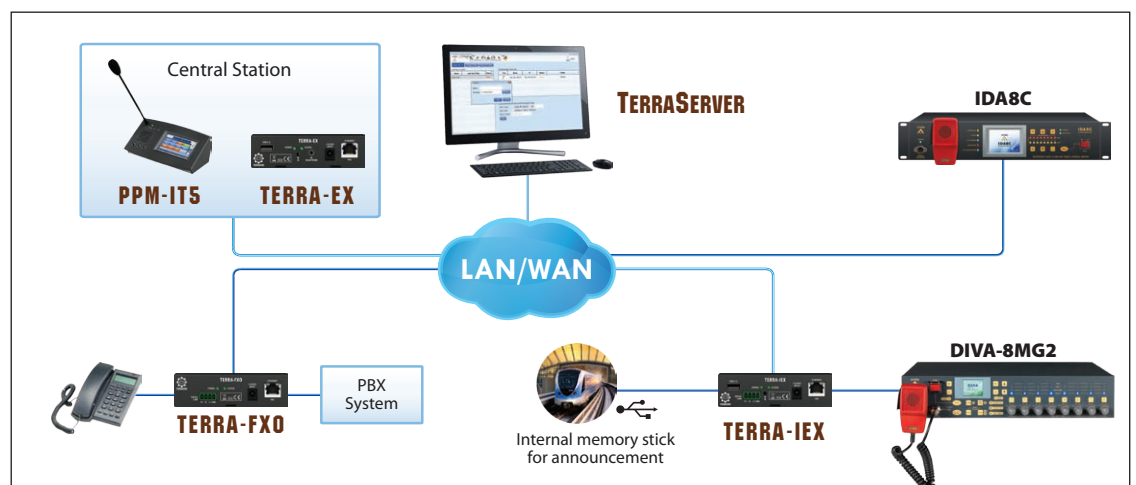
APPLICATIONS

INTERCOM-BACKGROUND MUSIC

Nowadays, there is no real limitations between intercom & PA BGM. You can decide whether to use TerraServer management software depending on the complexity of the system needs. The background music shall come from a hardware device like an audio processor such as a UAPG2, then connected to a TERRA-IEX. The the priority management is done by the TERRACOM devices themselves.
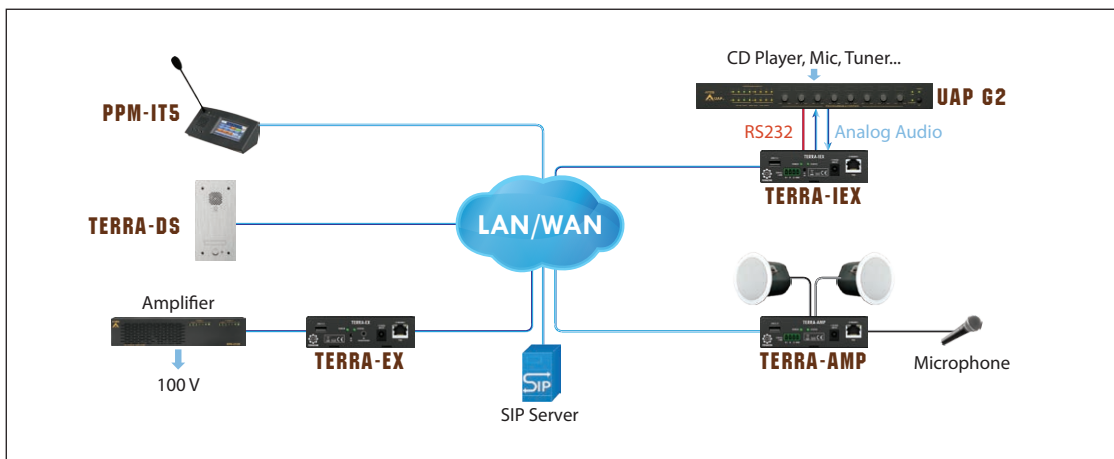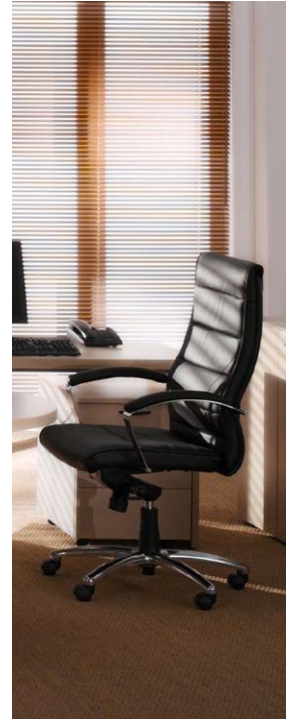
BACKGROUND MUSIC IN RETAIL SHOPS

The TERRACOM software provides pre-recorded messages and background music playing over a standard Internet connection in advance to shops, shopping malls or any desired locations around the world. Its messages and audio sources can be programmed before hand and be stored in any Terra devices with a USB port.

With the TERRACOM architecture, a user-friendly interface requires fewer people in operation which makes it a cost effective solution to customers.

Promotion Message Management

Users are encouraged to upload the desired messages or music on TerraServer, and have them scheduled in the desired sequences under priority setting, playing dates, repeating times, etc..

Later, users can upload the desired promotion schedules to the selected TERRACOM devices in any targeted locations worldwide over the internet, and store the setting in advance on any TERRACOM device which has a USB port. The pre-stored USB lists will be broadcast according to the schedules in certain areas. Users are welcome to browse through or refresh all device status to get the firsthand information.

Uploading status is visible to users under history tab, as well as preset schedule modifications that can be achieved via the TerraServer. This then provides customers the ability to handle worldwide advertising management by overcoming the geographical restrictions and time zones concerns.
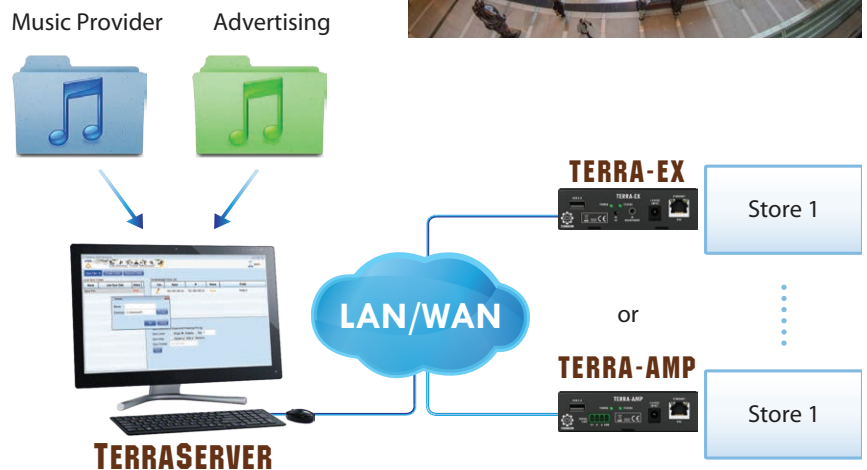
ORDERING INFORMATION

TERRA-EX	IP Audio Decoder (stereo line-OUT x 1 or mono x 2, input contact x 3 & relay output contact (NO/NC)each x 1)
TERRA-EX2	IP Audio Decoder (including all interfaces on TERRA-EX, plus RS232 x 1)
TERRA-EX4	IP Audio Decoder (including all interfaces on TERRA-EX, plus RS485 x 1)
TERRA-EXU	IP Audio Decoder (including all interfaces on TERRA-EX, plus USB2.0 x 1)
TERRA-EXU2	IP Audio Decoder (including all interfaces on TERRA-EX, plus RS232 x 1, USB2.0 x 1)
TERRA-EXU4	IP Audio Decoder (including all interfaces on TERRA-EX, plus RS485 x 1, USB2.0 x 1)
TERRA-EXA	2 x 20W (8 ohm) Amplified IP Audio Decoder (stereo OUT x 1 or mono x 2, input contact x 3, relay output contact (NO/NC) x 1)
TERRA-IEX	IP Audio Encoder/Decoder (mic/line-IN x 2, stereo line-OUT x 1 or mono x 2, input contact x 3, relay output contact (NO/NC) each x 1, RS232 x 1)
TERRA-IEXU	IP Audio Encoder/Decoder (including all interfaces on TERRA-IEX, plus USB2.0 x 1)
TERRA-IEXU4	IP Audio Encoder/Decoder (including all interfaces on TERRA-IEX except change the RS232 x 1 to RS485 x 1, plus USB2.0 x 1)
TERRA-AMP	2 x 15W (8 ohm) Amplified IP Terminal (3.5 mm stereo in x 1, mic/line x 1, stereo OUT x 1 or mono x 2, stereo line-OUT x 1 or mono x 2, input contact x 3, relay output contact x 2, RS232 x 1)
TERRA-AMP4	2 x 15W (8 ohm) Amplified IP Terminal (3.5 mm stereo in x 1, mic/line x 1, stereo OUT x 1 or mono x 2, stereo line-OUT x 1 or mono x 2, input contact x 3, relay output contact x 2, RS485 x 1)
TERRA-K	IP Based Intercom Microphone
TERRA-FDX	Full Duplex IP Terminal (mic/line x 2, stereo line-OUT x 1 or mono x 2, input contact x 3, relay output contact x 2, USB2.0 x 1, RS232 x 1)
TERRA-FDX4	Full Duplex IP Terminal (mic/line x 2, stereo line-OUT x 1 or mono x 2, input contact x 3, relay output contact x 2, USB2.0 x 1, RS485 x 1)
TERRA-DS1	Flush-Mount IP Door Station Intercom Unit (mic/line-IN x 1, speaker-OUT x 1 & button x 1, button ext. port x 1, relay output contact x 2)
TERRA-DS2	Flush-Mount IP Door Station Intercom Unit (mic/line-IN x 1, speaker-OUT x 1, button x 2, button ext. port x 1, relay output contact x 2)
TERRA-DS3	Flush-Mount IP Door Station Intercom Unit (mic/line-IN x 1, speaker-OUT x 1, button x 3, button ext. port x 1, relay output contact x 2)
TERRA-DS4	Flush-Mount IP Door Station Intercom Unit (mic/line-IN x 1, speaker-OUT x 1, button x 4, button ext. port x 1, relay output contact x 2)
TERRA-FXO	Full Duplex IP Terminal to Telecom Gateway (analog phone interface x 2, RS232 x 1)
TERRA-FXO4	Full Duplex IP Terminal to Telecom Gateway (analog phone interface x 2, RS485 x 1)
TERRA-4IO	IP Contact Input & Output Terminal (contact IN x 4, relay contact OUT x 4, RS232 x 1)
TERRA-8IO	IP Contact Input & Output Terminal (contact IN x 8, relay contact OUT x 8, RS232 x 1)
TERRA-4IO4	IP Contact Input & Output Terminal (contact IN x 4, relay contact OUT x 4, RS485 x 1)
TERRA-8IO4	IP Contact Input & Output Terminal (contact IN x 8, relay contact OUT x 8, RS485 x 1)
PPM-IT5	Programmable Paging Microphone InTerCom (5" panel)
TERRA-RD	IP-Media Console / IP Radio Receiver
RAC 5	Remote Analog Source / Volume 5 Position
RAC 8	Remote Analog Source / Volume 8 Position
URC-200	Wall-mount with 2" TFT LCD and IR receiver

TERRACOM

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AUDIO AND CONTROL OVER IP
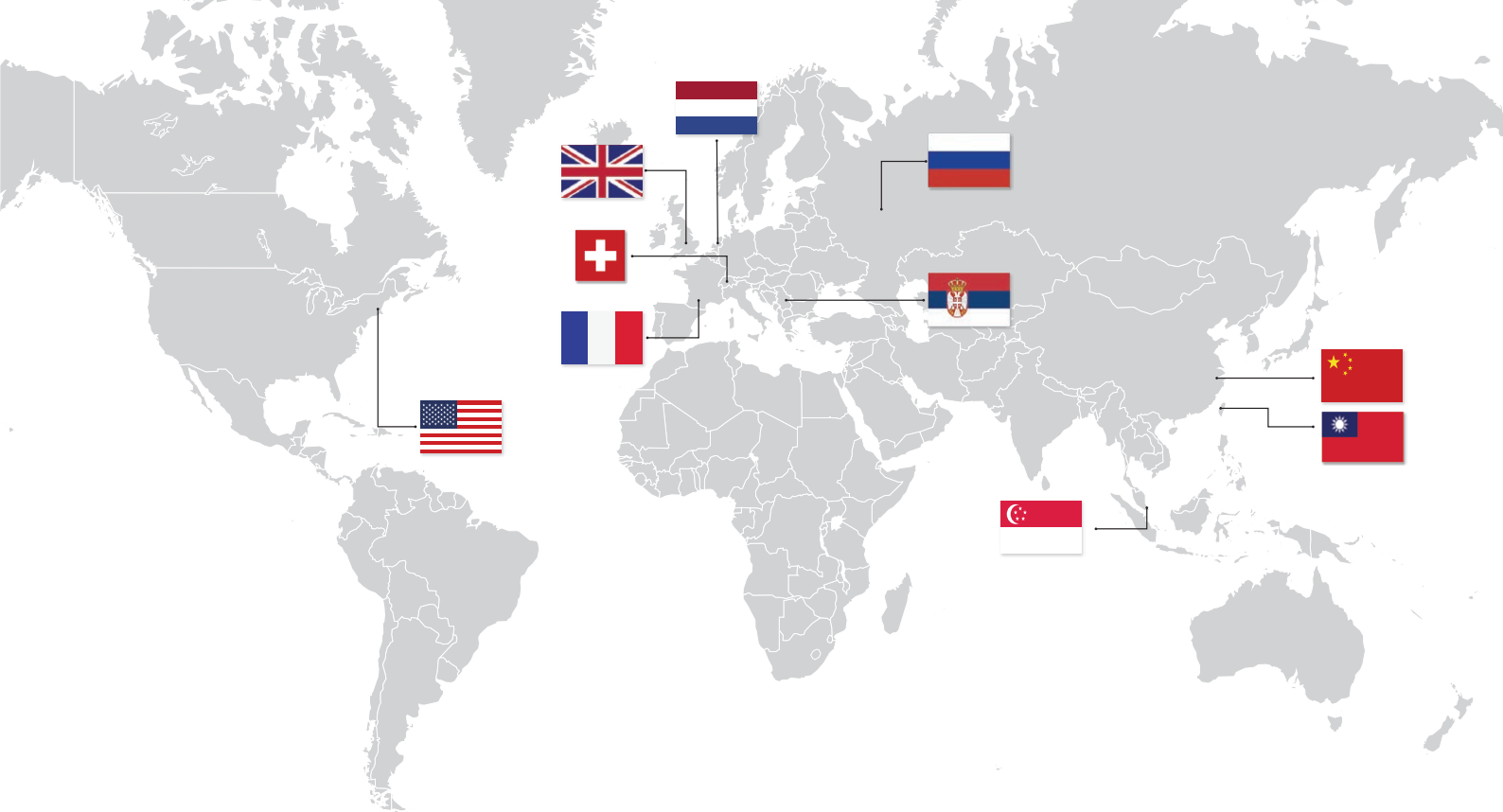
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