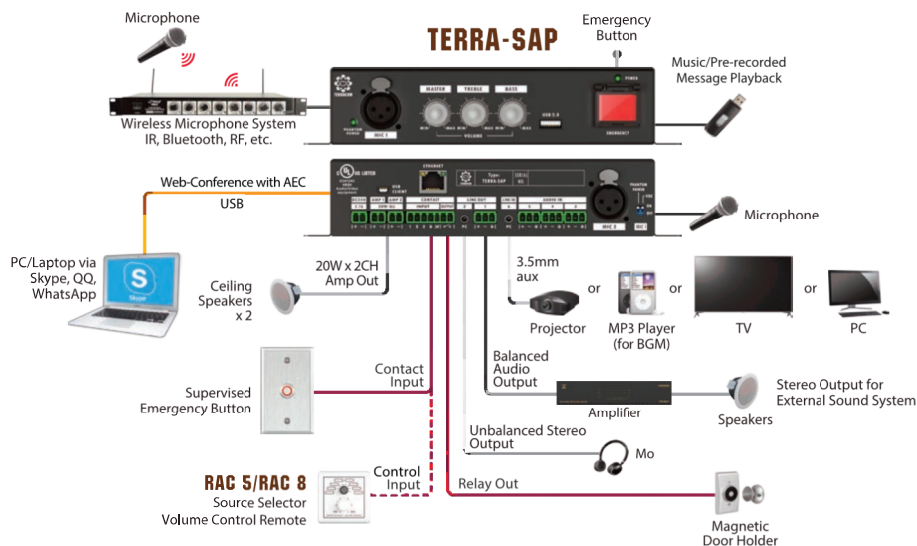




The TERRA-SAP is an integrated audio over IP, Mini Audio DSP Processor & dual amplifier, used to integrate all your local audio sources. It can be used as a stand-alone unit or as part of a fully integrated PA & Lock-down system using our full range of TERRA audio over IP devices and our analogue PA & VA audio products. The TERRA-SAP acts as the audio hub for a classroom or any other location. A wide range of audio inputs can be managed from devices such as a Projector, Display, PC, Bluetooth, IR, RF and wireless microphones etc. The TERRA-SAP can utilize our ceiling boundary microphones (BCM201W/BCM201B) for in room sound reinforcement complete with automatic echo control (AEC). The boundary microphones can also be used as a talkback microphone for hands-free intercom or recording events. By using the TERRA-SAP as the audio hub means that a single set of speakers can be used in the location to broadcast both local and site wide audio. The TERRA-SAP also manages the input priority structure to ensure a simple & seamless system operation.

The TERRA-SAP has an integrated 2 channel, 20w, 8ohm Class-D amplifiers for powering local speakers. It also includes 2 x XLR Microphone inputs with one offering switchable phantom power. A further 3 x Mic inputs are provided, which can be assigned as a standard microphone inputs or intercom function. A 3.5mm audio input jack enables the connection of a PC, phone or other audio device output. In addition a second 3.5mm audio output jack is provided to feed the system audio out to another device such as an induction loop or recorder. A second audio output is provided via a Phoenix connector. A single USB 2.0 port is provided to take a USB storage device. Pre-recorded messages, music tracks & play lists can be stored on the USB storage device in addition to being able to store recorded content from any of the audio inputs. The audio content can then be manually or automatically routed & broadcast via a range of system devices or triggers such as the PPM-IT5 paging microphone or contacts from 3rd party devices. A mini-USB port is also provided for connection to a PC for WEB conferencing with built-in AEC. 3 x Logic control inputs are provided for connection of our optional RAC5/8 volume control & source selector or for 3rd party contacts to trigger events such as a panic alarm, pre-recorded messages etc. A built in "Emergency" button on the front of the TERRA-SAP can be programmed to activate a pre-recorded message, a panic alarm, provide a remote indication of an incident, activate a relay trigger etc. A programmable FORM-A relay output is also provided that can be triggered via a local logic input such as any TERRACOM device or manually from our PPM-IT5 microphones and or GUI software such as our TERRAMANAGER or TERRASERVER.

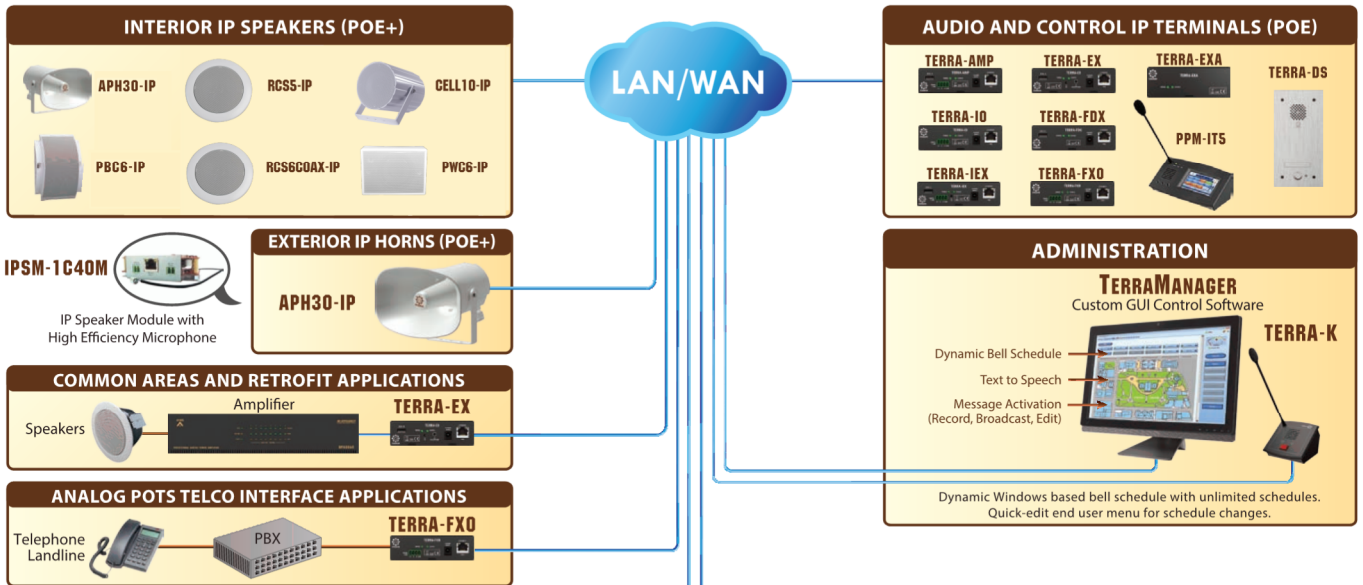


The Skype name, associated trade marks and logos and the "S" logo are trade marks of Skype or related entities.

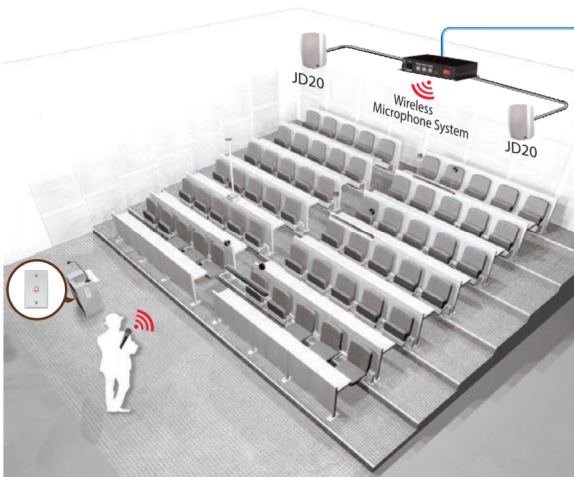
FEATURES

- Control, monitor, programming and management via HTML web browser
- Fully-featured solution including paging, audio streaming, messaging, bell scheduling, AEC hands-free intercom, voice evacuation, etc.
- STP CAT5/6 connection for audio and control two outputs
- 20W x 2CH Class-D amplification plus line level audio
- 2 XLR microphone inputs with master volume control and bass/tremble sound level adjustment
- Support phantom power & voice activated (VOX) on the XLR microphone inputs and 3 balanced mic inputs (configured via web browser)
- USB 2.0 interface for music and/or message storage or used as a record output to USB storage device
- Mini-USB input for connection to PC for use as web conferencing with built-in AEC

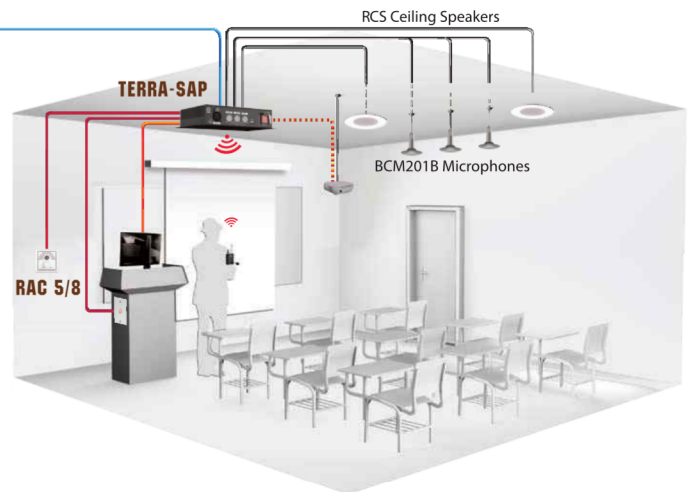
SYSTEM DIAGRAM



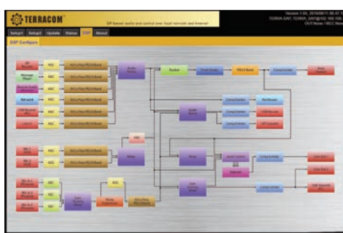
LECTURE HALL/AUDITORIUM



CLASSROOM



CONFERENCE ROOM



LAN/WAN

"Full DSP for advanced audio adjustments such as input muting priority management, EQ, Filters, Noise Suppression, AEC, Comp/Limiter, Feedback control, AGC and I/O level adjustments – all via HTML web browser programming"

TECHNICAL SPECIFICATIONS

CONTROLS AND INDICATORS

Front Panel

- XLR microphone input (MIC 1) with switchable phantom power
- Master volume knob
- Two knobs for tremble and bass adjustment
- 1 USB 2.0 interface for music and/or message storage or used as a record output to USB storage device
- 1 monitored emergency button to alert central monitoring station
- Phantom power LED and power LED

Rear Panel

- XLR microphone input (MIC 2)
- 48 VDC phantom power/voice activated (VOX) DIP switch (for MIC 1 only)
- 20W x 2CH (Class-D amp) amplification on 8 ohm load
- 3.5mm input jack for local program audio input
- 3.5mm output jack for monitoring
- 1 screw-terminal balanced audio output.
- 3 screw-terminal balanced mic inputs for local sound and assignable intercom use
- 3 logic control inputs for hidden emergency button or programmable source selector and volume control (RAC 5/RAC 8)
- 1 relay control output
- 1 Ethernet port
- 1 Mini-USB interface to connect to PC/Laptop for web conferencing
- 24 VDC power input (2.7A)

ELECTRICAL

DC power input: 21 VDC ~ 26 VDC
 Max. power consumption: 60W
 Rated loaded capacitance: 680 nf

AUDIO CHARACTERISTICS (GENERAL)

A/D-D/A bit resolution: 24 bit
 Sampling rate: 48 kHz
 Frequency response: 20 Hz ~ 20 kHz (±1.5 dB) @ 0 dBu
 SNR: > 92 dB

AUDIO CHARACTERISTICS (MIC)

EIN: < -110 dBra @ 3 dB gain
 Input impedance: 10k ohm
 Input gain range (MIC-1&2): 3 ~ 21 dBu (adjustable)
 Maximum input level (mic): -3 dBu @ 3 dB gain
 CMRR: < -100 dB @ 3dB gain, -3 dBu (1 kHz) in
 THD+N: < 0.005 % @ 3 dB gain, -3dBu (1 kHz) in
 Crosstalk: > 70 dB @ 3 dB gain, -3 dBu (10 kHz) in
 Phantom power: 48 VDC, 7 mA

AUDIO CHARACTERISTICS (EURO-BLOCK LINE IN & LINE OUT)

Input gain range: 12/24/36/48 step (fixed)
 Input impedance: 10k ohm
 Output impedance (balanced): 20 ohm
 Maximum input level (line in): -12 dBu @ 12 dB gain
 Maximum output level (line out): 0 dBu @ 0 dB gain

AUDIO CHARACTERISTICS (PHONE JACK LINE IN & LINE OUT)

Input impedance: 5k ohm
 Output impedance (balanced): 6 ohm
 Maximum input level (line in): -3 dBu @ 0dB gain
 Maximum output level (line out): 0 dBu @ 0dB gain

SUPPORTED AUDIO CODEC

Function	Supported Audio Codec
SIP	G.711 ulaw, G.711 alaw, G.722, G.726-32, G.727-32, G.729, PCM16K
Stream	G.711 ulaw, G.711 alaw, G.722, WAVE, MP3, PCM16
Record	WAV, MP3

NETWORK

Maximum distance: 100m (RJ45 connector, STP CAT5/6)

RELAY OUTPUTS

Maximum voltage: 100 VDC
 Maximum current: 0.5A

CONTROL INPUTS

- Contact mode
- Non-isolated analogue interfaces with internal pull-up to +3.3V by 6.2k ohm
 - Monitored analogue contact thresholds
 - Open circuit: > 2.2 VDC
 - Inactive voltage: 1.5 VDC ~ 2.2 VDC
 - Active voltage: 1.5 VDC ~ 0.8 VDC
 - Short circuit: < 0.8 VDC

MECHANICAL

Dimensions (W x H x D): 215 x 45 x 130 mm (9 x 2 x 5.1 inch)
 Weight: 0.5 kg (1.1 lb)
 Colour: RAL 7016

ENVIRONMENTAL

Operating temperature: -5 °C ~ +55 °C (+ 23 °F ~ +131 °F)
 Storage temperature: -40 °C ~ +70 °C (-40 °F ~ +158 °F)
 Relative humidity: 20% to 95%
 Air pressure: 600 to 1100 hPa
 Heat dissipation: 68 BTU/hr

SAFETY

CE/EMI: EN 55013/CISPR13 (pending)
 CE/EMS: EN 61000-4-2(ESD) (pending)

ORDERING INFORMATION

TERRA-SAP: Mini Audio DSP Processor, 20W x 2
 PSU65-27: Power Supply/100~240V/DC 27.5V/2.36A

* Note: TERRA-SAP is not shipped with the power adapter, please order PSU65-27 power adapter if necessary.