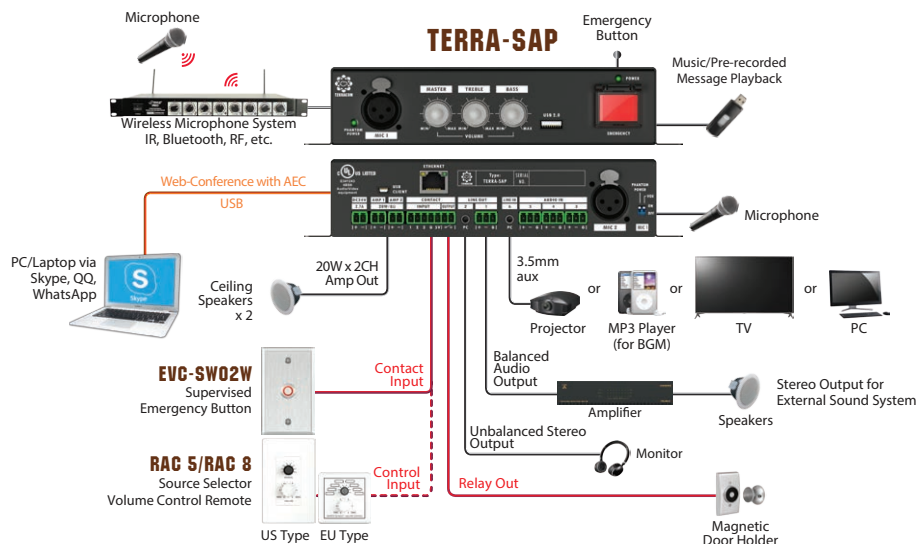




The Terra-SAP (Mini Audio DSP Processor) is an integral classroom IP device with full DSP, used to integrate all your local audio sources within the classroom with the TERRACOM overall audio IP system – without the need for additional sets of speakers for intercom. The Terra-SAP acts as the audio hub inside the classroom for locally connected audio devices such as wireless microphones (Bluetooth, IR, RF, etc.), PC audio, Display or Projector audio, etc.. The Terra-SAP can also utilize our specialized ceiling-mounted boundary microphones (BCM201W/BCM201B) for in-classroom sound reinforcement complete with AEC and as the talkback microphone for hands-free intercom - all using the same speakers including automatic muting of the local program audio.

The Terra-SAP includes 2 XLR Microphone inputs – 1 has switchable phantom power, 3 screw-terminal mic inputs for local sound and assignable intercom use, 1 3.5mm input jack for local program audio input. The Terra-SAP also has 1 3.5mm output jack and 1 screw-terminal balanced audio output. The Terra-SAP has 8-ohm, 20w x 2ch Class-D amplifier outputs for local classroom speakers, and also includes 1 USB2.0 port for music and/or message storage or it can be used as a record output to USB storage device. There is a mini-USB input for connection to PC for use as WEB conferencing with built-in AEC. There are also 3 Logic Control inputs for call-in buttons, analog local volume control and audio input selection can be controlled with our optional RAC 5/8 controllers, and/or can be used as emergency message, call-in activation or output relay trigger. A built-in push-button with protective security cover on the front of the Terra-SAP can also be programmed for call-in, emergency call activation for alerting a central monitoring station to respond incidents, internal message playback, relay trigger. There is also an on-board programmable FORM-A relay output that can be triggered via local logic input, logic input from any TERRACOM device in the intercom system, or manually from microphones and/or GUI software.

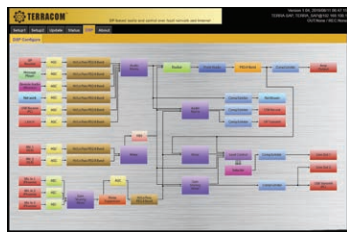
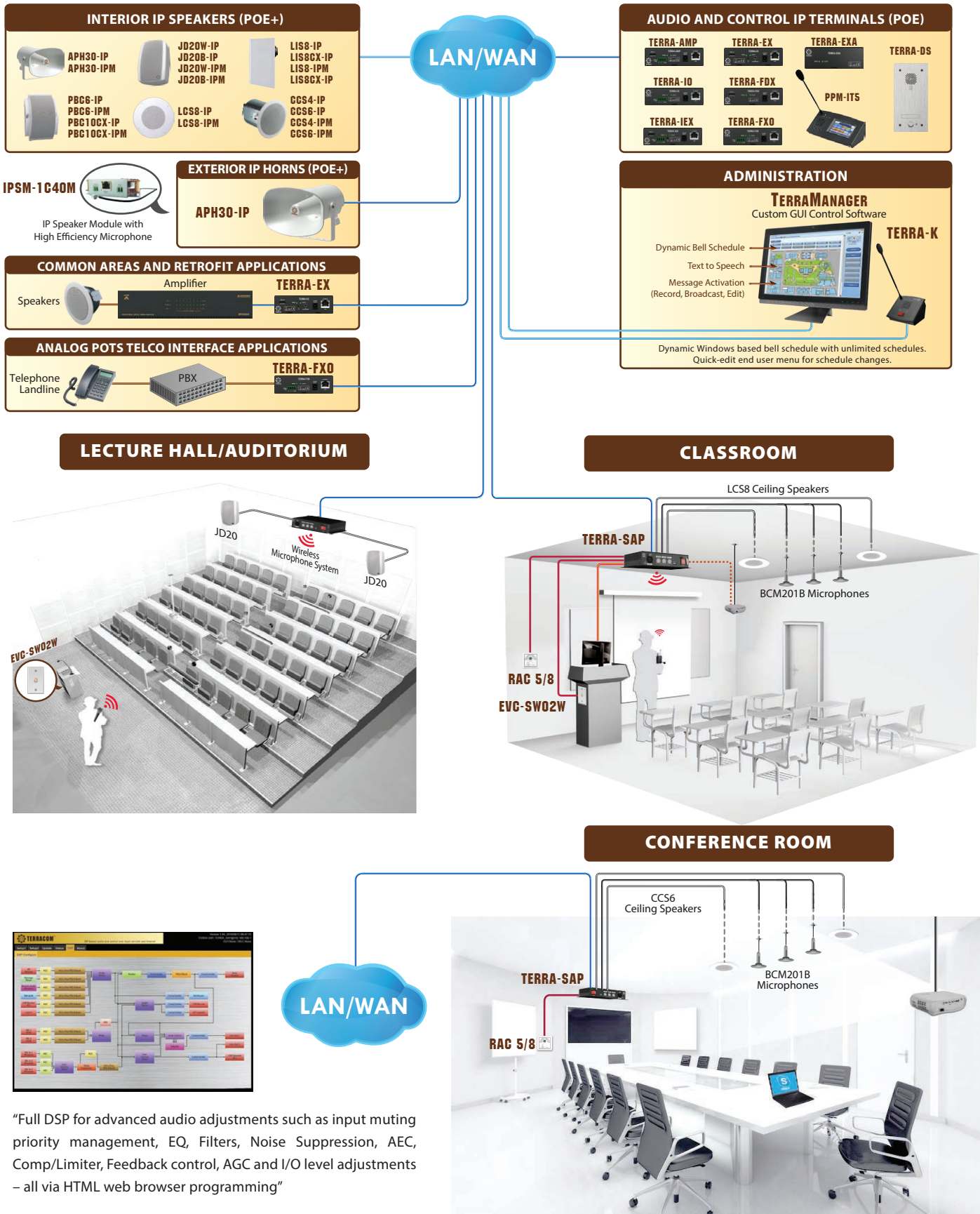


The Skype name, associated trade marks and logos and the "S" logo are trade marks of Skype or related entities.

FEATURES

- Control, monitor, programming and management via HTML web browser
- Full-featured solution including paging, audio streaming, messaging, bell scheduling, AEC hands-free intercom, voice evacuation, etc.
- STP CAT5/6 connection for audio and control
- 20W x 2CH Class-D amplification plus one line level audio out on Terra-SAP
- 2 XLR microphone inputs with master volume control and bass/treble sound level adjustment
- Support phantom power/voice activated (VOX) on the 2 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



"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)
 - 48VDC 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, -3 dBu (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.