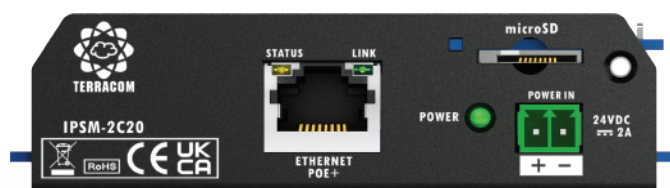


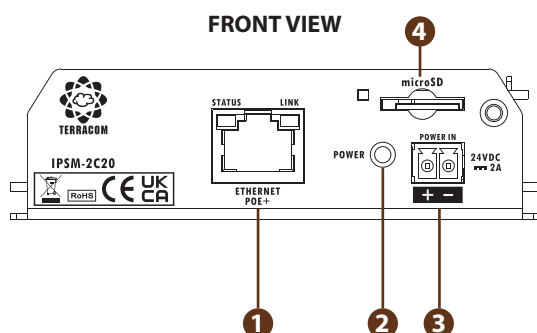
**IPSM-2C20
IPSM-2C20M**
IP SPEAKER MODULE, 2 CHANNEL, 20W
IP SPEAKER MODULE, 2 CHANNEL, 20W WITH MICROPHONE INPUT


Modules of IPSM-2C20 is equipped with 2 channels in 20W with 8ohm loudspeaker, or be bridged to 1 channel in 40W with 4 ohm loudspeaker. It supports PoE+ power and user can order an external power adapter to provide greater power to the IP speaker (If PoE+ is not available 24VDC will supply power). With Power over Ethernet (PoE+), audio, control and power can be flowed over the standard female RJ45 Ethernet connector, giving a cost effective way to be used as the SIP endpoint of paging, intercom, mass notification system and minimizing the number of cables.

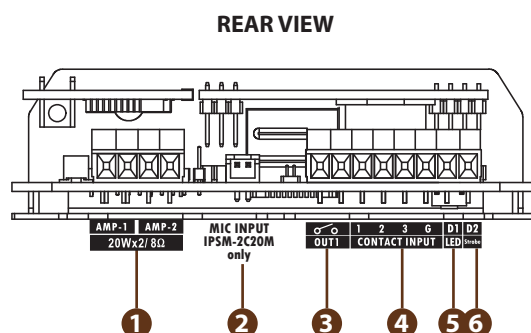
The IPSM-2C20 is designed to embed in TERRACOM's IP speaker. To fulfill hands-free intercom and monitoring, the IPSM-2C20M is equipped with a built-in microphone interface. The YMC0101-005 mic capsule could be connected to this microphone interface.

The IPSM-2C20 have 3 control inputs for level control and source selection using the RAC 5/8 controller, 1 relay contact output can be programmed to control an external device via TerraManager. To configure, control, monitor the IP speakers in real-time, this can be easily done through user's favorite web browser interface, making the management even the most complex environments simpler than ever. The remarkable features include event management, volume control, paging, intercom, music streaming, routing, logic control, 3rd party control, DSP control, monitoring, etc.

The IPSM-2C20 is also supported by the Onvif protocol which compatible with different VMS software.



- ❶ Ethernet port with PoE+ (25W) power
- ❷ Power LED indicator
- ❸ Optional external power input (24 ~ 27 VDC), PSU65-27 (65W) and PSU36-24 (36W) recommend
- ❹ Micro SD Card interface (function reserved)



- ❶ 20W x 2 Channels amp output (8 ohm load speaker) or bridged 40W x 1 Channel amp output (4 ohm load speaker)
- ❷ Mic input for IPSM-2C20M, optional mic capsule with lead YMC0101-005 recommended
- ❸ 1 relay contact output can be programmed to control an external device
- ❹ 3 programmable contact inputs are controlled by external remotes such as source selector and volume control
- ❺ LED interface (3.3V@10 mA): for safety and emergency alerting
- ❻ LED strobe light interface (24V@10mA): A strobe light for safety and emergency alerting

**IPSM-2C20
IPSM-2C20M**
IP SPEAKER MODULE, 2 CHANNEL, 20W
IP SPEAKER MODULE, 2 CHANNEL, 20W WITH MICROPHONE INPUT
FEATURES

- Support PoE+ and PoE power
- A micro SD card interface and internal storage of IPSM-2C20 is 200MB
- Cost effective and simple installation with single cable deployment
- Easily configured, controlled, managed and monitored via web browser
- Microphone input built-in for hands-free duplex intercom (IPSM-2C20M)
- IP based for music streaming, routing, paging and control over LAN/WAN
- Full DSP includes Ducker, AGC, PEQ, Hi/Low Pass, Compressor, Limiter, etc.
- TERRACOM system can control other system or be controlled (command string) by a 3rd party
- Support VoIP call via SIP protocol
- Support audio codec G.711u, G.711a, G.722, G.729, PCM16K, WAVE and MP3
- 3 control inputs for level control, source selection and 1 relay contact output
- Support Onvif protocol

TECHNICAL SPECIFICATIONS
ELECTRICAL

- Power over Ethernet (POE+)
- DC power input: 21 ~ 27.5 VDC
- Power consumption
 - PoE+: 25W max.
 - External power: 50W max.
 - Stand-by: 3W
- Input power option: DC power input, POE(IEEE 802.3 af), POE+ (IEEE 802.3at)

AUDIO CHARACTERISTICS (AMPLIFIED OUTPUT)

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

AUDIO CHARACTERISTICS (MIC INPUT)

- Phantom power: 2.5V
- Frequency response: 20 Hz ~ 20 kHz (± 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 @ 1 kHz (0 dBu=1VPa)
- Impedance: 2.2k Ω (max.)
- S/N ratio (A-weighted): 60 dB
- Maximum SPL: 110 dB
- Frequency response: 50 Hz ~ 20 kHz (± 3 dB) @ 0 dBu

INTERCONNECTION

- Female RJ45 socket, CAT5/6 cables
- Max. cable length: 100m

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 protocols: IPv4, TCP/IP
- Compatible VMS
 - Happytime
 - DSS Express
 - MileStone Xprotect
 - NX Witness

CONTACT OUTPUT

- Default status: OPEN (N.O.)
- Maximum voltage: 60V
- Maximum current: 0.5A

LED STATUS CONTROLLER

- Output: 3.3V@10 mA

AUDIO

- Audio codec: G.711u, G.711a, G.722, G.729, PCM16K, WAVE and MP3

NETWORK

- 10/100 Mbps Base TX Ethernet RJ45
- Manual or Dynamic Host Configuration Protocol (DHCP) IP address setup
- Time and date synchronization using NTP

MECHANICAL

- Dimensions (W x H x D): 95 x 28 x 61 mm (3.7 x 1.1 x 2.4 inch)
- Weight: 127g (0.28 lbs)

ENVIRONMENTAL

- Operating temperature: -5 °C ~ +50 °C (+ 23 °F ~ +122 °F)
- Storage temperature: -40 °C ~ +70 °C (-40 °F ~ +158 °F)
- Relative humidity: 20% to 95%
- Air pressure: 600 to 1100 hPa
- Heat dissipation: 34 BTU/hr @ 20W x 2CH

CERTIFICATIONS

Europe - CE/EMC	EN 55032
	EN 55035
	EN 61000-3-2
	EN 61000-3-3

ORDERING INFORMATION

IPSM-2C20	IP Speaker Module/ 2 channel/ 20W
IPSM-2C20M	IP Speaker Module/ 2 channel/ 20W w/ mic input
IPSM-2C20L	IP Speaker Module/ 2 channel/ 20W w/o PoE+
IPSM-2C20ML	IP Speaker Module/ 2 channel/ 20W w/ mic input w/o PoE+

- YMC0101-005: Mic Capsule w/40cm lead & connector for IPSM-2C20M and IPSM-2C20ML.

* Note: IPSM-2C20M and IPSM-2C20ML are not shipped with the mic capsule, please order YMC0101-005 mic capsule if necessary.

*** NOTICE (MICROPHONE CAPSULE)**

We recommend to use a temperature controlled soldering iron (360 degree) and the soldering time must less than 3 seconds to keep contact of the iron to the microphone capsule as brief as possible.

*** NOTICE (EXTERNAL POWER ADAPTER)**

All IP speaker modules are not shipped with the external power adapter, and please order "PSU65-27" which can supply maximum 65W power to IP speaker if necessary.