



#### 1008315060

# TCIV-6+

## IP and SIP Video Intercom

- Powerful audio technology, including high sound pressure, automatic volume gain control, and noise and acoustic echo cancellation
- ✓ HD video up to 1080p resolution
- Wide angle lens
- ✓ High performance hardware platform with 4x Cortex-A53 CPU cores and 512MB LPDDR4 RAM
- ONVIF Conformant
- Vandal Resistant Design
- P66 Dirt, dust and water resistant
- Cybersecurity compliant
- Oan operate in SIP, IC-EDGE and ICX-AlphaCom mode



# Description

TCIV-6+, as all IP stations in the Turbine series utilize the latest technology to create unparalleled audio quality. Some of the many features include:

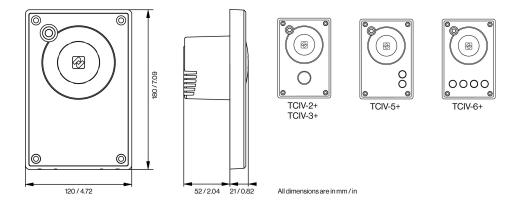
- HD voice quality,
- Open Duplex
- Noise and acoustic echo cancellation
- MEMS microphone
- a 10W Class D amplifier and our unique speaker grille design.

These features, in conjunction with the company's 70+ years of experience with acoustic technology, are just a few of the many factors that contribute to our superior audio quality. The Turbine IP Video Intercom range expands this feature set with wide FoV HD Video, Digital PTZ and support for H.264 and MJPEG.

See also: additional documentation on wiki.zenitel.com

# **Technical Dimensions**

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# Specifications

#### **AUDIO**

SPL peak power at 1m in half duplex         100 dB           SPL peak power at 1m in program distribution and announcement         100 dB           Noise cancellling         Yes           Codecs         G.711, G.722, G.729           Frequency range, G.722 Codec         200 Hz – 7000 Hz           Audio technology         Modes: Full open duplex, switched open duplex           Audio technology         Adaptive jitter buffer           Custom Ringing Tone         Audio Mixing – Conversation and Group Call           Automatic gain control (microphone)         Automatic gain control (microphone)           Internal speaker amplifier         10 W class D           Internal speaker amplifier         10 W           Microphone technology         Digital MEMS, omnidirectional microphone           Automatic Volume Control (AVC)         Yes	SPL peak power at 1m in open duplex	90 dB
Noise cancelling Yes Codecs G.711, G.722, G.729 Frequency range, G.722 Codec Audio technology Modes: Full open duplex, switched open duplex Adaptive jitter buffer Custom Ringing Tone Custom Ringing Tone Audio Mixing – Conversation and Group Call Audio at Level Detection / scream alarm (in AlphaCom mode) Internal speaker amplifier Internal speaker Microphone technology Digital MEMS, omnidirectional microphone Automatic Volume Control (AVC) Yes		100 dB
Codecs G.711, G.722, G.729 Frequency range, G.722 Codec 200 Hz – 7000 Hz Audio technology Modes: Full open duplex, switched open duplex Adaptive jitter buffer Custom Ringing Tone Audio Mixing – Conversation and Group Call Automatic gain control (microphone) Sound Level Detection / scream alarm (in AlphaCom mode) Internal speaker amplifier 10 W class D Internal speaker 10 W Microphone technology Digital MEMS, omnidirectional microphone Automatic Volume Control (AVC) Yes		100 dB
Frequency range, G.722 Codec 200 Hz – 7000 Hz  Audio technology Modes: Full open duplex, switched open duplex Adaptive jitter buffer Custom Ringing Tone Audio Mixing – Conversation and Group Call Automatic gain control (microphone) Sound Level Detection / scream alarm (in AlphaCom mode) Internal speaker amplifier 10 W class D Internal speaker Microphone technology Digital MEMS, omnidirectional microphone Automatic Volume Control (AVC) Yes	Noise cancelling	Yes
Audio technology  Modes: Full open duplex, switched open duplex dependence open duplex.  Adaptive jitter buffer  Custom Ringing Tone  Audio Mixing – Conversation and Group Call  Automatic gain control (microphone)  Sound Level Detection / scream alarm (in AlphaCom mode)  Internal speaker amplifier  10 W class D  Internal speaker  10 W  Microphone technology  Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC)  Yes	Codecs	G.711, G.722, G.729
Audio technology open duplex Adaptive jitter buffer Custom Ringing Tone Audio Mixing – Conversation and Group Call Automatic gain control (microphone) Sound Level Detection / scream alarm (in AlphaCom mode) Internal speaker amplifier 10 W class D Internal speaker Microphone technology Digital MEMS, omnidirectional microphone Automatic Volume Control (AVC) Yes	Frequency range, G.722 Codec	200 Hz – 7000 Hz
Custom Ringing Tone  Audio Mixing – Conversation and Group Call  Automatic gain control (microphone)  Sound Level Detection / scream alarm (in AlphaCom mode)  Internal speaker amplifier 10 W class D  Internal speaker 10 W  Microphone technology Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC) Yes	Audio technology	
Audio Mixing – Conversation and Group Call  Automatic gain control (microphone)  Sound Level Detection / scream alarm (in AlphaCom mode)  Internal speaker amplifier  10 W class D  Internal speaker  10 W  Microphone technology  Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC)  Yes		Adaptive jitter buffer
Group Call  Automatic gain control (microphone)  Sound Level Detection / scream alarm (in AlphaCom mode)  Internal speaker amplifier 10 W class D  Internal speaker 10 W  Microphone technology Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC) Yes		Custom Ringing Tone
Sound Level Detection / scream alarm (in AlphaCom mode)  Internal speaker amplifier 10 W class D  Internal speaker 10 W  Microphone technology Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC) Yes		<u>e</u>
alarm (in AlphaCom mode)  Internal speaker amplifier 10 W class D  Internal speaker 10 W  Microphone technology Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC) Yes		Automatic gain control (microphone)
Internal speaker 10 W  Microphone technology Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC) Yes		
Microphone technology  Digital MEMS, omnidirectional microphone  Automatic Volume Control (AVC)  Yes	Internal speaker amplifier	10 W class D
Automatic Volume Control (AVC)  Yes	Internal speaker	10 W
	Microphone technology	· · ·
Acustic Echo Cancellation (AEC) Yes	Automatic Volume Control (AVC)	Yes
	Acustic Echo Cancellation (AEC)	Yes

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#### VIDEO

Image Sensor	1/2.5" RGB CMOS
Lens	F 2.0, fixed iris
Light Sensitivity	Down to 1 lux
Resolution	240 / 480p / 960x720p / 1440x1080p*
Frame Rate	Up to 30 FPS in 1440x1080p**
Supported Codecs	MJPEG, H.264 **
Digital PTZ	Yes
Digital Zoom	Up to 4x
Field of View	Configurable up to 180 degrees horizontally and vertically
Parallel videostreams	6 (1x SIP H.264, 2x HTTP MJPEG, 3x RTSP sessions)
	* MJPEG does not support 720p and 1080p resolution.
	** 30 FPS is only supported in H.264 mode, while MJPEG is limited to 10 FPS.
	*** AlphaCom mode supports only RTSP H.264 mode, while other modes support SIP H.264.

## **HARDWARE**

Ethernet connector	1 x RJ-45
All other connectors	Tool less, spring loaded, vibration proof terminals
General inputs and outputs	6 (configurable)
Outputs	12mA as LED drivers
Change-over relay (NO+NC+COM)	SELV
Power options	PoE, PoE+
PoE (Power over Ethernet)	IEEE 802.3af standard, IEEE 802.3at
Power consumption	Idle 3.5W, max 12W (depending on volume)
Power consumption  Audio Line out / Induction loop signal	
Audio Line out / Induction loop	volume)
Audio Line out / Induction loop signal	volume)  0 dBV

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#### PROCESSOR/CHIPSET

CPU cores	4 x Cortex-A53
CPU Clock Speed	1.6 GHz
RAM	512 MB LPDDR4
Flash	1 GB
Video encoder	MJPEG, H.264
Dual Image	Yes

## CONSTRUCTION

Dimensions (HxWxD)	180 x 120 x 73 mm / 7.1" x 4.7" x 2.9"
Dimensions after flush mount	180 x 120 x 24 mm / 7.1" x 4.7" x 0.9"
Dimensions with on wall box	180 x 120 x 86 mm / 7.1" x 4.7" x 3.4"
Weight	1 kg / 2.2 lbs.
Faceplate material	3 mm / 0.12" PMMA, color printed on backside
Base / frame material	3 mm / 0.12" Aluminum alloy - A413.0, AlSi12Fe, painted
Electronics cover material	Polycarbonate (semi translucent)
Gasket material	TPV
Fastening bracket material	SECC Steel
Button material	3 mm / 0.12" Polycarbonate (transparent)
Button travel length	1.25 mm
Button activation force	350 gf
Button push-cycles before failure	300 000
Loudspeaker poke protection, large diameter object	3D cast aluminum speaker grille
Loudspeaker poke protection, small diameter objects	Stainless steel mesh, acoustically transparent
Anechoic Design	Open flow anechoic design eliminates "standing waves"

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#### **NETWORKING & PROTOCOLS**

Protocols	IPv4 (with DiffServ), SIP, TCP, UDP, HTTPS, TFTP, RTP, RTSP, RTCP, SRTP, DHCP, SNMP, Vingtor-Stentofon CCoIP®, NTP, ONVIF, WS-Discovery	
LAN protocols	Power over Ethernet (IEEE 802.3 a-f), Power over Ethernet (IEEE 802.3at), Network Access Control (IEEE 802.1x)	
Management and operation	HTTP/HTTPS (Web configuration) DHCP and static IP. Remote automatic software upgrade. Centralized monitoring.	
Advanced supervision functions	E.g. network test, tone test, status reports	
SIP support	RFC 3261 (SIP base standard) RFC 3515 (SIP refer) RFC 2976 (SIP info), SIP using TLS, RFC 5630 SIPS URI scheme	
DTMF support	RFC 2833, 2976 (SIP info)	
Integration and API	Connected to ICX-AlphaCom through AlphaCom protocol ACDP	
	Connected to Zenitel Connect Pro though Zenitel Link	
	ONVIF	
	Scripting	

#### **ENVIRONMENTAL**

IP rating	IP-66, tested according to EN 60529 (applies when mounted in TA-1 back-box)
Operating temperature range	-40° to 70° C / -40° to 158 ° F
Storage temperature range	-40° to 70° C / -40° to 158 ° F
Relative humidity	< 95% not condensing
UV-resistant	Yes
EMC	CE and FCC Part 15

## CERTIFICATIONS

## OTHER SPECIFICATIONS

IP address information	Speaks IP address after system boot
Country of manufacture	Poland
Warranty	2 Years standard warranty, extendible up to total of 5 years (additional fee)

# Accessories

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TA-1

Turbine Compact Onwall Back Box



TA-2

US 2-Gang 31/2" Deep Backbox



TA-5

Bracket for US 2 GANG Double Depth Back Box



TA-18

Turbine Compact Flush-Mount Back Box



TA-14

Microphone windshield for TCIS / TCIV



Touchless Sensor

## **Used With**



ITSV-4

HD IP Video Phone with 5" Screen



ITSV-5

HD IP Video Phone with 8" Screen