AURI-TX2N / AURI-TX2N-D Transmitter Datasheet

The TX2N Auracast Transmitter is the heart of an Auri system, providing long range, low latency Auracast™ compliant broadcast audio.

A factory option for integrated Dante input is available.

Key Features

- 2 radios with flexible routing options
- Expandable with repeater mode
- Network management
- 2 balanced mic/line inputs with phantom power
- Optional integrated Dante
- Powered by USB-C or PoE

Contents

1x AURI-TX2N or AURI-TX2N-D Transmitter
1x Universal mounting bracket
3x Euroblock connectors
1x 1.8 m (6 ft) Cat6 cable
1x Quick Start Guide and Safety Data Sheet

Note: This unit does not come with a power supply, it can be powered by PoE or a USB-C supply available separately (LA-425).

AURACAST™

Product Specifications

Inputs	
Input selection	2x audio inputs individually selectable between mic, line or optional Dante modes
Mic/Line Inputs	
Connection	2x 3-way 3.5mm pitch Euroblock
Input impedance	15kΩ
THD+N	0.03% at 0dBu (line mode) 0.02% at –25dBu (mic mode)
Common mode rejection	56dB
Microphone Mode	
Max level before clipping	-25 dBu
Sensitivity	-65 dBu
Switchable phantom power	+24 V
Line Mode	
Max level before clipping	+16 dBu
Sensitivity	-25 dBu
Dante (optional)	
Connection	Dedicated RJ45 socket
Port speed	100 Mbit
Channels	2
Sample rates	48 kHz
Outputs	
Line Output	
Connection	1x 3-way 2.5mm pitch Euroblock
Nominal output level	+1dBu

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Output impedance	150Ω
Radio	
Bluetooth version	5.3
Operating Frequency	2400 to 2482 MHz
Operating mode	Auracast™ Compliant, Broadcast Only
Supported codec	LC3
Maximum output power	North America: +20dBm Rest of World: +10dBm
Output power control	Attenuation from regional max to -10dBm
Encryption	AES128-CCM encryption, with 4-16 character password
Supported formats	Mono or Stereo
Network Audio	
Input routing	Additional input source for each audio stream, must be selected from another TX2N on same network
Connection	Shared RJ45 with control and PoE
Channels	2x stereo inputs 2x stereo outputs
Format	Multicast RTP
Bit depth	16 bit
Sample rate	16kHz, 24kHz or 48kHz, matched to broadcast
Bandwidth	0.5Mbit/s (16kHz) to 1.5Mbit/s (48kHz) per stereo stream
Latency	5 ms nominal
Audio Processing	
Input routing	Disabled, Input 1 Only, Input 2 Only, Input 1 & 2 Stereo Pair, Input 1 & 2 Mono Sum
AGC	Switchable, 20dB gain control range
Low cut	Switchable, 24 dB/oct, frequency based on sample rate 16 kHz sample rate: 75 Hz 24 kHz sample rate: 110 Hz 48 kHz sample rate: 220 Hz
Sample rates	16 kHz, 24 kHz (Auracast Standard - required) 48 kHz (Auracast High)
Frequency response +/- 3 dB (internal, line in to line out)	16 kHz sample rate: 50 Hz – 7.5 kHz 24 kHz sample rate: 50 Hz – 11.0 kHz 48 kHz sample rate: 50 Hz – 22.5 kHz
Latency (internal, line in to line out)	13ms
Latency (complete system, end to end)	Auri RX1 – 29 ms to 45 ms (dependant on sample rate and mono/stereo) Other receivers will vary
Network	
Port speed	100 Mbit
IP address	DHCP, static or link-local
Protocols	mDNS, UDP (unicast), RTP (multicast), RTCP (multicast)
Security	UDP communication AES256-GCM
Controls and Indication	
Buttons	Recessed restart and factory reset buttons
Setup/Programming	Via Auri Manager Software

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Status LED	RGB multi-function LED, see handbook for states
Power	
PoE	IEEE 802.3af
USB-C	5V PD Compliant
Power consumption (nominal)	USB-C: 5V, 370mA (1.85W) PoE: 48V, 53mA (2.54W)
Physical	
Dimensions	183 x 173 x 48 mm (7.20 x 6.81 x 1.89 in.)
Weight	TX2N – 0.45 kg (0.99 lbs.) TX2N-D – 0.47 kg (1.04 lbs.)
Shipping Weight	TX2N – 0.89 kg (1.96 lbs.) TX2N-D – 0.91 kg (2.01 lbs.)
Enclosure Material	PC-ABS
Colour	White
Mounting	Removable wall/ceiling bracket Multiple holes to support mounting on standard UK, EU and US electrical back boxes and VESA 75
Environmental	
Temperature - Storage	-40 °C (-40 °F) to 70 °C (+158 °F)
Temperature - Operation	-10 °C (14 °F) to 40 °C (+104 °F)
Relative Humidity	0 to 95% relative humidity, non-condensing
IP Rating	IP30 (with mounting bracket attached)
Compliance	
Standards	FCC, ISED, CE, UKCA, RCM, MIC, RoHS, REACH, WEEE
	Specifications subject to change without notice

Network Requirements

Usage	Type	Address	Port
Device discovery	mDNS (Multicast)	224.0.0.251	5353
Control	UDP (Unicast)	Device IP (DHCP, Static or Link Local)	55666, 56666
Firmware Update	TFTP	Device IP	69
Network Audio	RTP (Multicast)	239.255.0.0/16	5004, 5006, 5008, 5012
Network Audio	RTCP (Multicast)	239.255.0.0/16	5005