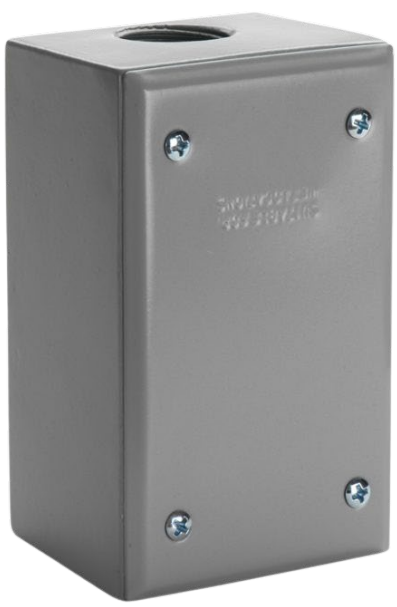
LOUROE ELECTRONICS

World Leader in Audio Monitoring Technology

Recommended Hanwha Cameras For Louroe Microphones



Louroe Electronics recommends selecting AAC encoding for audio streaming

This accompanying list of Hanwha cameras supporting AAC encoding is a supplement to the previously released service bulletins (LSB-09242021-01 and LSB-09242021-00) covering the use of Louroe Microphones with Hanwha Cameras

Note: If using a Hanwha camera that is not on this list, or does not support AAC encoding, please contact Louroe Technical Support for further information
1-800-927-6498 x222

HANWHA PRODUCT LINE UP FOR LOUROE AUDIO

8K Cameras		
Camera - Network	TNB-9000	8K Network Box Camera
4K Cameras & up		
Camera - Network	PNB-A9001	4K Box AI camera
Camera - Network	PND-A9081RF	4K IR Indoor Flush Mount Dome AI Camera
Camera - Network	PND-A9081RV	4K IR Indoor Vandal Dome AI Camera
Camera - Network	PNM-9000QB	Remote head 2MP x 4CH camera
Camera - Network	PNM-9022V	8.3MP Panoramic Camera
Camera - Network	PNM-9031RV	15MP Panoramic Camera
Camera - Network	PNM-9084QZ	2MP X 4 outdoor Dome, PTRZ
Camera - Network	PNM-9084RQZ	2MP X 4 outdoor Dome, PTRZ w/IR
Camera - Network	PNM-9085RQZ	5MP X 4 outdoor Dome, PTRZ w/IR
Camera - Network	PNM-9322VQP	5 Channel 2MP / 5MP X 4 + 2MP 32x PTZ
Camera - Network	PNO-A9081R	4K IR Bullet AI camera
Camera - Network	PNV-A9081R	4K IR Outdoor Vandal Dome AI Camera
Camera - Network	XNB-9002	4K Box Camera
Camera - Network	XNB-9003	4K Box AI Camera
Camera - Network	XND-9082RF	4K IR Flush Mount Dome
Camera - Network	XND-9082RV	4K IR Indoor Dome
Camera - Network	XND-9083RV	4K IR Indoor Vandal Dome AI Camera
Camera - Network	XND-C9083RV	4K IR Indoor Vandal Dome AI Camera
Camera - Network	XNF-9010RS	12MP Stainless Steel IR Fisheye Camera
Camera - Network	XNF-9010RV	12MP, WN7 Fisheye
Camera - Network	XNF-9010RVM	12MP, WN7 Fisheye
Camera - Network	XNO-9082R	4K IR Bullet Camera
Camera - Network	XNV-9082R	4K IR Outdoor Vandal Dome
Camera - Network	XNV-9083R	4K IR Outdoor Vandal Dome AI Camera
Camera - Network	XNV-C9083R	4K IR Outdoor Vandal Dome AI Camera
6MP Cameras		
Camera - Network	XNB-8002	6MP Box Camera
Camera - Network	XNB-8003	6MP Box AI Camera
Camera - Network	XND-8082RF	6MP IR Flush Mount Dome
Camera - Network	XND-8082RV	6MP IR Indoor Dome
Camera - Network	XND-8083RV	6MP IR Indoor Vandal Dome AI Camera
Camera - Network	XND-C8083RV	6MP IR Indoor Vandal Dome AI Camera
Camera - Network	XNO-8082R	6MP IR Bullet Camera
Camera - Network	XNV-8082R	6MP IR Outdoor Vandal Dome
Camera - Network	XNV-8083R	6MP IR Outdoor Vandal Dome AI Camera
Camera - Network	XNV-C8083R	6MP IR Outdoor Vandal Dome AI Camera
5MP Cameras		
Camera - Network	XNB-8000	5MP Box
Camera - Network	XNF-8010RW	X-Series Indoor IR Fisheye **(White Color)**
Camera - Network	XND-8030R	5MP Indoor IR Vandal Dome
Camera - Network	XND-8040R	5MP Indoor IR Vandal Dome
Camera - Network	XND-8080RV	5MP Indoor IR Vandal Dome
Camera - Network	XND-8081FZ	5MP Flush Mount PTRZ Dome
Camera - Network	XND-8081REV	5MP Indoor Dome, PoE extender camera
Camera - Network	XND-8081RF	5MP IR Flush Mount Dome
Camera - Network	XND-8081RV	5MP IR Indoor Dome
Camera - Network	XND-8081VZ	5MP Indoor PTRZ Dome
Camera - Network	XNF-8010R	X-Series Indoor IR Fisheye
Camera - Network	XNF-8010RV	X-Series Outdoor IR Fisheye

HANWHA PRODUCT LINE UP FOR LOUROE AUDIO

Camera - Network	XNF-8010RVM	X-Series Mobile IR Fisheye
Camera - Network	XNO-8020R	5MP IR Bullet
Camera - Network	XNO-8030R	5MP IR Bullet
Camera - Network	XNO-8040R	5MP IR Bullet
Camera - Network	XNO-8080R	5MP IR Bullet
Camera - Network	XNV-8020R	5MP IR Outdoor Dome
Camera - Network	XNV-8030R	5MP IR Outdoor Dome
Camera - Network	XNV-8040R	5MP IR Outdoor Dome
Camera - Network	XNV-8080R	5MP IR Outdoor Dome
Camera - Network	XNV-8080RSA	5MP Stainless Steel IR Dome
Camera - Network	XNV-8081R	5MP IR Outdoor Dome
Camera - Network	XNV-8081RE	5MP Outdoor Dome, PoE extender camera
Camera - Network	XNV-8081Z	5MP Outdoor PTRZ Dome
4MP Cameras		
Camera - Network	XND-C7083RV	4MP IR Indoor Vandal Dome AI Camera
Camera - Network	XNV-C7083R	4MP IR Outdoor Vandal Dome AI Camera
2MP Cameras		
Camera - Network	PNB-A6001	2MP Box AI camera
Camera - Network	PND-A6081RF	2MP IR Indoor Flush Mount Dome AI Camera
Camera - Network	PND-A6081RV	2MP IR Indoor Vandal Dome AI Camera
Camera - Network	PNO-A6081R	2MP IR Bullet AI camera
Camera - Network	PNV-A6081R	2MP IR Outdoor Vandal Dome AI Camera
Intercoms	TID-600R	Video Intercom
Camera - Network	TNB-6030	PVM Camera
Camera - Network	TNU-6321	2MP 32x Positioning Camera
Camera - Network	XNB-6000	2MP Box
Camera - Network	XNB-6001	2MP Covert Camera Main Module
Camera - Network	XNB-6003	2MP Box AI Camera
Camera - Network	XNB-6005	eXtraLUX Box Camera
Camera - Network	XNB-H6240A	2MP Network ATM Camera Kit
Camera - Network	XNB-H6241A	2MP Network ATM Camera Kit
Camera - Network	XNB-H6280B	2MP Bandit Barrier
Camera - Network	XNB-H6461H	2MP Pinhole Height Strip Camera Kit
Camera - Network	XND-6010	2MP Indoor Vandal Dome
Camera - Network	XND-6020R	2MP Indoor IR Vandal Dome
Camera - Network	XND-6080RV	2MP Indoor IR Vandal Dome
Camera - Network	XND-6080V	2MP Indoor Vandal Dome
Camera - Network	XND-6081F	2MP Flush Mount Dome
Camera - Network	XND-6081FZ	2MP Flush Mount PTRZ Dome
Camera - Network	XND-6081REV	2MP Indoor Dome, PoE extender camera
Camera - Network	XND-6081RF	2MP IR Flush Mount Dome
Camera - Network	XND-6081RV	2MP IR Indoor Dome
Camera - Network	XND-6081V	2MP Indoor Vandal Dome
Camera - Network	XND-6081VZ	2MP Indoor PTRZ Dome
Camera - Network	XND-6083RV	2MP IR Indoor Vandal Dome AI Camera
Camera - Network	XND-6085V	eXtraLUX Indoor PTRZ Dome
Camera - Network	XND-C6083RV	2MP IR Indoor Vandal Dome AI Camera
Camera - Network	XNO-6010R	2MP IR Bullet
Camera - Network	XNO-6020R	2MP IR Bullet
Camera - Network	XNO-6080R	2MP IR Bullet
Camera - Network	XNO-6085R	eXtraLUX IR Bullet
Camera - Network	XNO-6120R	2M 12X IR Bullet
Camera - Network	XNO-6120R/LPR	Low Speed LPR IR Bullet
Camera - Network	XNP-6040H	2MP 4.3X PTZ
Camera - Network	XNP-6120H	2MP 12X PTZ

HANWHA PRODUCT LINE UP FOR LOUROE AUDIO

Camera - Network	XNP-6320	2MP 32X PTZ
Camera - Network	XNP-6320H	2MP 32X PTZ
Camera - Network	XNP-6320HS	2MP 32x Stainless steel PTZ
Camera - Network	XNP-6320RH	2MP IR 32x PTZ
Camera - Network	XNP-6321	2MP 32x PTZ Indoor
Camera - Network	XNP-6321H	2MP 32x PTZ Outdoor
Camera - Network	XNP-6550RH	2MP IR 55x PTZ
Camera - Network	XNV-6010	2MP Outdoor Dome
Camera - Network	XNV-6012	2MP Mobile Vandal Dome
Camera - Network	XNV-6012M	2MP Mobile Vandal Dome
Camera - Network	XNV-6013M	2MP Mobile Vandal Dome
Camera - Network	XNV-6020R	2MP IR Outdoor Dome
Camera - Network	XNV-6022R	2MP Mobile Vandal Dome
Camera - Network	XNV-6022RM	2MP Mobile Vandal Dome
Camera - Network	XNV-6080	2MP Outdoor Dome
Camera - Network	XNV-6080R	2MP IR Outdoor Dome
Camera - Network	XNV-6080RSA	2MP Stainless Steel IR Dome
Camera - Network	XNV-6081	2MP Outdoor Dome
Camera - Network	XNV-6081R	2MP IR Outdoor Dome
Camera - Network	XNV-6081RE	2MP Outdoor Dome, PoE extender camera
Camera - Network	XNV-6081Z	2MP Outdoor PTRZ Dome
Camera - Network	XNV-6083R	2MP IR Outdoor Vandal Dome AI Camera
Camera - Network	XNV-6085	eXtraLUX Outdoor PTRZ Dome
Camera - Network	XNV-6120	2M 12X Outdoor Dome
Camera - Network	XNV-6120R	2M 12X IR outdoor Dome
Camera - Network	XNV-6120R/LPR	Low Speed LPR Outdoor IR Dome
Camera - Network	XNV-C6083R	2MP IR Outdoor Vandal Dome AI Camera
Camera - Network	XNZ-6320	2MP 32x Zoom Box
Camera - Network	XNZ-L6320	2MP 32x Zoom Box
Thermal Cameras		
Camera - Network	TNM-3620TDY	EBT camera
Camera - Network	TNO-3010T	QVGA Thermal Bullet
Camera - Network	TNO-3020T	QVGA Thermal Bullet
Camera - Network	TNO-3030T	QVGA Thermal Bullet
Camera - Network	TNO-3040T	QVGA Thermal Bullet
Camera - Network	TNO-3050T	QVGA Thermal Bullet
Camera - Network	TNO-4030T	VGA Thermal Bullet
Camera - Network	TNO-4030TR	VGA Radiometric Bullet
Camera - Network	TNO-4040T	VGA Thermal Bullet
Camera - Network	TNO-4040TR	VGA Radiometric Bullet
Camera - Network	TNO-4041T	VGA Thermal Camera for PT Unit
Camera - Network	TNO-4041TR	VGA Radiometric Camera for PT Unit
Camera - Network	TNO-4050T	VGA Thermal Bullet
Camera - Network	TNO-4051T	VGA Thermal Camera for PT Unit
Camera - Network	TNU-4041T	VGA Thermal Positioning
Camera - Network	TNU-4051T	VGA Thermal Positioning

September 24th,2021

IMPORTANT PRODUCT TECHNICAL SERVICE BULLETIN

PRODUCT TYPE SERIES COVERED BY THIS BULLETIN

Louroe Electronics: Louroe Mic-level microphones (A-ML, B-ML, C-ML, D/DV-ML, E-ML)
Hanwha Techwin: All camera models

BACKGROUND

The result of a recent product integration review, Louroe Electronics Inc. ("LE") has discovered that the LE line of Mic-level microphones has exhibited susceptibility to excessive noise and poor audio quality when connected to newer (circa 2018) Hanwha Techwin Wisenet IP cameras.

EVALUATION

As part of LE's continued commitment to ensuring optimal performance of our microphones; LE frequently evaluates the key characteristics of our range of microphones integrated with a variety of receiving digital and analog devices. The characteristics of the microphones such as frequency response, sensitivity etc. are independently measured and baselined and then compared against the audio output of the receiving device under evaluation to determine the "in-system" performance of the microphone/s. Characteristics such as audio clarity/quality, gain, noise (inherent and ambient) etc. are measured, recorded, and compared across a wide array of devices and manufacturers.

RECOMMENDATION

LE has offered sharing our findings with the Engineering leadership of Hanwha Techwin to remedy the excessive noise and poor audio quality that is emanating from the camera series discussed. We anticipate that Hanwha Techwin will be addressing this Engineering notice in a future hardware/firmware update to their respective cameras**.**

In the interim LE advises customers using OR planning to use newer Hanwha Techwin cameras paired with a LE Mic-level microphone to instead use the following listed **equivalent** LE Mic-level microphone.

A-ML = WSP-AML-HNW
B-ML = WSP-BML-HNW
C-ML = WSP-CML-HNW
D-ML = WSP-DML-HNW
DV-ML = WSP-DVML-HNW
E-ML = WSP-EML-HNW

For further information please contact Louroe Technical Support at 1-800-927-6498 x222
Louroe Electronics, inc. is a 40+year old technology company in the business of concepting, designing, developing, and commercializing world class microphones for the security industry

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September 24th,2021

IMPORTANT PRODUCT TECHNICAL SERVICE BULLETIN

PRODUCT TYPE SERIES COVERED BY THIS BULLETIN

Louroe Electronics: Verifact® series microphones: A, B, C, D, DV, E
Hanwha Techwin: All camera models

BACKGROUND

The result of a recent product integration review, Louroe Electronics Inc. ("LE") has discovered that the LE line of Line-level microphones has exhibited susceptibility to excessive noise and poor audio quality when connected to certain newer **(circa 2018)** Hanwha Techwin Wisenet IP cameras.

EVALUATION

As part of LE's continued commitment to ensuring optimal performance of our microphones; LE frequently evaluates the key characteristics of our range of microphones integrated with a variety of receiving digital and analog devices. The characteristics of the microphones such as frequency response, sensitivity etc. are independently measured and baselined and then compared against the audio output of the receiving device under evaluation to determine the "in-system" performance of the microphone/s. Characteristics such as audio clarity/quality, gain, noise (inherent and ambient) etc. are measured, recorded, and compared across a wide array of devices and manufacturers.

RECOMMENDATION

LE has offered sharing our findings with the Engineering leadership of Hanwha Techwin to remedy the excessive noise and poor audio quality that is emanating from the camera series discussed. We anticipate that Hanwha Techwin will be addressing this Engineering notice in a future hardware/firmware update to their respective cameras**.**
In the interim LE advises customers using OR planning to use newer Hanwha Techwin cameras paired with a LE Line-level microphone of the following recommendations.

- Where possible the use of Hanwha cameras that support **AAC audio encoding**.
- Where possible the use of LE microphones with **automatic gain control** viz. Verifact AGC, BGC, CGC, DGC, DVGC, EGC.
- Where possible the use of the following audio-in settings on the respective Hanwha Techwin camera as: *Audio in settings: Source: Line, Codec: AAC, Bitrate: 48K, Gain: 3, Noise reduction: Disabled.*

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