Handheld Acoustic & Thermal Camera





HZ-HA-270P is a high sensitivity acoustic imaging system specifically engineered for partial discharge detection, pressurized leak detection and mechanical fault detection.

Boasting an array of 138 MEMS microphones, this sophisticated system excels in detecting and quantifying various instances of partial discharge while also providing accurate estimations of gas leak rates and associated costs.

HZ-HA-270p supports both audible frequency and ultrasonic frequency, for steady-state or high transient sound sources, static or moving objects can obtain excellent detection result.

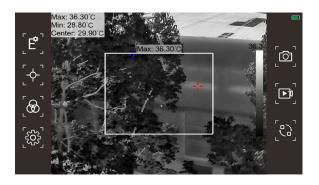
With a 640*512 resolution thermal module, it supports temperature measurement range from -20 to 550°C, with a NETD (Noise Equivalent Temperature Difference) as low as 40mk.

As the world's lightest acoustic camera, it's perfect for inspectors and professionals to swiftly identify efficiency loss and potential failures.

Driven by Hertzinno's AI engine, the system offers intuitive operation, reducing training time and ensuring ease of use.

Key Feature

- 138 Low-noise MEMS Microphones
- Partial discharge type intelligent analysis
- Thermal imaging function
- Multiple sources detection
- Real-time sound source localization
- Partial discharge detection
- Gas leakage estimate
- Mechanical fault detection







hertzinno.com

Specification



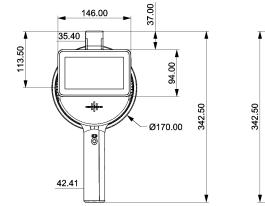
AcousticMicrophones138 MicrophonesDynamic Range of Camera-3008 - 12008Dynamic Range of Sensor3008 - 12008Minimum Imaging Sensitivity3008 - 12008Minimum Imaging Sensitivity3008 - 12008Operating Distance0.3m 200mOperating Distance0.3m 200mOperating Distance0.3m 200mMinophone Self-diagnosis0 - 1848Frequency Bandwidth2kHr - 100kHzMicrophone Self-diagnosis0 - 1848Frequency Bandwidth2kHr - 100kHzCamera13MPCamera13MPCamera FOV7s -Low Lux0.5Lux/F2.0Photo Image Resolution1920 - 1080 @30fpsUideo Image Resolution1920 - 1080 @30fpsStorageInternal 64GBVideo Image Resolution240/5GUS5TYPE-CBattery Operating TypeType-CBattery Operating Type1924 - 1080 @30fpsVideo Image Resolution1920 - 1080 @30fpsStorageInternal 64GBVideo Image Resolution1920 - 1080 @30fpsStorage1924 - 1080 @30fps<	Model	HZ-HA-270p
Dynamic Range of Sensor30d8 - 120d8Dynamic Range of Sensor30d8 - 120d8Minimum Imaging Sensitivity20000Operating Distance0.3m-200mHorizontal Spatial Resolution150mmDynamic Range of multiple targets0 - 18d8Frequency Bandwidth24tr - 1004 tr2Microphone Self-Giagonsis0 - 18d8Camera13MPCamera13MPCamera13MPCamera FOV75°Low Lux0.5ur/20.0Digital Zoom8xVideo Image Resolution150006/0000Bigtal Zoom8xCamera13MPCamera13MPCamera1201/00006Uka Cux0.5ur/2.0Photo Image Resolution1201/0000 (300/s)Digital Zoom8xVideo Image Resolution1202/1080 (300/s)StorageInternal 64G8Video Image Resolution1202/1080 (300/s)Display*7205. 5-Inch Capacitive Touch ScreenWi-Fi2.4G/SGUSB7PE-CCBattery Operating Time4hDirect Charging TypeType CProtection Level1954AFEKExis III (Ta GoDimension342.5mm 167mm* 89.9mmWorking Temperature Range-207C = 30°CStorage Temperature Range-207C =	Acoustic	
Dynamic Range of Sensor 3048 - 12048 Minimum Imaging Sensitivity 200412 - 1048 SPL 300412 - 0408 SP 300412 - 0408 SP 300412 - 0408 SP 3	Microphones	138 Microphones
Minimum imaging SensitivityIokHz: 1dB SPL 20kHz: 0dB SPL 3dB SPL 20kHz: 0dB SPL 4dkHz: 3dB SPL 3dB SPL cokHz: 2dB SPL 0dbHz: 3dB SPL 3dB SPL 3dB SPL 3dB SPLOperating Distance0.3m*200mHorizontal Spatial Resolution0~18dBDynamic Range of multiple targets0~18dBFrequency Bandwidth2kHz~100kHzMicrophone Self-diagnosisSupportGeneral13MPCamera0.5Lux/F2.0Photo Image Resolution0.5Lux/F2.0Photo Image Resolution8xVideo Image Resolution920*1080@30fpsStorageInternal 64GBVideo Image Resolution920*1080@30fpsStorageInternal 64GBVideo Image Resolution246/5GUsBTVPE-CBattery Operating Time4hDirect Charging TypeType-CProtection Level1954ATEXExil IICT 80° CD Exil IICT 80° CD E	Dynamic Range of Camera	-30dB ~ 120dB
Minimum Imaging Sensitivity20kHr: -1008 SPL 40kHr: 368 SPL 40kHr: 368 SPL 60kHr: 2008 SPLOperating Distance0.3m°200mHorizontal Spatial Resolution150mmDynamic Range of multiple targets0° 18/80Prequency Bandwidth2kHr: 100kHzMicrophone Self-diagnosisSupportGeneral14MPCamera13MPCamera13MPCamera FOV75°Low Lux0.5Lux/F2.0Photo Image Resolution1920°1080 @30fpsDigital Zoom8xVideo Image Resolution1920°1080 @30fpsStorageInternal 646BVideo record5minDigital Zoom7VP-CBattery Operating Time4hDirect Charging TypeType-CProtection Level1954ATEXExis IIICT 80° CDb Exis IIICT 80° C	Dynamic Range of Sensor	30dB ~ 120dB
Horizontal Spatial Resolution150mmDynamic Range of multiple targets0~18dBFrequency Bandwidth2kHz ~ 100kHzMicrophone Self-diagnosisSupportGeneral1Thermal SensorYESCamera13MPCamera FOV75°Low Lux0.5Lux/F2.0Photo Image Resolution4K (3840°2160), 1080PDigital Zoom8xVideo Image Resolution1920°1080 @30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5inch Capacitive Touch ScreenWi-Fi2.445/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXExis III CT 80°C Db Exis III CT 80°C Db Exis III CT 46BDimension342.5mm* 167mm* 89.9mnWorking Temperature Range-30°C ~ 60 °CHumidity10%-95%Applications ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Minimum Imaging Sensitivity	20kHz: -10dB SPL 30kHz: -6dB SPL 40kHz: 3dB SPL 50kHz: 6dB SPL
Dynamic Range of multiple targets0 ~ 18dBFrequency Bandwidth2kHz ~ 100kHzMicrophone Self-diagnosisSupportGeneral1Thermal SensorVESCamera13MPCamera FOV75"Low Lux0.5Lux/F2.0Photo Image Resolution4k (3840°2160), 1080PDigital Zoom8xVideo Image Resolution1920°1080@30fpsStorageInternal 64GBVideo Irage Resolution246/5GUsplay*220%_5inch Capacitive Touch ScreenWi-Fi246/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXExih III CT80°C Db Exih III CT80°C Db Exih III CT4 Gb Exih III CT4 Gb 	Operating Distance	0.3m~200m
Frequency Bandwidth 2kHz ~ 100kHz Microphone Self-diagnosis Support General Thermal Sensor Thermal Sensor VES Camera 13MP Camera FOV 75° Low Lux 0.5Lw/F2.0 Photo Image Resolution 4K (3840*2160), 1080P Digital Zoom 8× Video Image Resolution 1920*1080 @30fps Storage Internal 64GB Video record 5min Display* 720P, 5-Inch Capacitive Touch Screen Wi-Fi 2.4G/SG USB TYPE-C Battery Operating Time 4h Direct Charging Type Type-C Protection Level IP54 ATEX Ex Ib III CT 80° CDb Ex Ib III CT 40° CD Ex Ib III CT 40° CD Dimension 342.5mm* 167mm* 89.9mm Working Temperature Range -20°C ~ 50°C Storage Temperature Range -30°C ~ 60°C Humidity 10%-95% Applications Partial discharge/Kosa leakage/Vibration	Horizontal Spatial Resolution	150mm
Microphone Self-diagnosis Support General	Dynamic Range of multiple targets	0 ~ 18dB
GeneralThermal SensorYESCamera13MPCamera FOV75°Low Lux0.5Lux/F2.0Photo Image Resolution4K (3840*2160), 1080PDigital Zoom8xVideo Image Resolution1920*1080 @30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/SGUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection Level1954ATEXEx bi IIC T80°C Db Ex bi IIC T80°C Db Ex bi IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10%-95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Frequency Bandwidth	2kHz ~ 100kHz
Thermal SensorYESCamera13MPCamera FOV75°Low Lux0.5Lux/F2.0Photo Image Resolution4K (3840*2160), 1080PDigital Zoom8xVideo Image Resolution1920*1080 @30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection Level1P54ATEX£xib IIIC T80°C Db Ex to IIIC T46 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-30°C ~ 60 °CHumidity10%-95%Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Microphone Self-diagnosis	Support
Camera13MPCamera FOV75°Low Lux0.5Lux/F2.0Photo Image Resolution4K (3840*2160), 1080PDigital Zoom8xVideo Image Resolution1920*1080 @30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5-Inch Capacitive Touch ScreenWI-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIIC T80°C Db Ex ib IIIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CHumidity10%-95%Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	General	
Camera FOV75°Low Lux0.5Lux/F2.0Photo Image Resolution4K (3840*2160), 1080PDigital Zoom8xVideo Image Resolution1920*1080 @30fpsStorageInternal 64GBVideo recordSminDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIC T80°C Db Ex ib IIC T80°C Db Ex ib IIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10%-95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Thermal Sensor	YES
Low Lux0.5Lux/F2.0Photo Image Resolution4K (3840*2160), 1080PDigital Zoom8xVideo Image Resolution1920*1080 @30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXExib III CT80°C Db Exib III CT4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10%-95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Camera	13MP
Photo Image Resolution4K (3840*2160), 1080PDigital Zoom8xVideo Image Resolution1920*1080@30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T8 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10%-95%ApplicationsPartial discharge Type PredictionPartial discharge Type PredictionCorona/Floating/Surface/Noise	Camera FOV	75°
Digital Zoom8xDigital Zoom8xVideo Image Resolution1920*1080@30fpsStorageInternal 64GBVideo record5minDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 6bDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10%-95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Low Lux	0.5Lux/F2.0
Video Image Resolution1920*1080 @30fpsStorageInternal 64GBVideo recordSminDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Photo Image Resolution	4K (3840*2160), 1080P
StorageInternal 64GBVideo recordSminDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10%-95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Digital Zoom	8x
Video recordSminDisplay*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Video Image Resolution	1920*1080 @30fps
Display*720P, 5-inch Capacitive Touch ScreenWi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Storage	Internal 64GB
Wi-Fi2.4G/5GUSBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib III CT80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Application ScenariosPartial discharge/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Video record	5min
USBTYPE-CBattery Operating Time4hDirect Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Display*	720P, 5-inch Capacitive Touch Screen
Battery Operating Time4hBattery Operating TypeType-CDirect Charging TypeIP54Protection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Wi-Fi	2.4G/5G
Direct Charging TypeType-CProtection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	USB	TYPE-C
Protection LevelIP54ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Battery Operating Time	4h
ATEXEx ib IIIC T80°C Db Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Applications-20°C ~ 50 °CApplication ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Direct Charging Type	Туре-С
Ex ib IIC T4 GbDimension342.5mm* 167mm* 89.9mmWorking Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Protection Level	IP54
Working Temperature Range-20°C ~ 50 °CStorage Temperature Range-30°C ~ 60 °CHumidity10% -95%Applications	ATEX	
Storage Temperature Range-30°C ~ 60 °CHumidity10% -95%ApplicationsPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Dimension	342.5mm* 167mm* 89.9mm
Humidity 10% -95% Applications Partial discharge/Gas leakage/Vibration Partial discharge Type Prediction Corona/Floating/Surface/Noise	Working Temperature Range	-20℃ ~ 50 ℃
Applications Application Scenarios Partial discharge/Gas leakage/Vibration Partial discharge Type Prediction Corona/Floating/Surface/Noise	Storage Temperature Range	-30°C ~ 60 °C
Application ScenariosPartial discharge/Gas leakage/VibrationPartial discharge Type PredictionCorona/Floating/Surface/Noise	Humidity	10% -95%
Partial discharge Type Prediction Corona/Floating/Surface/Noise	Applications	
	Application Scenarios	Partial discharge/Gas leakage/Vibration
Leaks Rate > 0.83ml/s, @120kpa from 8m	Partial discharge Type Prediction	Corona/Floating/Surface/Noise
	Leaks Rate	> 0.83ml/s, @120kpa from 8m

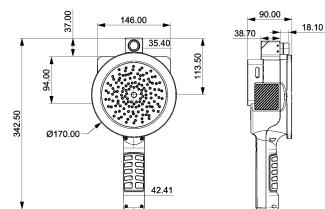
Specification



Model	НZ-НА-270р
Thermal Sensor	640*512
Temperature Range	-20°C~ 550°C
FOV of Lens	32.9°x26.6°
Geometrical Resolution	0.92mrad
NETD	≤40mk

Dimension





Packaging list

- 1. Acoustic Imaging Camera
- 2. Charger
- 3. Power bank
- 4. Carrying Case
- 5. User Manual
- 6. Factory test report
- 7. Accessary kit

Notes

Please note that parameters are subject to change, and we encourage you to refer to Hertzinno's official announcements for the most up-to-date information.

Hertzinno reserves the right to provide final explanations for any changes that may occur.

