

**WISeNET**

# **CÁMARA DE RED**

Manual del usuario

PNM-9320VQP

SLA-2M2400P/2M2800P/2M3600P/2M6000P/  
2M1200P/5M3700P/5M4600P/5M7000P



# Cámara de Red

## Manual del usuario

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### Marca comercial

Todas las marcas aquí mencionadas están registradas. El nombre de este producto y otras marcas mencionadas en este manual son marcas registradas de sus respectivas compañías.

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❖ El diseño y las especificaciones están sujetos a cambio sin aviso.

❖ El ID inicial del administrador es "admin" y la contraseña debe establecerse al iniciar sesión por primera vez. Por favor, cambie su contraseña cada tres meses para proteger de forma segura la información personal y evitar daños por el robo de información. Por favor, tenga en cuenta que es responsabilidad del usuario la seguridad y otros problemas causados por el mal manejo de una contraseña.

## INSTRUCCIONES DE SEGURIDAD IMPORTANTES

1. Lea estas instrucciones.
2. Consérvelas.
3. Atente para todas las advertencias.
4. Siga todas las instrucciones.
5. No utilice este aparato cerca del agua.
6. Limpie el área contaminada en la superficie del producto con un paño seco y suave o un paño húmedo. (No utilice detergente o productos cosméticos que contengan alcohol, disolventes o tensioactivos o constituyentes de aceites, ya que pueden deformar o dañar el producto).
7. No obstruya ninguna apertura de ventilación. Instale el aparato siguiendo las instrucciones del fabricante.
8. No lo instale cerca de ninguna fuente de calor como radiadores, focos de calor o cualquier otro aparato (incluidos los amplificadores) que emita calor.
9. No olvide que la finalidad de los enchufes polarizados o de toma a tierra es proporcionarle seguridad. Un enchufe polarizado tiene dos clavijas, una más ancha que la otra. Un enchufe con toma a tierra tiene dos clavijas y una tercera de toma a tierra. Tanto la clavija más ancha, en el caso del enchufe polarizado, como la clavija adicional, en el caso del enchufe con toma a tierra, tienen como objetivo aportarle seguridad. Si el enchufe del aparato no encaja en su toma de corriente, póngase en contacto con un electricista para cambiar la toma de corriente obsoleta.
10. Evite pisar o doblar el cable de alimentación. Ponga especial cuidado para no hacerlo en enchufes, tomas de corriente y en los puntos en los que salen desde el aparato.
11. Utilice únicamente los dispositivos y accesorios especificados por el fabricante.
12. Utilice sólo las mesitas con ruedas, soportes, trípodes o mesas recomendadas por el fabricante o vendidas con el aparato. Cuando se utilice una mesita con ruedas, tenga cuidado al mover la mesita con ruedas junto con el aparato para evitar daños por vuelco.
13. Desenchufe este aparato durante tormentas eléctricas o cuando no se utilice durante largos períodos de tiempo.
14. Remita todas las reparaciones a personal de mantenimiento cualificado. Es necesario enviar el aparato para su reparación cuando ha sufrido cualquier tipo de daño, como, por ejemplo, que el cable o el enchufe de la alimentación está dañado, se han derramado líquidos sobre el aparato o algún objeto ha caído sobre él, el aparato ha sido expuesto a la lluvia o a humedad, no funciona correctamente o se ha caído al suelo.
15. Este producto está destinado a ser suministrado por una Unidad de Alimentación de la Lista con la marca "Clase 2" o "LPS" y clasificado de PoE, 1.5A. (PNM-9320VQP)
16. Si utiliza una fuerza excesiva al instalar el producto, es posible que la cámara pueda sufrir daños y funcione de forma incorrecta. Si instala el producto de forma forzada utilizando herramientas no compatibles, es posible que el producto pueda sufrir daños.
17. No instale el producto en un lugar donde exista o pueda generarse sustancias químicas o niebla de aceite. Los aceites comestibles como el aceite de soja pueden dañar o deformar el producto, por lo que no debe instalar el producto en la cocina o cerca de la mesa de la cocina. Esto podría causar daños al producto.
18. Al instalar el producto, tenga cuidado y no permita que la superficie del producto se manche con sustancias químicas. Algunos disolventes químicos como limpiadores o adhesivos pueden causar daños graves a la superficie del producto.
19. Si instala o desmonta el producto de una manera que no se ha recomendado, es posible que las funciones/ rendimiento de producción no estén garantizados. Instale el producto consultando "Instalación y conexión" en el manual del usuario.
20. La instalación o uso del producto en el agua puede causar daños graves al producto.



## ADVERTENCIA

PARA REDUCIR EL RIESGO DE INCENDIO O DESCARGA ELÉCTRICA, MANTENGA ESTE DISPOSITIVO LEJOS DE LLUVIA Y/O LA HUMEDAD. NO INSERTE NINGÚN OBJETO METÁLICO EN LAS REJILLAS DE VENTILACIÓN NI EN NINGUNA ABERTURA DEL EQUIPO.

No debe exponer el aparato a gotas ni salpicaduras de agua ni a objetos con líquido, como jarrones, evitando colocarlos sobre el aparato.

Para evitar daños, este aparato debe instalarse de forma adecuada en el techo o la pared de acuerdo con las instrucciones de instalación.

**Los motores con bandeja/volante/zoom y el anillo colector tienen garantía por un año bajo un funcionamiento continuo.**

## PRECAUCIÓN

	<b>PRECAUCIÓN</b> NO ABRIR RIESGO DE SUFRIR UNA DESCARGA ELÉCTRICA	
<b>PRECAUCIÓN : PARA REDUCIR EL RIESGO DE SUFRIR UNA DESCARGA ELÉCTRICA, NO RETIRE LA CUBIERTA (NI LA PARTE POSTERIOR). DENTRO NO HAY PIEZAS QUE PUEDAN SER REPARADAS POR EL USUARIO. REMITA EL APARATO A PERSONAL DE MANTENIMIENTO CUALIFICADO.</b>		

## EXPLICACIÓN DE LOS SÍMBOLOS GRÁFICOS



Un triángulo con un rayo y una punta de flecha es un símbolo de advertencia para avisar al usuario de la presencia de "voltajes peligrosos" dentro de la carcasa del producto que pueden ser lo suficientemente intensas como para constituir un peligro de descarga eléctrica.



Un triángulo con un signo de exclamación es un símbolo de advertencia para avisar al usuario de que hay instrucciones importantes de funcionamiento y mantenimiento (reparaciones) en la documentación que acompaña al aparato.

## Construcción de clase I

Un aparato con construcción de CLASE I se conectará a una toma de corriente con la conexión de protección de tierra.

## Batería

No debe exponer las baterías (paquete de batería o pilas instalados) a calor excesivo, a la luz directa del sol ni al fuego, etc.

## Desconexión del dispositivo

Desconecte el enchufe de corriente del aparato si está defectuoso. Y llame a un servicio de reparaciones.

**Cuando lo utilice fuera de EE.UU., se puede utilizar el código HAR con acoplamiento de una agencia aprobada.**

## PRECAUCIÓN

Existe un riesgo de explosión si la batería se sustituye por otra que no sea adecuada. Tire las baterías usadas como se indica en las instrucciones.

Estas instrucciones de servicio están destinadas únicamente a personal de servicio técnico cualificado.

Para reducir el riesgo de descarga eléctrica no realice ninguna operación de servicio que no sean las indicadas en las instrucciones de funcionamiento a menos que esté cualificado para hacerlo.

Se suministra el terminal de salida CVBS del producto para facilitar la instalación, aunque no se recomienda utilizarlo con fines de gestión.

Utilice la alimentación de entrada con sólo una cámara y sin que estén conectados otros dispositivos.

**El ITE solo se debe conectar a redes PoE sin enviarlo a la red externa.**

Lea detenidamente las precauciones de seguridad recomendadas que se incluyen a continuación.

- El producto tiene un componente a prueba de humedad incluido. Debido a la naturaleza del producto, se pueden formar condensaciones después de energizar el producto, pero desaparecerán en dos o tres horas.
- Dado que este producto está equipado con un sistema de ventilación a prueba de agua, evite instalarlo en un lugar que presente un cambio artificial repentino de temperatura.
- No coloque este aparato sobre una superficie desigual.
- No lo instale en una superficie expuesta a la luz directa del sol, cerca de equipos de calefacción ni cerca de áreas frías.
- No coloque este aparato cerca de material conductivo.
- No intente reparar este aparato por sí solo.
- No coloque jarrones sobre el producto.
- No lo instale cerca de fuentes magnéticas.
- No bloquee las aberturas de ventilación.
- No coloque objetos pesados sobre el producto.
- Use guantes protectores cuando instale/desinstale la cámara.  
La alta temperatura de la superficie del producto puede causar quemaduras.

El Manual del usuario es una guía sobre cómo utilizar los productos.

El significado de los signos que se utilizan en el manual es el siguiente.

- Referencia : en caso de que se facilite información de ayuda sobre el uso del producto
- Aviso : si existe alguna posibilidad de que se produzcan daños en bienes o lesiones en personas causadas por no seguir las instrucciones
- ✳ Lea este manual por razones de seguridad antes de utilizar los productos y guárdelo en un lugar seguro.

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## CARACTERÍSTICAS DEL PRODUCTO

- **Opciones de lente, de acuerdo con la distancia focal**  
Puede seleccionar el objetivo que desee y conectarlo a la cámara.
- **Antipolvo/Impermeable**  
Su diseño resistente al polvo y al agua protege al producto de lluvia y polvo si se instala en exteriores. (IP66)
- **Flujo de datos múltiple**  
Esta cámara de red puede mostrar simultáneamente vídeos en diferentes resoluciones y calidades utilizando CÓDEC diferentes.
- **Supervisión basada en el Explorador Web**  
Utilización de un explorador web de Internet para mostrar la imagen en un entorno de red local.
- **Alarma**  
Cuando ocurre un evento, se envía el video relevante al correo electrónico y al servidor FTP registrado por el usuario o almacenado en la tarjeta de memoria Micro SD, o se envía una señal a la terminal de la salida de la alarma.
- **Detección de sabotaje**  
Detecta intentos de sabotaje en la vigilancia del vídeo.
- **Función de detección de desenfoque**  
Detecta el fenómeno de desenfoque en la lente de la cámara.
- **Detección de movimiento**  
Detecta movimiento en la entrada de vídeo de la cámara.
- **Detección de neblina**  
Detecta neblina que sea más densa que el nivel de detección.
- **Detección de rostro**  
Detecta las caras en el área especificada de la entrada de vídeo de la cámara.
- **Función AVI (Análisis de vídeo inteligente)**  
Detecta un movimiento o una situación que cumple las reglas de evento configuradas.
- **Compatibilidad con ONVIF**  
Este producto es compatible con ONVIF Profile-S.  
Para más información, consulte [www.onvif.org](http://www.onvif.org).



## CARACTERÍSTICAS RECOMENDADAS DEL ORDENADOR









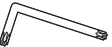
- CPU : Intel(R) Core(TM) i7 a 3,4 GHz o superior
  - SO admitido : MS Windows, Mac OS X
  - Navegadores web compatibles: Google Chrome, MS Edge, Mozilla Firefox (sólo compatible con Windows 64bit), Apple Safari (sólo compatible con Mac OS X), MS Explorer
- ※ Consulte el anexo para información detallada sobre los sistemas operativos y navegadores verificados. Algunas funciones pueden estar restringidas incluso en navegadores compatibles.




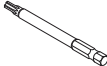

## ESPECIFICACIONES DE LA TARJETA DE MEMORIA MICRO SD/SDHC/SDXC RECOMENDADA

- Capacidad recomendada : De 16 GB a 256 GB (tipo MLC)
- Para esta cámara se recomiendan los siguientes tipos de tarjetas de memoria de los siguientes fabricantes.
  - Fabricante : SanDisk, Transcend
  - Familia de productos : High endurance
- Se recomienda utilizar una tarjeta de memoria de 16 GB o más que cumpla con la especificación de clase UHS-3 (tipo MLC).









## COMPONENTES (PNM-9320VQP)

Compruebe si la cámara y los accesorios se incluyen en el paquete del producto.  
(Debido a los diferentes países de venta, los accesorios no son los mismos.)

Aspecto	Nombre de elemento	Cantidad	Descripción
	Cámara	1	
	Manual de instrucciones, CD del software del instalador	1	
	Manual de consulta rápida (Opcional)	1	
	Tarjeta de garantía (Opcional)	1	
	Inyector HPoE	1	Conecta el suministro eléctrico y la red
	Cable para probar el monitor	1	Se utiliza para probar la conexión de la cámara en un dispositivo de visualización portátil
	Cable eléctrico	1	Conecta a HPoE
	Bloque de terminales	1	Conecta alarma I/O
	Llave hexagonal	1	Se utiliza para ajustar las tuercas después de conectar la base instalada con el cuerpo de la cámara
	Llave punta estrella	1	Se utiliza para ensamblar/desensamblar la tapa abovedada y la puerta de la tarjeta SD

Aspecto	Nombre de elemento	Cantidad	Descripción
	Tornillo hexagonal	3	Se utiliza para conectar la base instalada con el cuerpo de la cámara
	Base instalada	1	Soporte para la instalación del producto
	Accesorios resistentes al agua	1	Se utiliza para la instalación en un área húmeda
	Broca	1	Se utiliza para ensamblar/desensamblar la tapa abovedada y la puerta de la tarjeta SD (para la herramienta eléctrica)
	Núcleo de ferrita	1	Utilizado para bloquear el/los componente/s de alta frecuencia contenido/s en la fuente de alimentación y el extremo de la señal de ser irradiada hacia el exterior <ul style="list-style-type: none"> <li>Se recomienda darle cuerda 2 veces alrededor del cable de alimentación y el cable LAN antes de su uso.</li> </ul>

**COMPONENTES (MÓDULO DELENTE-OPCIONAL)**

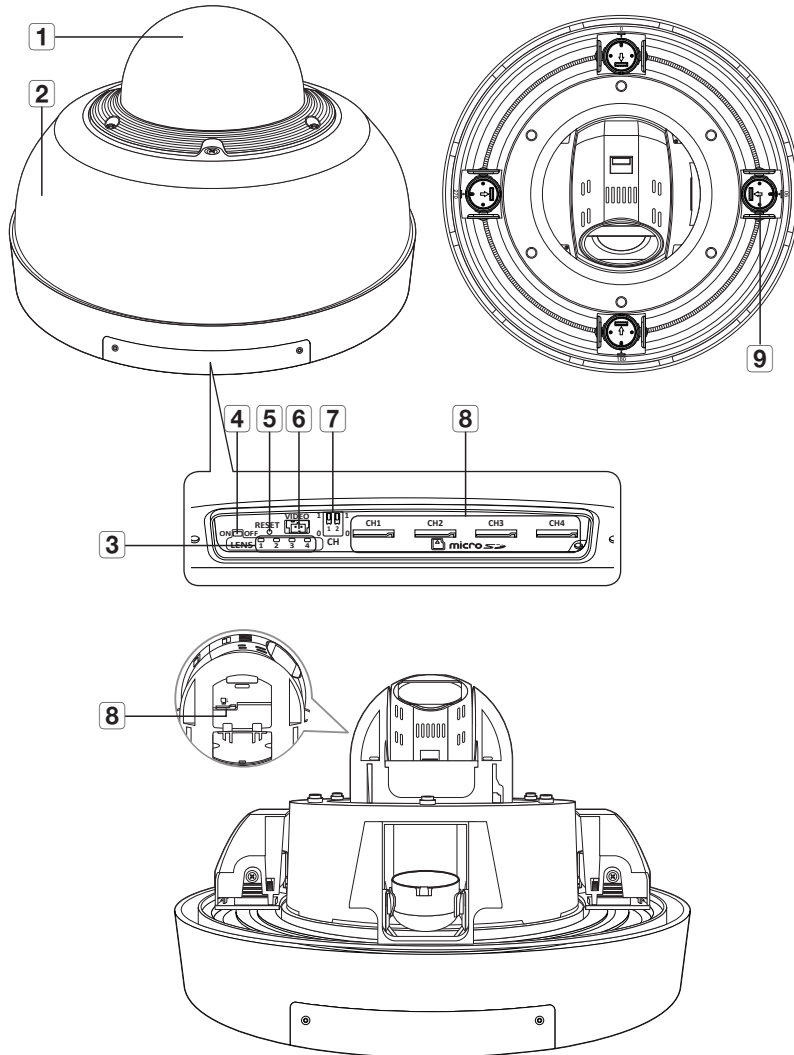
Aspecto	Nombre de elemento	Descripción	Nombre del modelo
	Módulo de lente	Montado en PNM-9320VQP	SLA-2M2400P
			SLA-2M2800P
			SLA-2M3600P
			SLA-2M6000P
			SLA-2M1200P
			SLA-5M3700P
			SLA-5M4600P
			SLA-5M7000P



## VISTA (PNM-9320VQP)

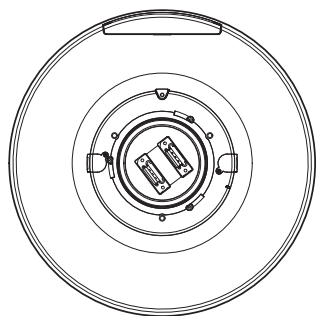
Aspecto

Componentes

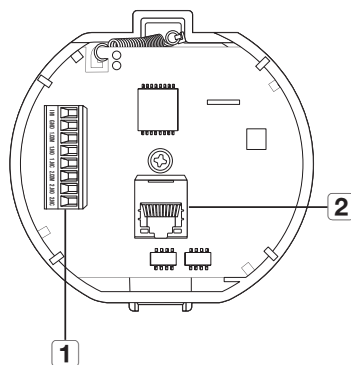


Elemento	Descripción
<b>1</b> Tapa curvada	Cubierta utilizada para proteger el objetivo y la unidad principal.
<b>2</b> Tapa de la ventana	
<b>3</b> Luz de indicación del módulo de la lente (normal: verde, anormal: rojo)	Si el módulo de la lente está conectado correctamente, el LED verde se iluminará y luego se apagará después de aproximadamente 40 segundos. (para evitar reflejos indeseables)
<b>4</b> Interruptor de encendido/apagado	Interruptor utilizado para encender/apagar el producto. <ul style="list-style-type: none"> <li>Úselo solo para reemplazar su módulo de objetivo.</li> </ul>
<b>5</b> Botón de reinicialización	Este botón restaura los valores predeterminados de la cámara. Manténgalo pulsado durante unos 5 segundos para reiniciar el sistema. <ul style="list-style-type: none"> <li>Si reinicia la cámara, los ajustes de red se ajustarán de forma que se pueda habilitar DHCP. Si no hay servidor DHCP en la red, debe ejecutar el programa IP installer para cambiar los ajustes básicos de red como la dirección IP, la máscara de subred, la puerta de enlace, etc., antes de conectar a la red.</li> </ul>
<b>6</b> Puerto de salida de monitor	Puerto de salida para monitorizar la prueba de la salida de vídeo. Utilice el cable del monitor de prueba para conectarlo a una pantalla móvil y realizar la prueba de vídeo.
<b>7</b> Interruptor DIP para cambiar el canal	Cambie los interruptores DIP para especificar el canal que desea utilizar para ver el vídeo de instalación. <ul style="list-style-type: none"> <li>Solo puedes comprobar los videos del módulo de lentes 4CH, no los videos del PTZ.</li> </ul>
<b>8</b> Compartimento de la tarjeta de memoria Micro SD	Compartimento de la tarjeta de memoria Micro SD.
<b>9</b> Porción de montaje del módulo de la lente	Este es el terminal para montar el módulo de la lente.

Instalación lateral



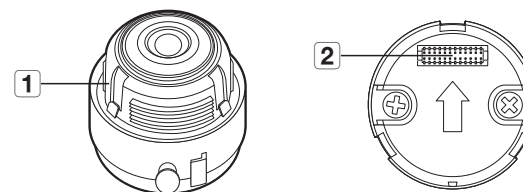
Interior de la base instalada



Elemento	Descripción
<b>1</b> Terminales de la alarma I/O	Terminales que conectan los cables de alarma I/O.
<b>2</b> Terminal de red/conexión de fuente de alimentación	Una terminal que conecta la fuente de alimentación y la red a través del cable RJ45.

VISTA (MÓDULO DE LENTE)

Aspecto



Elemento	Descripción
<b>1</b> Módulo de lente	Este es un módulo de lente que graba vídeo.
<b>2</b> Conector de cámara	Esta es una terminal para la conexión con la cámara.

## INSTALACIÓN

- ! La cámara es resistente al agua y cumple la norma IP66. No obstante, el conector hembra conectado al cable externo no lo es. Se recomienda instalar este producto por debajo del borde de los aleros para evitar que el cable quede en el exterior.

### Precauciones antes de la instalación

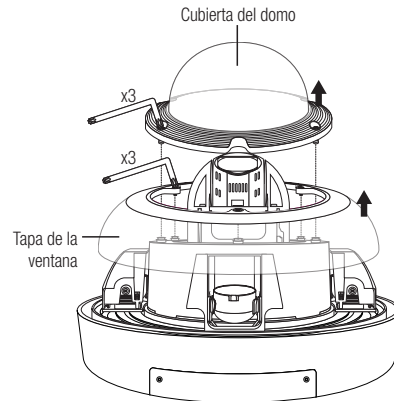
Asegúrese de leer las siguientes instrucciones antes de instalar la cámara:

- Seleccione un lugar para la instalación que al menos soporte 5 veces el peso de la cámara.
- Cables doblados o pelados pueden causar daños en el producto o producir un incendio.
- Por razones de seguridad, mantenga alejado a todo el mundo del lugar de la instalación. Y guarde aparte las pertenencias personales, como precaución.
- Si el producto se instala con excesiva fuerza, la cámara debido podría sufrir daños debido a un mal funcionamiento. Forzar el ensamblaje utilizando herramientas no compatibles puede dañar el producto.
- No instale o retire el módulo de lentes mientras la fuente de alimentación esté encendida.

### Desmontaje

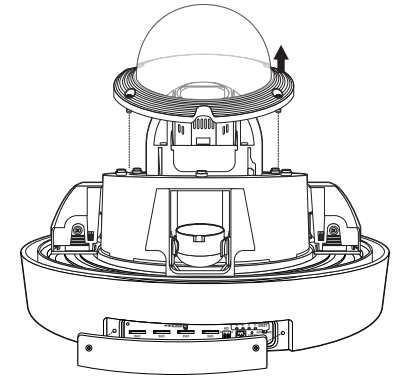
Con la llave punta estrella o taladros, afloje los tornillos de fijación en el sentido contrario a las agujas del reloj y retire la tapa abovedada y de la ventana.

- ✂ No debe retirar completamente los tornillos de las cubiertas.
- Retire la tapa abovedada solo cuando instale la tarjeta Micro SD para PTZ. En todos los otros casos, no quite la tapa abovedada.
- Retire la tapa de la ventana cuando instale el módulo de lentes. No debe retirar la tapa abovedada.
- ! Dado que las tapas abovedadas y de la ventana son transparentes, no hay un cable de seguridad.



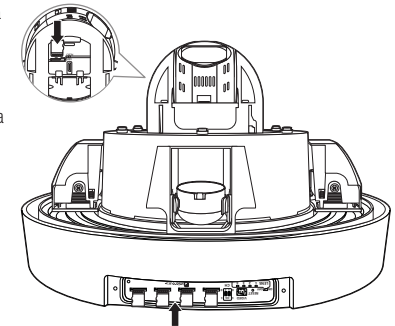
### Inserte una tarjeta de memoria Micro SD

1. Utilice la llave punta estrella o taladros, retire la tapa abovedada y la puerta de la tarjeta SD.



2. Inserte una tarjeta micro SD en la dirección de la flecha que aparece en la figura.

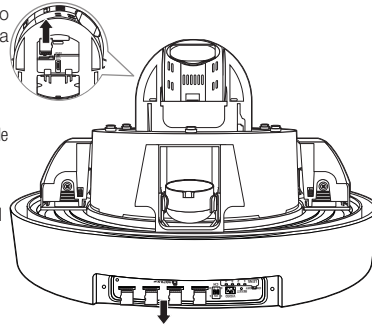
- ! Desconecte el cable de alimentación de la cámara antes de insertar la tarjeta de memoria Micro SD.
- No lo inserte a la fuerza en la dirección inversa. Podría dañar la tarjeta de memoria Micro SD y el producto.
- Cuando llueve o la humedad es alta, no se recomienda que inserte o expulse una tarjeta Micro SD.
- El desmontaje de la cubierta del producto se debe efectuar en un plazo de 5 minutos, o se podría producir condensación interna.
- Retire la tapa abovedada cuando instale la tarjeta Micro SD para PTZ.



## Quite la tarjeta de memoria Micro SD

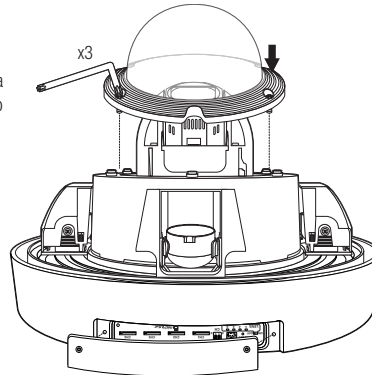
1. Presione suavemente hacia abajo en el extremo expuesto de la tarjeta de memoria como se muestra en el esquema para sacarla de la ranura.

- ! Debería guardar una tarjeta SD para cada canal.
- Tenga en cuenta que si empuja firmemente y suelta la tarjeta de memoria Micro SD al expulsarla, puede salirse.
- Antes de retirar la tarjeta de memoria Micro SD, en <Almacenamiento>, ajuste el dispositivo en <Des> y pulse el botón [Aplicar] y apague la cámara.
- Si apaga la cámara o retira la tarjeta de memoria SD que contiene datos, puede perderlos o dañarlos.



2. Utilice la llave punta estrella o taladros, una la tapa abovedada y la puerta de la tarjeta SD.

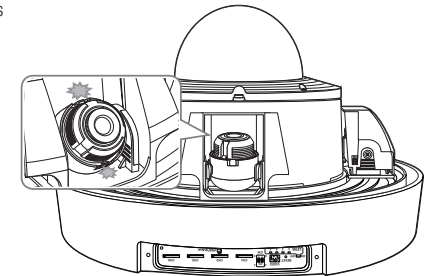
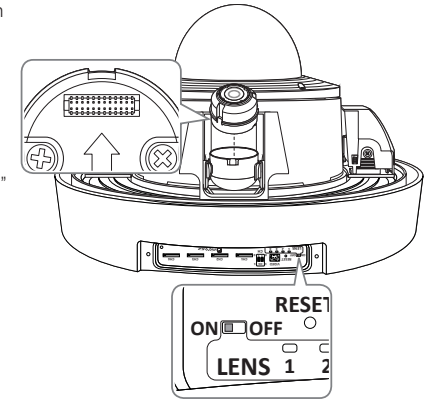
- ! Utilice la llave punta estrella o taladros para ajustar con firmeza los tornillos de fijación para que no haya un problema por daño de agua.



## Módulo de lente de montaje

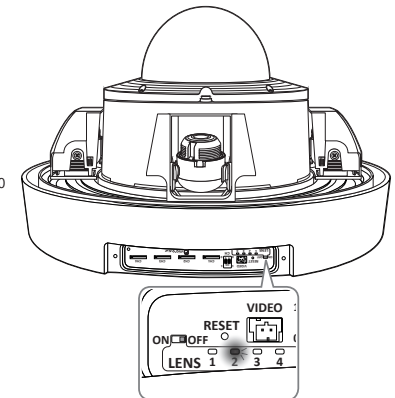
1. Alinee y ajuste el conector del módulo de lente con el conector del cuerpo de la cámara.

- ! Instale el módulo del objetivo mientras la alimentación no está conectada (HPoE).
- Asegúrese que el interruptor de la fuente de alimentación esté "OFF" antes de instalar el módulo de lente. Reemplace el módulo de lentes mientras está "ON" puede provocar mal funcionamiento.
- Se recomienda evitar manipular la lente por separado, ya que se envía de fábrica con el enfoque ajustado durante la inspección de fabricación.
- Cuando inserte el módulo de lente, hágalo hasta que los ganchos superiores/inferiores hagan "clíc".



2. Complete el proceso de montaje de la lente.  
3. Conecte el producto a la red eléctrica (HPoE).

- ! Si el módulo de la lente no está conectado correctamente, la luz de estado del módulo de la lente se iluminará en rojo, como se muestra en la figura. Si esto ocurre, apague el interruptor de alimentación y vuelva a conectar el módulo de la lente. Si está conectado normalmente, se iluminará en verde y luego se apagará después de aproximadamente 40 segundos.
- Si desea reemplazar el módulo del objetivo mientras el producto está conectado a la red eléctrica (HPoE), ajuste el interruptor de alimentación en la posición "OFF", vuelva a colocar el módulo del objetivo y luego ajuste el interruptor de alimentación en la posición "ON".
- Tenga cuidado de no utilizar ninguna herramienta con punta afilada al manipular el interruptor, ya que podría dañarse.
- Tenga cuidado de no manipular con fuerza el interruptor, ya que podría dañarse.



## Preparación e instalación del soporte de la cámara

Para obtener instrucciones de instalación de los soportes y carcasas, consulte el manual de instalación que se incluye con los mismos.

### Modelos de soportes disponibles

Modelo	Elemento
SBP-390WM1	Soporte de pared
SBP-300CM	Soporte de montaje en techo
SBP-300LM	Soporte de parapeto
SBP-300KM	Soporte para esquina
SBP-300PM	Soporte para poste

■ Consulte "Accesorios opcionales para la instalación" para ver el aspecto de cada soporte (no se incluye). (Página 17)

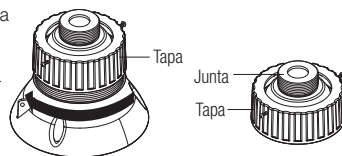
### Colocación en el adaptador no suministrado

Elija y compre una de las opciones siguientes (no suministradas) apropiada para el lugar de instalación o que se adapte a sus preferencias.

Vea "Accesorios opcionales para la instalación" para productos vendidos por separado (Página 17).

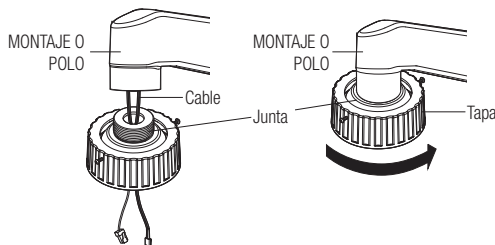
1. Gire la tapa en la dirección que indica la flecha para separar la tapa de la junta.

■ Si no está utilizando el módulo SFP para la instalación, puede saltar el procedimiento de instalación del paso 1 al 6.



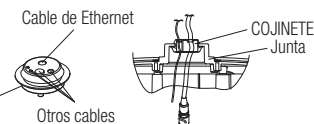
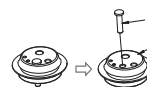
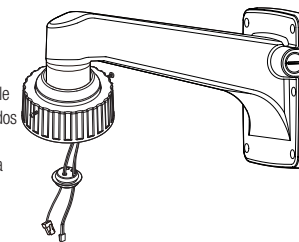
2. Pase el cable expuesto por el exterior de la montura o poste a través de la junta.

3. Gire la junta en la dirección que indica la flecha para conectar los dos materiales.

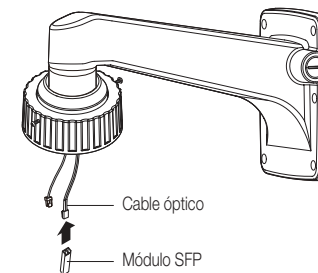


■ Si el producto se instala en una zona donde la humedad exterior puede penetrar a través de la montura o poste, utilice el buje accesorio para bloquear la entrada de humedad del exterior.

- Recubra el buje con una cantidad apropiada de grasa y conecte el cable al orificio correcto del buje. Conecte los agujeros restantes no penetrados por los cables con los con los pines.
- Presiona equitativamente en el cojinete para ajustar de manera precisa en la "Junta" como se muestra en la imagen de la sección transversal.

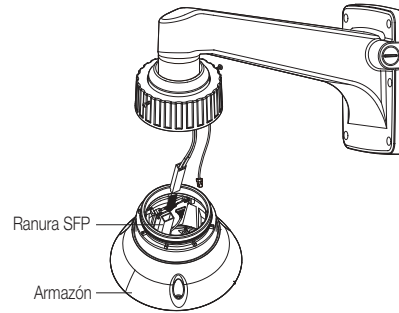


4. Fije el cable óptico al módulo SFP.

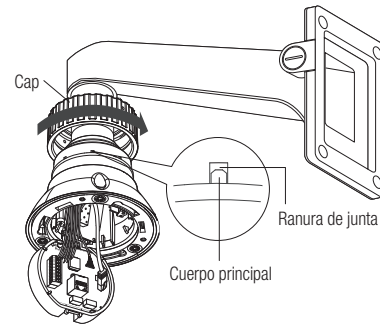


# instalación y conexión

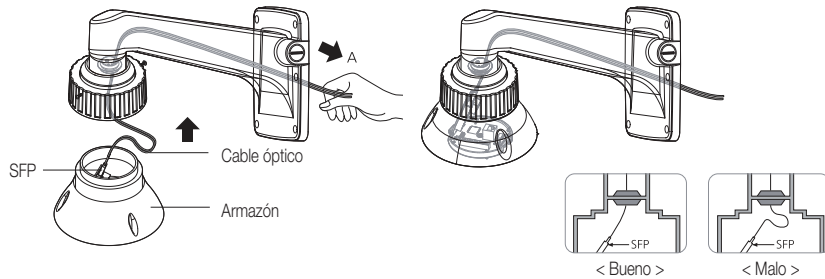
5. Fije el módulo SFP en la ranura SFP del cuerpo principal.



6. Conecte el enganche del cuerpo principal y la ranura de la junta al encajar la forma y, a continuación, únelos girando la tapa en la dirección que indica la flecha.

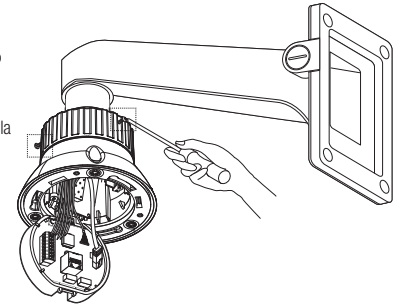


- ! Cuando sujete los dos materiales, tire del cable óptico desde el exterior para que este no se doble en el interior.



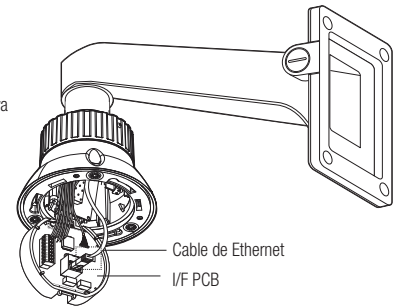
7. Gire los tornillos en ambos lados de la tapa para evitar que la tapa se afloje en la dirección opuesta. (Solo una parte de los tornillos se introduce a un grado determinado).

- ! Incluso si no conecta el módulo SFP, ajuste de manera firme la tapa para evitar fugas. No se ensambla firmemente cuando se envía.

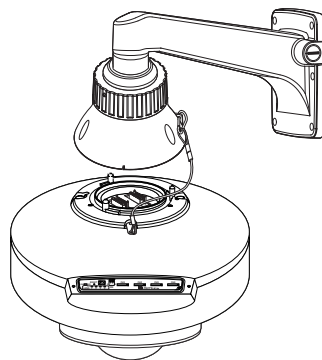


8. Conecte el cable Ethernet al I/F PCB.

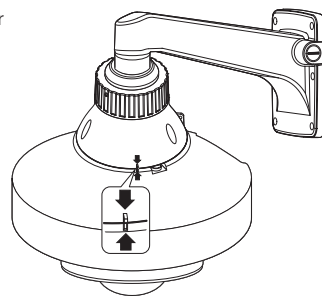
- ! Para un ensamblaje delicado con la cámara PTZ, por favor tenga cuidado con la forma y manera. (Después de unir la cámara, el cable podría estar enredado ya que el I/F PCB rota).



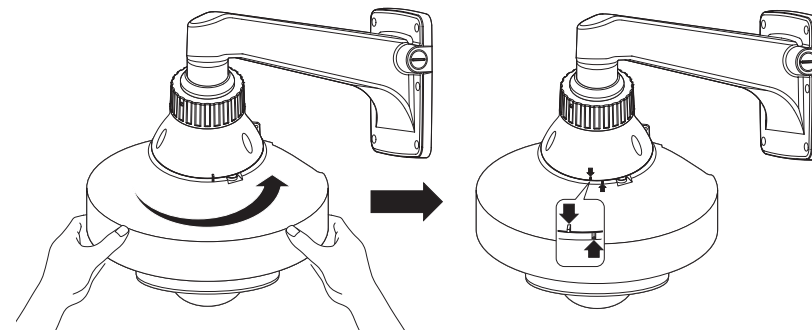
9. Después de ajustar el I/F PCB al cuerpo, instale el cable de seguridad del cuerpo de la cámara a la base instalada.



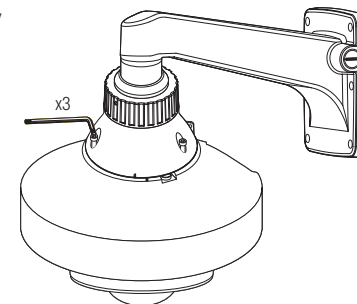
10. Ajuste los indicadores de referencia de dirección para conectar la base instalada y el cuerpo principal de la cámara.



11. Encienda la cámara en la dirección que indica la flecha, de modo que los indicadores de referencia en la parte superior e inferior sean los mismos que en la imagen de la derecha.



12. Utilice la llave hexagonal para asegurar la base instalada y la cámara.



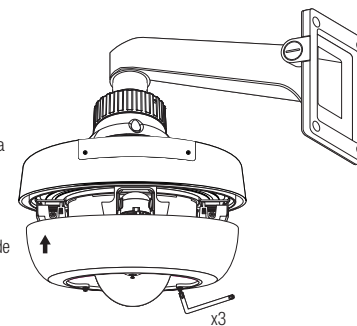
13. Para ajustar el objetivo a la dirección deseada, consulte "Ajuste de la dirección de monitoreo de la cámara" (Página 18).

- Si inclina la lente, puede que necesite ajustarla ya que esto podría bloquear la pantalla.

14. Utilice la llave punta estrella o los taladros para unir la tapa de la ventana.



- Utilice la llave punta estrella o taladros para ajustar con firmeza los tornillos de fijación para que no haya un problema por daño de agua.
- Dado que la tapa de la ventana es transparente, no hay un cable de seguridad. Por favor tenga cuidado de no dejarlo caer.



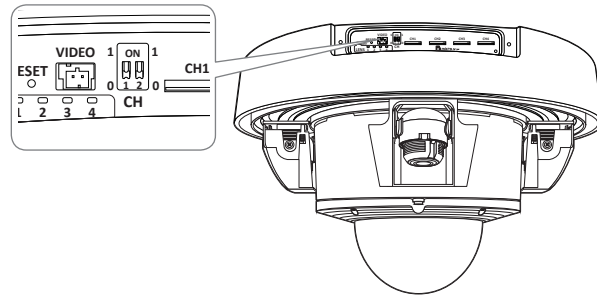
## Cómo configurar canales para monitorear la instalación

El cuerpo de la cámara tiene un conmutador DIP de canal, como se muestra en la figura.

Puede cambiar el canal de la cámara utilizando los interruptores DIP de canal.

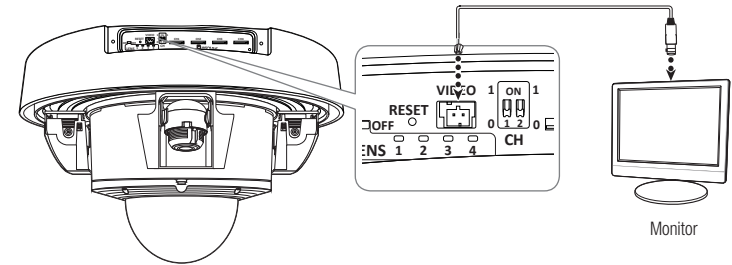
CH1	CH2	CH3	CH4
00	01	10	11

- Si un interruptor DIP no está completamente activado/desactivado, es posible que el producto no funcione correctamente. Después de la instalación, compruebe los interruptores DIP en la parte posterior.
- enga cuidado, ya que corre el riesgo de dañar un interruptor DIP si lo manipula con una herramienta afilada.
- enga cuidado, ya que un interruptor DIP puede resultar dañado aplica una fuerza excesiva para hacerlo funcionar.



## Conexión del monitor de instalación

Conecte la terminal de salida de video de este producto a la terminal de entrada del video del monitor para la instalación.



- El cableado varía dependiendo del tipo de monitor y de los dispositivos periféricos; consulte el manual del usuario de cada dispositivo.
- Asegúrese de que el monitor y la cámara estén apagados cuando se conecten.

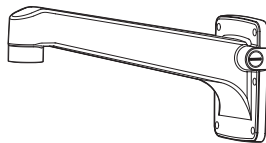
- El producto es una cámara de red que transfiere video por una red; el terminal de salida de video se utiliza para ajustar el rango de imágenes de la cámara en la instalación.
- La utilización del terminal para vigilancia puede causar problemas como la degradación de la calidad del video.
- No apto para control profesional de 24 horas usando monitores de TRC profesionales o monitores portátiles TFT/LCD.
- Use la pantalla de transferencia de red para el control y almacenamiento de 24 horas.
- Solo puedes comprobar los videos del módulo de lentes 4CH, no los videos del PTZ.



## Accesorios opcionales para la instalación

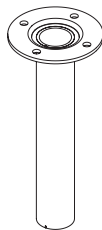
Para una instalación más sencilla, puede adquirir los accesorios opcionales apropiados disponibles

1. Si se instala la cámara en la pared
  - Soporte de pared (SBP-390WM1)

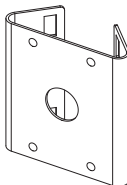


2. Si se instala la cámara en el techo
  - Soporte de montaje en techo (SBP-300CM)

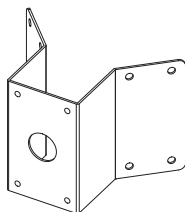
Cuando instale el montaje de techo, se recomienda colocarlo al menos a 30 cm de distancia del muro lateral.



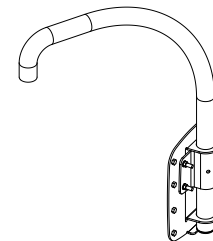
3. Si se instala en el soporte de pared (SBP-390WM1) en un cilindro de al menos 80 mm de longitud
  - Soporte para poste (SBP-300PM)



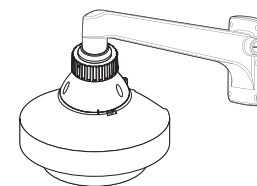
4. Si se instala en el soporte de pared (SBP-390WM1) en una esquina
  - Soporte para esquina (SBP-300KM)



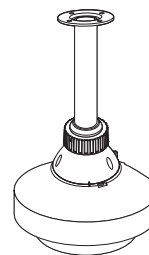
5. Si se instala en el tejado de un edificio
  - Soporte de parapeto (SBP-300LM)



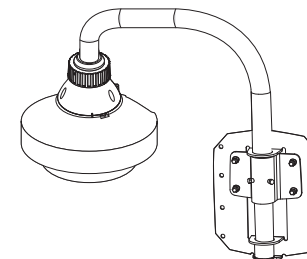
### ▪ Junta del montaje



Soporte de pared (SBP-390WM1)

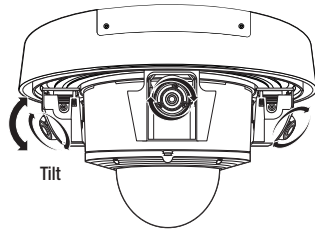


Soporte de montaje en techo (SBP-300CM)

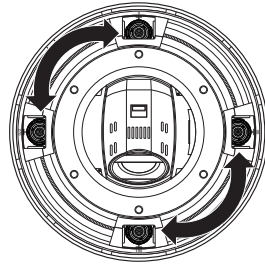


Soporte de parapeto (SBP-300LM)

## Ajuste de la dirección de la cámara



Mover el módulo de la cámara (Panorámica)



### ■ Ajuste de la dirección de vigilancia

Puede ajustar la dirección de la cámara sólo cuando la cámara esté fija al techo.

El acto de mover el módulo de la cámara se llama "Panorámica"; ajustar el ángulo "Inclinación"; girar el objetivo a lo largo del eje "Rotar".

- El ángulo de rotación de Panorámica es de  $-90^\circ$  a  $+90^\circ$  para cada módulo.
- El ángulo de rotación de Rotación es de  $-180^\circ$  a  $+180^\circ$ .
- El ángulo de rotación de Inclinación varía para cada objetivo. Vea la siguiente tabla.

- ! ■ La imagen puede quedar cubierta por la carcasa de la cámara según el ángulo.
- No mueva el ángulo de rotación especificado. Podría dañar el cable y ocasionar un mal funcionamiento del producto.

### ■ Métodos de ajuste

1. Después de instalar la cámara teniendo en cuenta la dirección de control, ajuste el ángulo de panorámica a lo largo del riel inferior.
2. Ajuste el ángulo horizontal para que la imagen no aparezca invertida durante la rotación.
3. Ajuste el ángulo de inclinación de manera que apunte en la dirección a monitorear.

### ■ Inclina el rango de ángulos para cada módulo de lentes

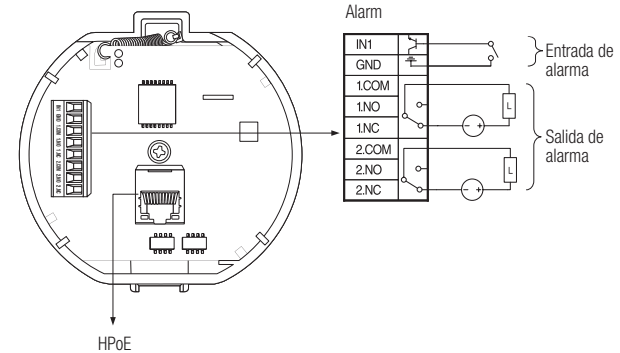
Nombre del módulo de lentes	SLA-2M2400P	SLA-2M2800P	SLA-2M3600P	SLA-2M6000P	SLA-2M1200P	SLA-5M3700P	SLA-5M4600P	SLA-5M7000P
Instalación normal	$52^\circ \sim 56^\circ$	$26^\circ \sim 80^\circ$	$22^\circ \sim 84^\circ$	$10^\circ \sim 95^\circ$	$10^\circ \sim 97^\circ$	$36^\circ \sim 73^\circ$	$21^\circ \sim 85^\circ$	$12^\circ \sim 93^\circ$
Para HallywayView	Sin soporte	$37^\circ \sim 70^\circ$	$33^\circ \sim 73^\circ$	$17^\circ \sim 88^\circ$	$12^\circ \sim 92^\circ$	$45^\circ \sim 62^\circ$	$38^\circ \sim 74^\circ$	$21^\circ \sim 85^\circ$

- ! ■ Un bloqueo parcial de la vista en la esquina del monitor puede ocurrir como resultado de una instalación más allá del rango de ángulos permitido.

## CONEXIÓN CON OTROS DISPOSITIVOS

### Placa de la interfaz de cableado de la cámara

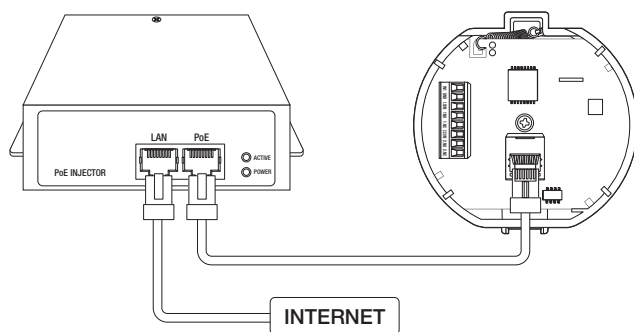
Para el cableado de la cámara, consulte la imagen que se incluye a continuación.



- ! ■ Cuando la salida de alarma está conectada como Abierta Normal:
- la entrada del sensor opera cuando está corto para tipo del punto de contacto, o en un nivel "BAJO" para el tipo activo.
  - La capacidad máxima del terminal de salida de la alarma es de 30 V CC/2 A, 125 V CA/0,5 A y 250 V CA/0,25 A.
  - Alí conectar los cables de entrada y salida, asegúrese de conectar un cable a cada terminal.
  - Para conectar productos por encima de la capacidad de la cámara, utilice un dispositivo de relé adicional.
  - La conexión incorrecta de GND con el puerto NC/NO y el puerto COM puede provocar fuego o dañar el producto.

## Alimentación y conexión en red

Conecte el dispositivo PoE con el terminal PoE de la cámara.



! ■ Por favor utilice un adaptador compatible apropiado para la fuente de alimentación del dispositivo.

## Características del cable de red

Elemento	Contenido	Observaciones
Conector	RJ45 (10/100/1000BASE-T)	
Ethernet	10/100/1000BASE-T	Para operar con 1000BASE-T, se debe utilizar un cable de UTP-6 o superior para el concentrador Giga.
Cable	UTP de categoría 6	
Distancia máx.	100M	Resistencia de CC $\leq 0,125 \Omega / m$
Soporte HPoE	HPoE	

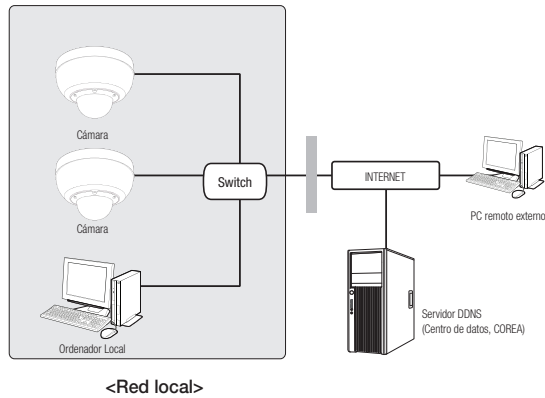
# conexión y configuración de la red

Puede fijar la configuración de red de acuerdo con sus configuraciones de red.

## CONECTAR LA CÁMARA DIRECTAMENTE A LA RED DE ÁREA LOCAL

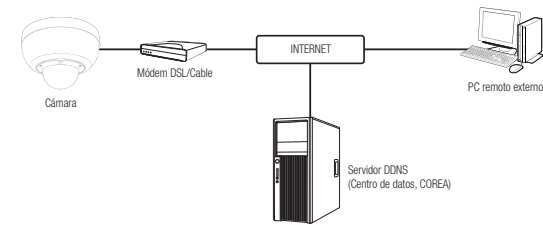
### Conectar con la cámara desde un ordenador local en la LAN

1. Abrir un navegador de Internet en su ordenador local.
2. Introduzca la dirección IP de la cámara en la barra de direcciones del navegador.



- Un ordenador remoto con una Internet externa fuera de la red LAN podría no poder conectarse a la cámara instalada en la intranet, en caso de que el reenvío de puertos no esté correctamente configurado o se haya instalado un cortafuegos. En este caso, para solucionar el problema, póngase en contacto con su administrador de red.
- En el programa de instalación de IP, puede utilizar la contraseña inicial, "4321" para configurar la dirección IP, máscara de subred, puerta de enlace, puerto HTTP, puerto VNP, tipo de IP. Después de cambiar la interfaz de red, para mayor seguridad, acceda al visor web y cambie la contraseña.
- Como valor predeterminado de fábrica, la dirección IP se asignará automáticamente desde el servidor DHCP. Si no hay ningún servidor DHCP disponible, la dirección IP se definirá en 192.168.1.100. Para cambiar la dirección IP, utilice Instalador IP. Para obtener más detalles sobre el uso de Instalador IP, consulte "Configuración de IP estática". (página 21)

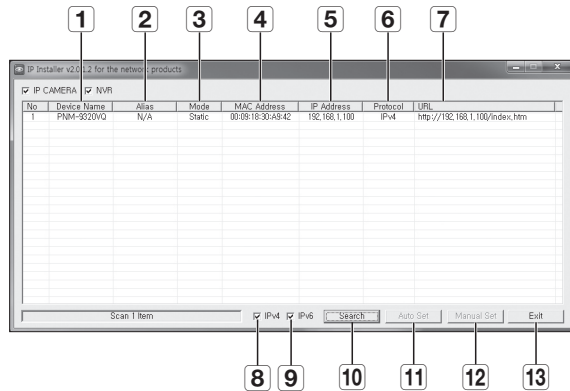
## CONEXIÓN DIRECTA DE LA CÁMARA A UN MÓDEM DSL/CABLE BASADO EN DHCP



1. Conectar el PC del usuario directamente a la cámara de red.
2. Ejecute IP Installer y cambie la dirección IP de la cámara de forma que pueda utilizar el navegador Web de su escritorio para conectar a Internet.
3. Utilice el navegador de Internet para conectar a Web Viewer.
4. Vaya a la página [Config].
5. Vaya a [Red] – [DDNS] y configure los ajustes de DDNS.
6. Vaya a [Basic] – [IP & Puerto] y establezca el tipo de IP para [DHCP].
7. Conecte la cámara, retirada del PC, directamente en el módem.
8. Reinicie la cámara.

- Para obtener información sobre cómo configurar el DDNS, consulte la ayuda en línea de Web Viewer.
- Para obtener información sobre cómo configurar el formato de IP, consulte la ayuda en línea de Web Viewer.

## BOTONES UTILIZADOS EN IP INSTALLER



Elemento	Descripción
<b>1</b> Device Name	Nombre de modelo de la cámara conectada. Haga clic en la columna para clasificar la lista por nombre de modelo. No obstante, la búsqueda se detendrá si hace clic durante la búsqueda.
<b>2</b> Alias	Esta función no está actualmente implantada.
<b>3</b> Mode	Muestra <Static> o <Dynamic> para el estado de conexión de red.
<b>4</b> MAC(Ethernet) Address	Dirección Ethernet de la cámara conectada. Haga clic en la columna para ordenar la lista por dirección Ethernet. No obstante, la búsqueda se detendrá si hace clic durante la búsqueda.
<b>5</b> IP Address	Dirección IP. Haga clic en la columna para ordenar la lista por dirección IP. No obstante, la búsqueda se detendrá si hace clic durante la búsqueda.
<b>6</b> Protocol	Ajuste de red de la cámara. El ajuste predeterminado de fábrica es "IPv4". Las cámaras con el ajuste IPv6 mostrarán "IPv6".
<b>7</b> URL	La dirección URL de DDNS que permite acceder desde Internet externa. No obstante, se sustituirá por la <IP Address> de la cámara si ha fallado el registro de DDNS.
<b>8</b> IPv4	Rastrea las cámaras que tengan el ajuste IPv4.

Elemento	Descripción
<b>9</b> IPv6	Rastrea las cámaras que tengan el ajuste IPv6. Se activa únicamente en un entorno compatible con IPv6.
<b>10</b> Search	Rastrea las cámaras que estén actualmente conectadas a la red. No obstante, este botón aparecerá atenuado si no se marca ni IPv4 ni IPv6.
<b>11</b> Auto Set	IP Installer configura automáticamente los ajustes de red.
<b>12</b> Manual Set	Debe configurar manualmente los ajustes de red.
<b>13</b> Exit	Sale del programa IP Installer.



- Para IP installer, utilice sólo la versión que se facilita en el CD de instalación o utilice la última versión si está disponible. Puede descargar la versión más reciente desde el sitio Web de Hanwha Techwin.
- Si el sistema operativo compatible es Windows 8.1, se recomienda que utilice el Administrador de dispositivos de Wisenet en lugar de IP Wisenet.  
El programa Wisenet Device Manager se puede descargar visitando el sitio web de Hanwha Techwin (<http://www.hanwha-security.com>) en el menú <Guía técnica> - <Herramienta en línea>.

## CONFIGURACIÓN DE IP ESTÁTICA

### Configuración de red manual

Ejecute <IP Installer\_v2.XX.exe> para ver la lista de búsqueda de cámaras.  
En el arranque inicial, tanto [Auto Set] como [Manual Set] aparecerán atenuados.

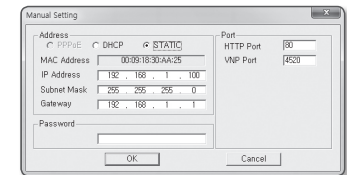
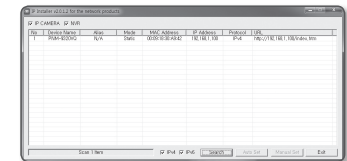


- En las cámaras encontradas con el ajuste IPv6, estos botones aparecerán atenuados ya que las cámaras no admiten esta función.

- Seleccione una cámara en la lista de búsqueda.  
Compruebe la dirección MAC de la cámara en la etiqueta de la cámara.  
Se activarán los botones [Auto Set] y [Manual Set].
- Haga clic en [Manual Set].  
Aparece el diálogo Manual Setting.  
<IP Address>, <Subnet Mask>, <Gateway>, <HTTP Port> y <VNP Port> de la cámara aparecen en los valores previamente configurados.
- En el panel <Address>, facilite la información necesaria.
  - MAC (Ethernet) Address : La dirección MAC impresa en la etiqueta de la cámara aparece automáticamente y no requiere ningún ajuste del usuario.



- Los respectivos parámetros IP sólo se pueden establecer cuando el DHCP no está seleccionado.



## Si no se utiliza un Enrutador de banda ancha

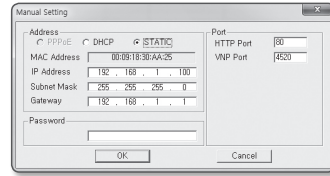
Para el ajuste de <IP Address>, <Subnet Mask> y <Gateway>, póngase en contacto con el administrador de red.

### 4. En el panel <Port>, facilite la información necesaria.

- HTTP Port : se utiliza para acceder a la cámara utilizando el explorador de Internet, por defecto en 80.
- VNP Port : se utiliza para controlar la transferencia de señales de vídeo, por defecto en 4520.

### 5. Introduzca la contraseña.

Introduzca la contraseña de la cuenta "admin", utilizada para acceder a la cámara.



- A efectos de seguridad, se recomienda utilizar una combinación de números, letras del alfabeto en mayúsculas y minúsculas, y caracteres especiales para su contraseña.
- Para obtener información sobre cómo cambiar la contraseña, consulte la ayuda en línea de Web Viewer.

### 6. Haga clic en [OK].

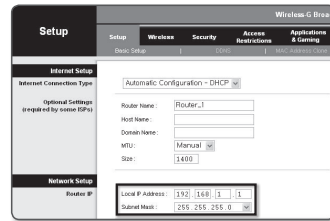
La configuración manual de la red queda completada.

## Si se utiliza un Enrutador de banda ancha

- IP Address : introduzca una dirección que se encuentre en el rango de IP facilitado por el enrutador de banda ancha. ej.) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254
- Subnet Mask : La <Subnet Mask> del enrutador de banda ancha será la <Subnet Mask> de la cámara.
- Gateway : La <Local IP Address> del enrutador de banda ancha será la <Gateway> de la cámara.

- Es posible que los ajustes difieran dependiendo del modelo de enrutador de banda ancha conectado. Para obtener información adicional, consulte el manual de usuario del enrutador aplicable.

- Para obtener información adicional sobre el reenvío de puertos del enrutador de banda ancha, consulte "Configuración de Reenvío del Rango de Puertos (Asignación de Puertos)". (Página 23)



## Si el Enrutador de banda ancha tiene más de una cámara conectada

Configure los ajustes relacionados con IP y los ajustes relacionados con Port de forma distinta entre sí. ej.)

Categoría	Cámara 1	Cámara 2	
Ajustes relacionados con IP	IP Address	192.168.1.100	192.168.1.101
	Subnet Mask	255.255.255.0	255.255.255.0
	Gateway	192.168.1.1	192.168.1.1
Ajustes relacionados con el puerto	HTTP Port	8080	8081
	VNP Port	4520	4521

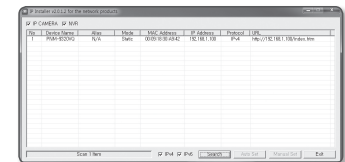
- Si <HTTP Port> se define con un valor distinto a 80, debe facilitar el número de <Port> en la barra de direcciones del explorador de Internet antes de poder acceder a la cámara. ej.) http://Dirección IP : HTTP Port  
http://192.168.1.100:8080

## Configuración automática de red

Ejecute <IP Installer\_v2.XX.exe> para ver la lista de búsqueda de cámaras. En el arranque inicial, tanto [Auto Set] como [Manual Set] aparecerán atenuados.

- En las cámaras encontradas con el ajuste IPv6, estos botones aparecerán atenuados ya que las cámaras no admiten esta función.

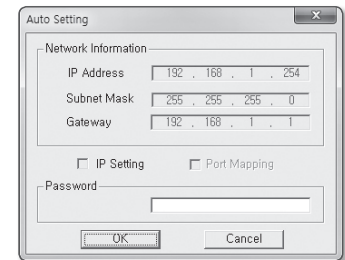
1. Seleccione una cámara en la lista de búsqueda. Compruebe la dirección MAC de la cámara en la etiqueta de la cámara. Se activarán los botones [Auto Set] y [Manual Set].
2. Haga clic en [Auto Set]. Aparece el diálogo Auto Setting. Se definirán automáticamente <IP Address>, <Subnet Mask> y <Gateway>.
3. Introduzca la contraseña. Introduzca la contraseña de la cuenta "admin", utilizada para acceder a la cámara.



- A efectos de seguridad, se recomienda utilizar una combinación de números, letras del alfabeto en mayúsculas y minúsculas, y caracteres especiales para su contraseña.
- Para obtener información sobre cómo cambiar la contraseña, consulte la ayuda en línea de Web Viewer.

### 4. Haga clic en [OK].

La configuración automática de la red queda completada.



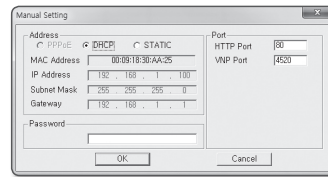
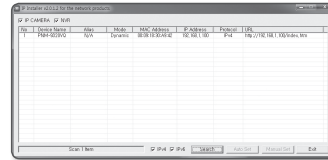
## CONFIGURACIÓN DE IP DINÁMICA

### Configuración del entorno de IP dinámica

- Ejemplo de entorno de IP dinámica
  - Si a un enrutador de banda ancha, con cámaras conectadas, se le asigna una dirección IP mediante el servidor DHCP
  - Si se conecta la cámara directamente al módem utilizando los protocolos DHCP
  - Si las IP se asignan mediante el servidor DHCP interno a través de la LAN

### Comprobación de la IP dinámica

- Ejecute IP Installer en el ordenador local del usuario. Las cámaras que tienen asignadas una dirección <Dynamic IP> aparecen en la lista.
- Seleccione una cámara en los resultados de la búsqueda.
- Haga clic en el botón de **[Manual Set]** y compruebe la dirección <Dynamic IP> de la cámara. Si quita la marca de selección de <DHCP>, puede cambiar la IP a <Static>.

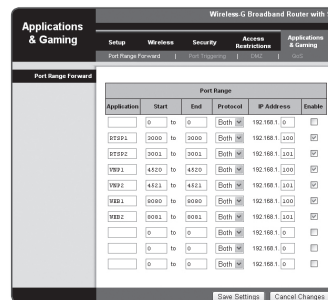


## CONFIGURACIÓN DE REENVÍO DEL RANGO DE PUERTOS (ASIGNACIÓN DE PUERTOS)

Si ha instalado un enrutador de banda ancha con una cámara conectada, debe definir el reenvío del rango de puertos en el enrutador de banda ancha de forma que un PC remoto pueda acceder a la cámara en él.

### Reenvío manual del rango de puertos

- En el menú de configuración del enrutador de banda ancha, seleccione <Applications & Gaming> - <Port Range Forward>. Para definir el reenvío del rango de puertos para un enrutador de banda ancha de terceros, consulte el manual del usuario de dicho enrutador de banda ancha.
- Seleccione <TCP> y <UDP Port> por cada cámara conectada al enrutador de banda ancha. El número de cada puerto que se configura para el router IP debe establecerse de acuerdo con el número de puerto designado en <Config.> - <Basic> - <IP & Puerto> en el visor web de la cámara.viewer.



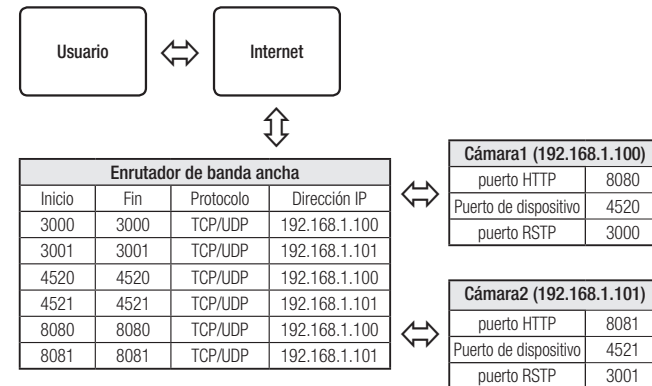
- Una vez hecho, haga clic en **[Save Settings]**. Se guardarán los ajustes.

- El ejemplo de instrucciones anteriores se basan en el enrutador de banda ancha de CISCO.
- Es posible que los ajustes difieran dependiendo del modelo de enrutador de banda ancha conectado. Para obtener información adicional, consulte el manual de usuario del enrutador aplicable.

### Configuración del reenvío del rango de puertos de varias cámaras de red

- Puede definir una regla de reenvío de puertos en el dispositivo enrutador de banda ancha a través de su página Web de configuración.
- Un usuario puede cambiar los puertos usando la pantalla de configuración de la cámara.


Cuando la Cámara 1 y la Cámara 2 estén conectadas a un enrutador :

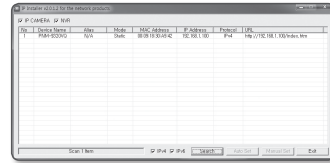


- El enrutamiento de puerto se puede hacer sin una configuración adicional del router si este está adaptado para la función UPnP (Universal Plug and Play). Después de conectar la cámara de red, seleccione la casilla de verificación del menú <Conexión rápida> en <Wisenet DDNS> en "Configuración -> Red -> DDNS".

## CONEXIÓN A LA CÁMARA DESDE UN PC LOCAL COMPARTIDO

1. Ejecute Instalador IP.  
Rastrear las cámaras conectadas y mostrará una lista de ellas.
2. Haga doble clic en una cámara para acceder a ella.  
Se inicia el explorador de Internet y se conecta a la cámara.

-  ■ También puede acceder a la cámara introduciendo la dirección IP de la cámara encontrada en la barra de direcciones del explorador de Internet.



## CONEXIÓN A LA CÁMARA DESDE UN PC REMOTO A TRAVÉS DE INTERNET

Debido a que no se permite utilizar Instalador IP en un ordenador remoto que no se encuentre en un grupo de red del enrutador de banda ancha, los usuarios pueden acceder a las cámaras dentro de una red del enrutador de banda ancha utilizando el URL de DDNS de la cámara.

1. Antes de poder acceder a una cámara de una red de enrutador de banda ancha, debe haber definido el reenvío del rango de puertos para el enrutador de banda ancha.
2. Desde el PC remoto, inicie el explorador de Internet e introduzca la dirección URL de DDNS de la cámara, o la dirección IP del enrutador de banda ancha en la barra de direcciones.  
ej.) <http://ddns.hanwha-security.com/ID>

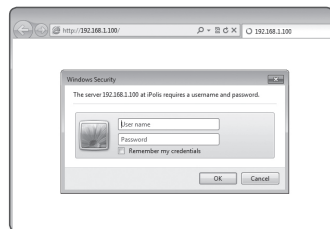
-  ■ Para obtener información sobre cómo registrar DDNS, consulte la guía de configuración de red.



## CONEXIÓN A LA CÁMARA

### Procedimiento normal

1. Inicie el explorador de Internet.
2. Introduzca la dirección IP de la cámara en la barra de direcciones.
  - ej.) • Dirección IP (IPv4) : 192.168.1.100 → http://192.168.1.100
  - Debe aparecer el diálogo de inicio de sesión.
  - Dirección IP (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111 → http://[2001:230:abcd:ffff:0000:0000:ffff:1111] - Debe aparecer el diálogo de inicio de sesión.



### Si el número de puerto HTTP no es 80

1. Inicie el explorador de Internet.
2. Introduzca la dirección IP y el número de puerto HTTP de la cámara en la barra de direcciones.
  - ej.) Dirección IP : 192.168.1.100:HTTP Port number(8080)
  - http://192.168.1.100:8080 - Debe aparecer el diálogo de inicio de sesión.

### Utilización del URL

1. Inicie el explorador de Internet.
2. Introduzca el URL de DDNS de la cámara en la barra de direcciones.
  - ej.) Dirección URL : http://ddns.hanwha-security.com/ID
  - Debe aparecer el diálogo de inicio de sesión.

 La conexión de red está desactivada en el entorno LAN.

### Conexión a través de UPnP

1. Ejecute el sistema cliente o sistema operativo para el protocolo UPnP.
2. Haga clic en el nombre de la cámara para realizar la búsqueda.
  - En el sistema operativo Windows, haga clic en el nombre de la cámara de búsqueda en el menú de red.
  - Aparece la ventana de inicio de sesión.

### Conexión a través de Bonjour

1. Ejecute el sistema cliente o el sistema operativo para el protocolo Bonjour.
2. Haga clic en el nombre de la cámara para realizar la búsqueda.
  - En el sistema operativo Mac, haga clic en el nombre de la cámara buscada desde la pestaña Bonjour de Safari.
  - Aparece la ventana de inicio de sesión.

### Para comprobar la dirección de DDNS

Si la cámara está conectada directamente a un módem de cable basado en DHCP o a un módem DSL, la dirección IP cambiará cada vez que intente conectarse al ISP (la compañía a la que se suscribió). Si este es el caso, no se le informará de la dirección IP modificada por el DDNS.

Una vez que registre el dispositivo con IP dinámica en el servidor DDNS, puede fácilmente cambiar la IP modificada cuando intente acceder al dispositivo.

Para registrar el dispositivo en el servidor de <DDNS>, entre en <http://ddns.hanwha-security.com> y registre primero el dispositivo y, a continuación, establezca <Red> - <DDNS> de Web Viewer en <Wisenet DDNS>, y facilite el <ID de producto> utilizado durante el registro de DDNS.

## CONFIGURACIÓN DE CONTRASEÑA

Al acceder al producto por primera vez, debe registrar la contraseña de inicio de sesión.

Cuando aparezca la ventana “Cambiar contraseña”, introduzca la contraseña nueva.

- Para una nueva contraseña que tenga entre 8 y 9 dígitos, debe utilizar por lo menos 3 mayúsculas/ minúsculas, 3 números y 3 caracteres especiales. Para una contraseña que tenga entre 10 y 15 dígitos, debe utilizar por lo menos 2 de los tipos mencionados.
  - Caracteres especiales que se permiten: ~!@#%&^\*()\_+={}|[]?/
- Para mayor seguridad, no se recomienda repetir los mismos caracteres ni entradas consecutivas de teclado en las contraseñas.
- Si ha perdido su contraseña, puede pulsar el botón [RESET] para iniciar el producto. Así pues, no pierda la contraseña utilizando un bloc de notas o memoricela.

## INICIO DE SESIÓN

Siempre que acceda a la cámara, aparecerá la ventana de inicio de sesión.

Introduzca el ID de usuario y la contraseña para acceder a la cámara.

1. Introduzca “admin” en el cuadro de entrada <User name>. La ID del administrador, “admin”, es fija y no es posible cambiarla.
2. Introduzca la contraseña en el campo de entrada <Password>.
3. Haga clic en [OK].  
Si ha iniciado sesión correctamente, verá la pantalla de Live Viewer.

- Al acceder al visor de la cámara web, preste especial atención a la seguridad comprobando que los datos de imagen estén encriptados.
- Si marca la opción “Remember my credentials” una vez realizada la entrada, la próxima vez se iniciará sesión automáticamente sin que se le pida introducir la información de inicio de sesión.
- Podrá disfrutar de la mejor calidad de vídeo si el tamaño de pantalla es del 100%. Si se reduce la relación existe el riesgo de cortar la imagen en los bordes.

## CONFIGURACIÓN DEL VISOR WEB DE LA CÁMARA

1. Haga clic en el icono [Configurar (⚙)].
2. Aparece la ventana de Ajustes.
3. Puede configurar a través de la red los ajustes de información básica de la cámara, vídeo, audio, red, evento, análisis y sistema.
4. Haga clic en <Ayuda (🔗)> para ver descripciones detalladas de cada función.

**ESPECIFICACIONES (PNM-9320VQP)**

Opciones		Descripción	
		Multi-direccional (CH 1 ~ 4)	PTZ (CH 5)
Video	Dispositivo de imágenes	(Vea los lentes opcionales)	1/2.8" 2.4M CMOS
	Píxeles totales/efectivos	(Vea los lentes opcionales)	1.981 (H) x 1.288 (V), 2,55 M/ 1.944 (H) x 1.212 (V), 2,35 M
	Sistema de barrido	(Vea los lentes opcionales)	Exploración progresiva
	Iluminación mín.	(Vea los lentes opcionales)	Color: 0,05 Lux (1/30 seg, F1,6, 30 IRE), Blanco y negro: 0,005 Lux (1/30 seg, F1,6, 30 IRE)
	Índice S/N	(Vea los lentes opcionales)	50dB
	Salida de vídeo	CVBS : 1.0 Vp-p / 75Ω compuesto, 720x480(N), 720x576(P) Para instalación	-
	Objetivo	Longitud focal (índice de zoom)	(Vea los lentes opcionales)
Coefficiente de apertura máx.		(Vea los lentes opcionales)	F1,6 (Angular) ~ F4,4 (Telescópico)
Campo de visión angular		(Vea los lentes opcionales)	H : 61,8°(Angular) ~ 2,19°(Telescópico) / V : 36,2°(Angular) ~ 1,24°(Telescópico)
Distancia mín. del objeto		(Vea los lentes opcionales)	Ancho: 1,5 m, Tele: 2 m
Control de enfoque		(Vea los lentes opcionales)	Auto/Manual/Una foto AF
Tipo lentes/montaje		(Vea los lentes opcionales)	Tipo DC auto diafr/tablero incorporado
Panorámica / Inclinación / Giro	Rango de Panorámica/ Inclinación/Rotación	(Vea los lentes opcionales)	360° sin final / 190°(-5°~185°)
	Velocidad de panorámica/ inclinación	-	Preaj. : 700°/seg., Manual : 0,024°/seg ~ 200°/seg
	Secuencia	-	Preajuste (300ea), Oscilación, Grupo (128ea), Rastreo (4ea), Tour, Ejecución automática, Horario
	Precisión de pos. predet.	-	±0.2°
	Seguimiento automático	-	No / Sí
Funcionamiento	Título de cámara	Apagado/Encendido (Se muestran 85 caracteres) - W/W : Inglés/Numérico/Caracteres especiales - Común: Multilínea (Máx 5), color (gris / verde / rojo / azul / negro / blanco), transparencia, escala automática por resolución	
	Día y noche	Eléctrico	Auto (ICR)/Color/N/B/Programación

Opciones	Descripción	
	Multi-direccional (CH 1 ~ 4)	PTZ (CH 5)
Compensación de luz de fondo	No / BLC / HLC (enmascaramiento/atenuación) / WDR	
WDR	150dB (SLA-2M), 120dB (SLA-5M)	150dB
Mejora de contraste	SSDR (Apagado/Encendido)	
Reducción de ruido digital	SSNR5 (Filtro de ruido 2D+3D) (Apagado/Encendido)	
Estabilizador digital de imágenes	Apagado/Encendido	Apagado/Encendido (sensor Gyro incorporado)
Desempeñado	Auto/Manual/Apagado	
Detección de movimiento	Apagado/Encendido (zonas poligonales 8ea, 8 puntos), Transferir	
Máscara de privacidad	Apagado/Encendido (zonas poligonales 32ea) - Color: gris, verde, rojo, azul, negro, blanco - Mosaico	
Control de ganancia	No / Bajo / Mediana / Alto	
Balance de blanco	ATW / AWC / Manual / Interior / Exterior (Mercurio y sodio incluidos)	
Contraste	Ajuste de nivel	
LDC	Sí / No (5 niveles con mín./máx.)	-
Velocidad de obturador electrónico	Mínima / Máxima / Anti parpadeo (2 ~ 1/12,000 seg)	
Zoom	-	32X (Optical)
Volteo / Espejo	Encendido/apagado, Pasillo: 90° /270°	Encendido/apagado
Análisis de vídeo	Manipulación, Merodeo, Detección direccional, Detección de niebla, Línea virtual, Entrar/Salir, Aparecer/Desaparecer, Detección de rostro, Detección de movimiento, Detección de desenfoque	Manipulación, Merodeo, Detección direccional, Detección de niebla, Línea virtual, Entrar/Salir, Aparecer/Desaparecer, Detección de rostro, Detección de movimiento
Alarma I/O	Entrada x1/Salida x2 (tipo de relé)	
Se activa la alarma	detección de movimiento, Análisis de vídeo, desconexión de red	
Evento de alarma	<ul style="list-style-type: none"> <li>Subida de archivo a través de FTP, E-Mail</li> <li>Notificación a través de e-mail</li> <li>Almacenamiento local (SD / SDHC / SDXC) grabación en red desconectada y eventos (activación de alarmas)</li> <li>Salida externa</li> </ul>	
Contador de píxeles	Soporte	

Opciones	Descripción	
	Multi-direccional (CH 1 ~ 4)	PTZ (CH 5)
Ethernet	RJ-45 (10/100/1000BASE-T)	
SFP	Pendiente SFP (100/1.000 Mbps)	
Formato de compresión de vídeo	H.265 / H.264 (MPEG-4 Parte 10 / AVC): Principal/Línea base/Alto Motion JPEG	
Resolución	[5MP] 2560x1920, 2560x1440, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 320x240 [2MP] 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	
Veloc. máx. de fotogramas	H.265/H.264 : 2 M máx. 60 fps, 5 M 30 fps en todas las resoluciones Motion JPEG : Máx 30fps	
Códec inteligente	Modo manual (basado en zona : 5ea)	
WiseStream II	Soporte	
Ajuste de calidad de vídeo	H.264 /H.265 / MJPEG : Control de nivel de vel. de bits de destino	
Método de control de vel. de bits	H.264/H.265 : CBR o VBR MJPEG : VBR	
Capacidad de flujo de datos	Flujo de datos múltiple (hasta 10 perfiles)	
IP	IPv4, IPv6	
Protocolo	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour	
Seguridad	Autenticación de inicio de sesión HTTPS(SSL) Autenticación de inicio de sesión Digest Filtro de dirección IP Registro de acceso de usuarios Método de autenticación 802.1X (EAP-TLS, EAP-LEAP)	

Red

Opciones	Descripción	
	Multi-direccional (CH 1 ~ 4)	PTZ (CH 5)
Red	Método de flujo de datos	Unicast / Multicast
	Acceso máx. de usuarios	20 usuarios en modo Unicast
	Almacenamiento Edge	5 Ranuras SD/SDHC/SDXC (cada CH) - Las imágenes de movimiento grabadas en la tarjeta de memoria SD/SDHC/SDXC se pueden descargar. PC local para la grabación instantánea
	Interfaz de programación de aplicaciones	ONVIF Profile S SUNAPI(HTTP API)
	Idioma de página web	Inglés, Coreano, Francés, Alemán, Español, Italiano, Chino, Ruso, Japonés, Sueco, Portugués, Checo, Polaco, Turco, Holandés, Húngaro, Griego
	Visor Web	SO admitido : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Navegadores web compatibles: Google Chrome 67, MS Edge 41, Mozilla Firefox 61 (sólo compatible con Window 64bit) , Apple Safari 11 (sólo compatible con Mac OS X) MS Explorer 11
	Software de gestión central	SSM
	Ambiental	Temperatura / Humedad de funcionamiento
Temperatura / Humedad deprzechowywania		-50°C ~ +60°C (-58°F ~ +140°F) / Menos del 90% RH
Protección de ingreso		IP66
Antivandálico		IK10
Eléctrico	Tensión/corriente de entrada	HPoE
	Consumo de energía	Máx 65W
Mecánico	Objetivo opcional	SLA-2M2400P / SLA-2M2800P / SLA-2M3600P / SLA-2M6000P / SLA-2M1200P SLA-5M3700P / 5M4600P / 5M7000P
	Color / Material	Marfil/metal
	Dimensiones (ØxH)	Ø367.8 x H381.5mm (Ø144.49" x H150.20")
	Peso	7.75 kg

## ESPECIFICACIONES (MÓDULO DE LENTE)

Opciones	Descripción					
	SLA-2M2400P	SLA-2M2800P	SLA-2M3600P	SLA-2M6000P	SLA-2M1200P	
Video	Dispositivo de imágenes	1/2.8" 2M CMOS				
	Píxeles totales	1945(H) x 1109(V) 2.16M				
	Píxeles efectivos	1945(H) x 1097(V) 2.13M				
	Sistema de barrido	Escaneo progresivo				
	Iluminación mín.	Color : 0,055Lux(F2.0, 1/30seg, 30IRE) N/B : 0,055Lux(F2.0, 1/30seg, 30IRE)				
	Índice S/N	50dB				
	Rango dinámico amplio	150dB				
	Día y noche	Eléctrico				
	Objetivo	Longitud focal (índice de zoom)	2.4mm	2.8mm	3.6mm	6mm
Coefficiente de apertura máx.		F2.0				
Campo de visión angular		H:135.4°, V:71.2°, D:161.6°	H:107.4°, V:62.2°, D:122.0°	H:94.8°, V:49.3°, D:114.3°	H:50.4°, V:28.8°, D:58.1°	H:26.3°, V:14.9°, D:30.0°
Tipo de objetivo		Punto focal fijo				
Tipo montaje		Módulo de lente M12 con unidad principal				
Panorámica/ Inclinación/ Rotación		-90°~+90° / +52°~+56° / -180°~+180°	-90°~+90° / +26°~+80° / -180°~+180°	-90°~+90° / +22°~+84° / -180°~+180°	-90°~+90° / +10°~+95° / -180°~+180°	-90°~+90° / +10°~+97° / -180°~+180°
Mecánico	Color / Material	Negro/plástico				
	Dimensiones	Ø35.5 x H35.9mm				
	Peso	30g				

Opciones	Descripción			
	SLA-5M3700P	SLA-5M4600P	SLA-5M7000P	
Video	Dispositivo de imágenes	1/1.8" 5M CMOS		
	Píxeles totales	3096(H) x 2094(V)		
	Píxeles efectivos	2616(H) x 1976(V)		
	Sistema de barrido	Escaneo progresivo		
	Iluminación mín.	Color : 0,16Lux(F1.6, 1/30seg, 30IRE) N/B : 0,16Lux(F1.6, 1/30seg, 30IRE)		
	Índice S/N	50dB		
	Rango dinámico amplio	120dB		
	Día y noche	Eléctrico		
	Objetivo	Longitud focal (índice de zoom)	3.7mm	4.6mm
Coefficiente de apertura máx.		F1.6		
Campo de visión angular		H:97.5°, V:71.9°, D:126.2°	H:77.9°, V:57.9°, D:98.7°	H:50.7°, V:37.8°, D:63.8°
Tipo de objetivo		Punto focal fijo		
Tipo montaje		Módulo de lente M12 con unidad principal		
Panorámica/ Inclinación/ Rotación	-90°~+90° / +36°~+73° / -180°~+180°	-90°~+90° / +21°~+85° / -180°~+180°	-90°~+90° / +12°~+93° / -180°~+180°	
Mecánico	Color / Material	Negro/plástico		
	Dimensiones	Ø35.5 x H35.9mm		
	Peso	35g		

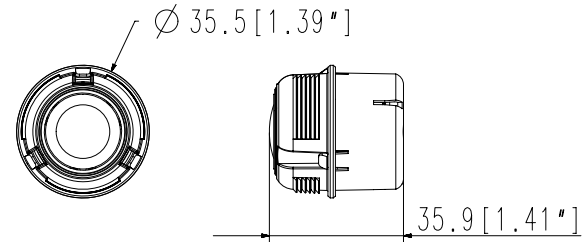
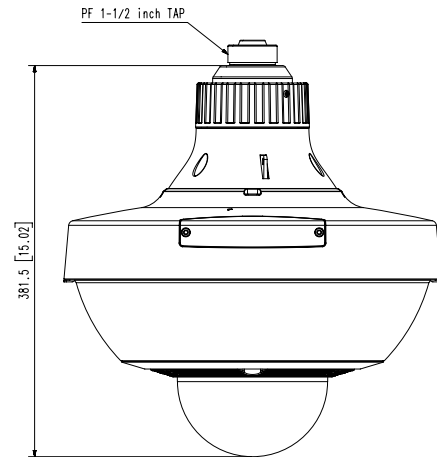
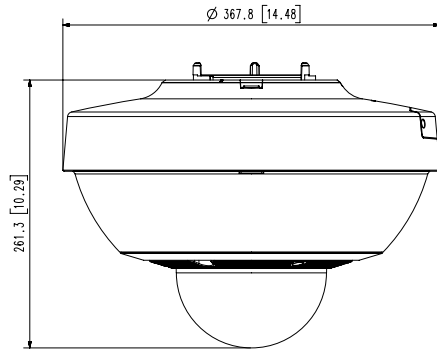
VISTA DEL PRODUCTO

SLA-2M SERIES

Unidad : mm (pulg.)

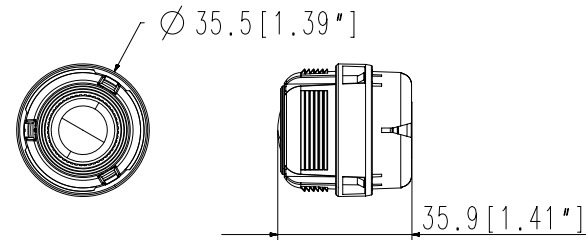
PNM-9320VQP

Unidad : mm (pulg.)



SLA-5M SERIES

Unidad : mm (pulg.)



## SOLUCIÓN DE PROBLEMAS

PROBLEMA	SOLUCIÓN
No se visualiza ningún vídeo al acceder al visor web sin plug-in en Safari a través de HTTPS.	<ul style="list-style-type: none"> <li>En la ventana emergente de autenticación que aparece cuando se accede inicialmente a https, haga clic en "Ver certificado de autenticación" y seleccione la casilla "Confiar siempre al conectar con la IP del visor web designado".</li> <li>Si el visor web continúa sin mostrar un vídeo después de seleccionar "Siguiente" en la ventana de mensaje siguiente, pulse la tecla de Comando + Q para salir del navegador Safari, obtenga acceso de nuevo y siga los procedimientos indicados anteriormente.</li> </ul>
No se puede acceder a la cámara desde un navegador web.	<ul style="list-style-type: none"> <li>Compruebe para asegurarse de que las configuraciones de Red de la cámara son las apropiadas.</li> <li>Compruebe para asegurarse de que todos los cables de red se han conectado bien.</li> <li>Si está conectado mediante DHCP, compruebe que la cámara puede admitir direcciones IP dinámicas sin problemas.</li> <li>Si la cámara está conectada al Enrutador de banda ancha, compruebe que el reenvío de puertos está configurado adecuadamente.</li> </ul>
El Visualizador se desconecta durante el control.	<ul style="list-style-type: none"> <li>Los Visualizadores conectados se desconectan debido a cualquier cambio en las configuraciones de cámara o de red.</li> <li>Compruebe todas las conexiones de red.</li> </ul>
La cámara conectada a la red no se detecta en el programa instalador IP.	<ul style="list-style-type: none"> <li>Apague las configuraciones de cortafuegos en su ordenador, y luego vuelva a buscar la cámara.</li> </ul>
Se superponen imágenes.	<ul style="list-style-type: none"> <li>Compruebe si dos o más cámaras están configuradas en una única dirección multicast en lugar de diferentes direcciones. Si se utiliza una única dirección para varias cámaras, las imágenes se pueden superponer.</li> </ul>
No aparece imagen.	<ul style="list-style-type: none"> <li>Si el método de transmisión está configurado como multicast, compruebe si hay un router que admita multicast en el LAN al que esté conectado la cámara.</li> <li>Verifique si el módulo de la lente funciona normalmente.</li> </ul>

PROBLEMA	SOLUCIÓN
<Detección de movimiento> de <Analítica> está ajustado en <Activar>, pero no me llega una notificación por correo electrónico, ni siquiera cuando se ha producido un evento de análisis.	<ul style="list-style-type: none"> <li>Verifique los ajustes en la secuencia siguiente:               <ol style="list-style-type: none"> <li>Compruebe los ajustes de &lt;Fecha y hora&gt;.</li> <li>&lt;Detección de movimiento&gt; debe definirse en &lt;Activar&gt;.</li> <li>Compruebe si la opción &lt;E-mail&gt; del menú &lt;Config. de evento&gt; está marcada para ser utilizada.</li> </ol> </li> </ul>
No se encuentra ninguna señal en el puerto de salida de alarma cuando se genera un evento de análisis de vídeo inteligente.	<ul style="list-style-type: none"> <li>Compruebe los ajustes del puerto de salida de alarma.</li> </ul>
No se puede grabar en la tarjeta de memoria Micro SD.	<ul style="list-style-type: none"> <li>Compruebe si la tarjeta de memoria está defectuosa.</li> </ul>
La tarjeta de memoria Micro SD está insertada pero no funciona correctamente.	<ul style="list-style-type: none"> <li>Compruebe si la tarjeta de memoria se ha insertado en la dirección correcta. En esta cámara, no se garantiza el funcionamiento de una tarjeta de memoria formateada con otros dispositivos</li> <li>Formatee de nuevo la tarjeta de memoria en el menú &lt;Config.&gt; → &lt;Evento&gt; → &lt;Almacenamiento&gt;.</li> </ul>

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## GPL SW

Component Name	License	URL
Base Kernel	GPL 2.0	
Busybox	GPL 2.0	<a href="http://www.busybox.net/downloads/snapshots">http://www.busybox.net/downloads/snapshots</a>
iproute2-4.3.0	GPL 2.0	
iptables-1.4.21	GPL 2.0	<a href="http://ftp.netfilter.org/pub/iptables">http://ftp.netfilter.org/pub/iptables</a>
ethtool-4.2	GPL 2.0	
mtid-1.5.2	GPL 2.0	<a href="ftp://ftp.infradead.org/pub/mtid-utils">ftp://ftp.infradead.org/pub/mtid-utils</a>
mi-diag-2.11	GPL 2.0	
rp-pppoe-3.11	GPL 2.0	<a href="http://www.roaringpenguin.com/pppoe/">http://www.roaringpenguin.com/pppoe/</a>
wpa_supplicant-2.5	GPL 2.0	
bash-4.3.30	GPL 3.0	
zeroconf	GPL 2.0	

## LGPL SW

Component Name	License	URL
glibc	LGPL 2.0	
inetutils	LGPL 3.0	
neon-0.29.6	LGPL 2.0	<a href="http://www.webdav.org/neon/">http://www.webdav.org/neon/</a>

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lighttpd is a secure, fast, compliant, and very flexible webserver that has been optimized for high-performance environments. It has a very low memory footprint compared to other web servers and takes care of cpuload. Its advanced feature-set (FastCGI, CGI, Auth, Output-Compression, URL-Rewriting and many more) make lighttpd the perfect webserver software for every server that suffers load problems. Simple Network Management Protocol (SNMP) is an Internetstandard protocol for managing devices on IP networks. It is used mostly in network management systems to monitor the devices attached to the network for conditions that need administrative attention. Net-SNMP is a suite of applications used to implement SNMP v1, SNMP v2c and SNMP v3 using both IPv4 and IPv6. For more additional information, send email to [help.cct@hanhwa.com](mailto:help.cct@hanhwa.com).

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It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

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### T-License [License Agreement for Source Code of T-Kernel]

established by T-Engine Forum  
on January 23, 2004  
revised on June 17, 2004  
revised on December 21, 2006  
revised on March 24, 2009

### Article 1. Scope of License Agreement

1. This License Agreement sets forth copyrights and the terms and conditions of use applicable to the source code of T-Kernel distributed by T-Engine Forum and any derivative work created therefrom.

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1. "T-Kernel" means a real-time operating system controlled and distributed by T-Engine Forum on behalf of the copyright holder thereof.
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4. "Compiler-dependent Part" means the part of the Source Code which depends on compiler and needs to be changed when the Source Code is ported and operated on the target hardware, and is designated and separated as such part.
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14. "System Developer" means any person who develops the Embedded Product by itself or has a third party develop the same, and provides, whether with or without payment, the End User with the Embedded Product.
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**16.** "Patch for Modification" means a difference, program, system, or the like in order to create the Modified Source Code from the Source Code or the Binary Code thereof.

**17.** "Vicarious Execution of Patch Processing" means vicarious execution service to create the Modified Source Code applying the Patch for Modification to the Source Code or the Binary Code thereof.

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1. to perform any and all acts set forth in the Article 4.3 above.
2. to develop and manufacture the Embedded Product containing the Binary Code, and, whether with or without payment, provide the End User with the same and make the Binary Code available to the End User on the Embedded Product.

5. The Source Code User and the System Developer shall be obligated to give a notice that the Source Code is used, in such a way as separately specified by T-Engine Forum, when they use the Source Code or the Binary Code, or make the Binary Code available for the End User on the Embedded Product.

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2. The Distributor of Modification may create the Modified Source Code based on the Source Code provided by T-Engine Forum and the Patch for Modification to be applied to create such Modified Source Code from the Source Code.

3. The Distributor of Modification shall, prior to the distribution, inform T-Engine Forum of and register a name and description of the Modified Source Code in such a way as specified by T-Engine Forum.

4. The Distributor of Modification shall determine the name of the Modified Source Code subject to the rules separately established by T-Engine Forum and publish an appropriate notice as required by the rules on the Patch for Modification and the Modified Source Code.

5. The Distributor of Modification may distribute the Modified Source Code to a third party, whether with or without payment, provided that the Distributor of Modification shall take the necessary measures to prohibit the third party from making the re-Distribution of the Modified Source Code.

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7. The Distributor of Modification may perform the Vicarious Execution of Patch Processing for the System Developer.

8. The System Developer shall not distribute the Modified Source Code in further modified form to any third party as a stand-alone software product.

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#### **Article 6. Distribution and Registration of the Ported Source Code**

1. The Source Code User and the System Developer may, whether with or without charge, distribute to any third party only the following parts of the Ported

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1. The Hardware-dependent Part and/or Compiler-dependent Part; provided that the Source Code User and the System Developer shall inform T-Engine Forum of, and T-Engine Forum may publish, a method for distributing said Part(s) to third parties.

2. The Header File; provided that the Header File shall be distributed together with the Binary Code of the Ported Source Code.

2. Any member of T-Engine Forum may request T-Engine Forum to register and distribute, as an original source code for T-Kernel, the Ported Source Code on the T-Engine Hardware or the Similar Hardware to T-Engine Hardware.

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1. The member shall confirm that the object hardware is the T-Engine Hardware or the Similar Hardware to T-Engine Hardware.
2. The member shall provide T-Engine Forum with a complete set of operational environment for the object hardware and T-Kernel free of charge when requesting the distribution.
3. The member shall submit test results of the Ported Source Code to T-Engine Forum when requesting the distribution.

4. In the event that T-Engine Forum accepts the request mentioned in Article 6.2, T-Engine Forum shall register and distribute the Ported Source Code as the Source Code for T-Kernel. Provided, however, that the Ported Source Code may be treated in the same way as the Modified Source Code until the time of registration hereunder.

5. The provision set forth in Article 3 shall apply to the Ported Source Code registered in accordance with this Article.

#### **Article 7. Use for Other Purpose**

1. Any use of the Source Code, the Modified Source Code or the Ported Source Code other than those stipulated in Articles 4, 5 and 6 shall be subject to the prior approval of T-Engine Forum.

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iperf performance test

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Jean-loup Gailly Mark Adler

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://www.ietf.org/rfc/rfc1950.txt> (zlib format), [rfc1951.txt](http://www.ietf.org/rfc/rfc1951.txt) (deflate format) and [rfc1952.txt](http://www.ietf.org/rfc/rfc1952.txt) (gzip format).



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