

CODIFICADOR DE VÍDEO DE RED

Manual del usuario

SPE-110

Codificador de vídeo de red

Manual del usuario

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Marca comercial

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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 alimentado por una Unidad de Suministro de Energía catalogada marcada como "Clase 2" o "LPS" y con una clasificación de 12V CC, mín. 0,3 A o PoE (37 V ~ 57 V), mín. 0,11 A.
16. Si usa una fuerza excesiva al instalar el producto, el codificador puede dañarse y funcionar incorrectamente. Si instala de forma forzada el producto utilizando herramientas no compatibles, es posible que el producto sufra 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.

PRECAUCIÓN

	PRECAUCIÓN NO ABRIR RIESGO DE SUFRIR UNA DESCARGA ELÉCTRICA	
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.		

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.

Utilice la potencia de entrada con solo un codificador y no deben estar 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.

- 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.
- Utilice guantes de protección cuando instale o extraiga el codificador.
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.

ANTES DE COMENZAR

Este manual proporciona la información operativa necesaria para utilizar el producto y contiene una descripción sobre cada una de los componentes y su función, así como el menú y los ajustes de red.

Ha de tener en cuenta las siguientes advertencias:

- Hanwha Vision posee los derechos de autor sobre este manual.
- Este manual no se puede copiar sin el consentimiento previo por escrito de Hanwha Vision.
- Reclinamos cualquier responsabilidad sobre cualquier pérdida que sufra el aparato debido a que ha sido utilizado de manera incorrecta o que ha incumplido las instrucciones incluidas en este manual.
- Si desea abrir la carcasa de su sistema para comprobar si hay errores, póngase en contacto con el experto de la tienda en la que compró el producto.

Advertencia

Pilas

Colocar una pila incorrecta en el aparato puede provocar una explosión. Por lo tanto, debe utilizar el mismo tipo de pila que la que está ya en el aparato.

A continuación se encuentran las especificaciones de la pila que está utilizando en este momento.

- Voltaje normal: 3 V
- Capacidad normal: 1 mAh
- Corriente de descarga estándar: 5uA
- Rango de temperatura en el que puede funcionar: -20°C ~ +60°C (-4°F ~ +140°F)

Temperatura de funcionamiento

El intervalo de temperatura en el que este producto funciona correctamente es de -10°C ~ 50°C (14°F ~ 122°F).

Es posible que este producto funcione correctamente si lo pone en funcionamiento después de haber estado guardado durante mucho tiempo en un lugar cuya temperatura es inferior a la de los intervalos recomendados.

Cuando utilice el aparato después de un largo periodo de tiempo en el que ha estado sometido a bajas temperaturas, coloque el aparato a temperatura ambiente durante un tiempo y enciéndalo.

Precauciones de seguridad

La 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 la información personal y para evitar los daños de un posible robo de información.

Por favor, tenga en cuenta que el usuario es responsable de la seguridad y de otros problemas derivados de la mala administración de la contraseña.

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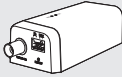
CARACTERÍSTICAS RECOMENDADAS DEL ORDENADOR

- CPU : Intel(R) Core(TM) i7 a 3,4 GHz o superior
 - RAM : 8G o superior
 - SO admitido : 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), Microsoft IE
- Consulte el apéndice para obtener información detallada sobre sistemas operativos y navegadores verificados. Algunas funciones pueden estar restringidas incluso en navegadores compatibles.

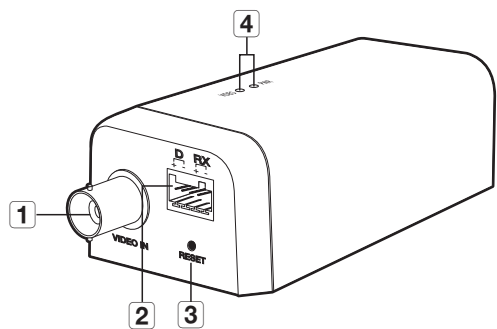
DESCRIPCIÓN GENERAL

Desembale el producto y colóquelo sobre una superficie plana o en el lugar en el que se va a instalar. Compruebe que además de la unidad principal se incluyan los elementos siguientes.

- 
- La apariencia de los componentes puede diferir de la imagen mostrada.
 - La categoría y la cantidad de accesorios pueden variar según la zona de venta.

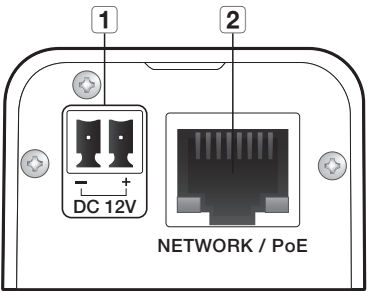
		
Codificador de vídeo de red	Guía rápida (Opcional)	Tarjeta de garantía (Opcional)
		
Tornillo de fijación	Tornillo pequeño de la máquina	Soporte
		
Bloque de terminales de 4 pines	Bloque de terminales de 2 pines	

NOMBRES DE COMPONENTES Y FUNCIONES (PARTE FRONTAL)



Nombres de componentes		Funciones
1	Entrada de video	Este es el terminal de entrada de señal de vídeo (tipo BNC).
2	Puerto RS-422/485	RX+, RX- Línea de datos RS-422 RX ■ Esto no está disponible en el modo RS-485.
		D+, D- Línea de datos RS-422 TX o línea RS-485
3	Inicialización	Este botón se utiliza para restablecer la configuración del codificador a sus valores predeterminados de fábrica. Manténgalo presionado durante aproximadamente 5 segundos para reiniciar. ■ Cuando se inicializa el codificador, se cambia la configuración de red para usar DHCP. Si no hay un servidor DHCP en la red, puede usar el programa instalador IP para reconfigurar la configuración de red básica (dirección IP, máscara de subred, puerta de enlace, etc.).
4	Estado de la entrada de video, indicador de alimentación	VIDEO Muestra el estado operativo de la entrada de vídeo.
		PWR Muestra el estado de la entrada de alimentación.

NOMBRES DE COMPONENTES Y FUNCIONES (PARTE POSTERIOR)



Nombres de componentes	Funciones
1 DC 12V	Este es un terminal de conexión de alimentación del codificador de vídeo de red.
2 Conexión de red	Este es un terminal que se conecta a la red a través de un cable PoE o Ethernet.

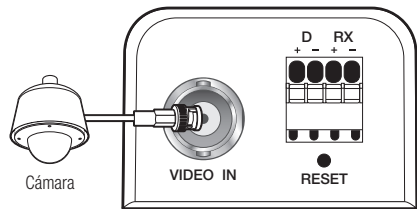
Antes de utilizar el producto tenga en cuenta la siguiente información.

- No utilice el producto en exteriores.
- No derrame agua ni líquidos en la parte de las conexiones del aparato.
- No someta al sistema a fuerza excesiva ni a impactos.
- No tire del cable de alimentación con energía.
- No desmonte el aparato por sí mismo.
- No sobrepase la tensión nominal de entrada ni de salida.
- Utilice únicamente un cable de alimentación certificado.
- Para el producto con toma de tierra de entrada, utilice un enchufe con toma de tierra.

CONEXIÓN CON OTROS DISPOSITIVOS

Conexión de la cámara

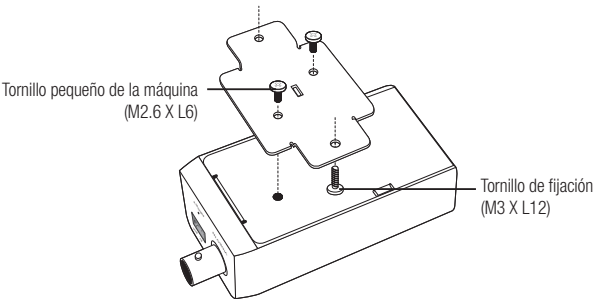
Conecte el puerto [VIDEO IN] del codificador de vídeo de red al puerto de salida de vídeo de la cámara.



Soporte de conexión

Alinee el producto con los orificios del soporte. Inserte y apriete el pequeño tornillo de la máquina (M2.6 X L6) suministrado para fijar el producto con el soporte.

-
- Use los tornillos de máquina pequeños (M2.6 X L6) suministrados para instalar el montaje del soporte o el soporte en el producto.
Si usa cualquier otro tornillo, es posible que dañe el producto.



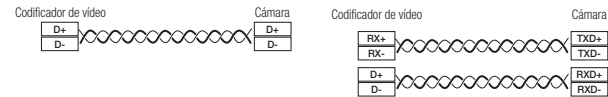
Conexión al dispositivo RS-422/485

Conecte el dispositivo externo a los puertos [D+, D-].
Puede conectar y controlar una cámara PTZ que sea compatible con la comunicación RS-422/485.

Puerto	Descripción	Puerto	Descripción
RX+	Línea de datos RS-422 RX	D+	Línea de datos RS-422 TX o línea RS-485
RX-	■ Esto no está disponible en el modo RS-485.	D-	

Conexión de la señal de control

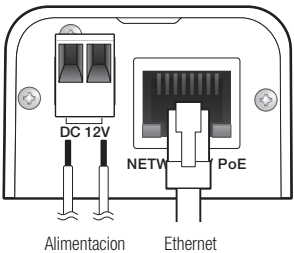
- Comunicaciones RS-485
- Comunicaciones RS-422



- De acuerdo con el tipo de cámara, puede ser diferente la polaridad de la conexión.
Para obtener más información, consulte la documentación de la cámara PTZ correspondiente.

Conexión Ethernet

Conecte el cable Ethernet a la red local o a Internet.



Alimentación eléctrica

Utilice el destornillador para conectar cada línea (+, -) del cable de alimentación al puerto de alimentación correspondiente del codificador.

- 
- También puede utilizar un enrutador que incorpore PoE para suministrar energía a la codificador.
 - Utilice PoE que sea compatible con los protocolos IEEE802.3af.
 - Se recomienda utilizar una única fuente para alimentar el equipo, PoE o CC 12V.
 - Tenga cuidado de no invertir la polaridad al conectar el cable de alimentación.
 - Si desea conectar un dispositivo externo, debe apagar el dispositivo externo antes de continuar.
 - Conecte primero el conjunto y la línea de alimentación del adaptador y, a continuación, conecte el cable de alimentación a la toma de la pared.

Características del cable de alimentación para cada modelo

Cuando la entrada es CC 12V:

Tipo de cable (AWG)	#22	#20	#18
Longitud del cable (Max.)	24m	38m	60m

Características del cable de red

Elemento	Contenido	Observaciones
Conector	RJ45 (10/100BASE-T)	
Ethernet	10/100Base-T	
Cable	Categoría 5e	
Distancia máx.	100M	Resistencia CC ≤ 0,188 Ω/m
Soporte PoE	IEEE 802.3af	

Conexión al dispositivo RS-485

Conecte el dispositivo externo a los puertos [RS-485 +, -].
Puede conectar y controlar la cámara PTZ que admite la comunicación RS-485.

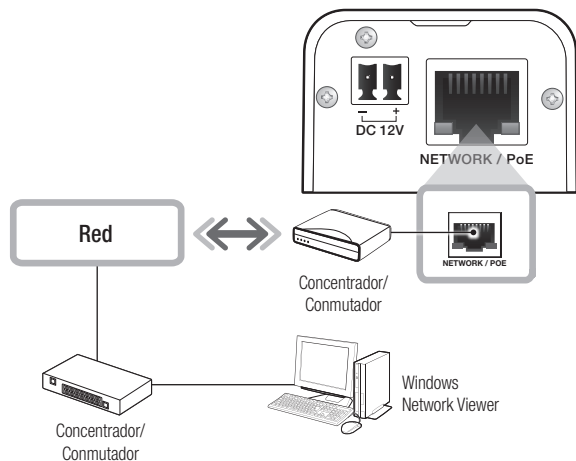
- 
- Puede conectar y controlar la cámara PTZ que admite la comunicación RS-485.
 - Puede controlarlos conectando la función AUX que admite la comunicación RS-485.
 - Primero verifique si el dispositivo RS-485 es compatible con el producto.
 - Preste atención para no cambiar la polaridad (+/-) del dispositivo RS-485 al conectarlo.
 - Para obtener más información, consulte la documentación de la cámara respectiva.

conexión y configuración de la red

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

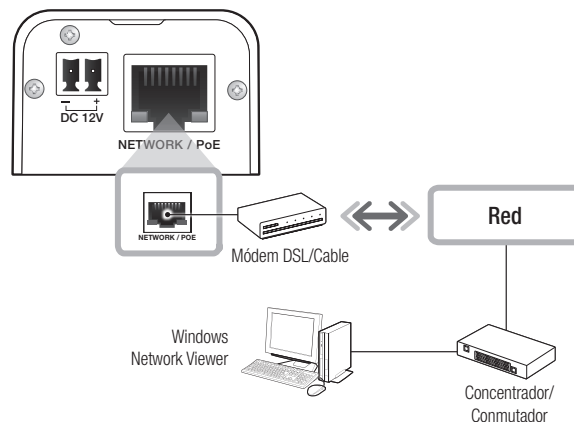
CONEXIÓN A LA RED A TRAVÉS DE ETHERNET

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



- Es posible que un PC remoto en Internet externo fuera de la red LAN no pueda conectarse al codificador instalado en la intranet si el reenvío de puertos no está configurado correctamente o si está configurado un firewall. 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 13)

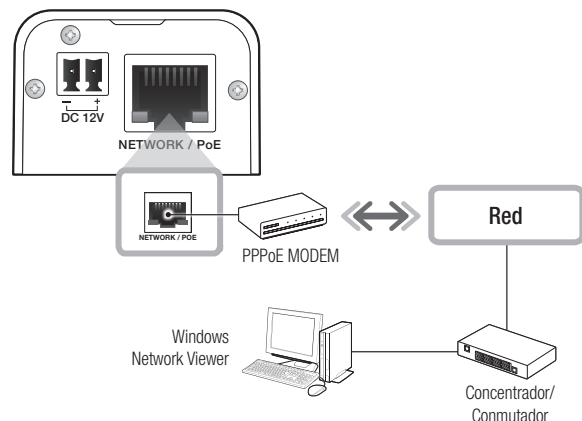
CONEXIÓN DEL CODIFICADOR DIRECTAMENTE A UN MÓDEM DSL/ CABLE BASADO EN DHCP



1. Conecte el PC del usuario directamente con el codificador de red.
2. Ejecute el Instalador de IP y cambie la dirección IP del codificador para que pueda usar el navegador web de su equipo para conectarse 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 el codificador, que se retiró de su PC, directamente al módem.
8. Reinicie el codificador.

- Para configurar los ajustes de DDNS, consulte "DDNS". (página 26)
- Para registrar los ajustes de DDNS, consulte "Registro con DDNS". (página 27)
- Consulte "IP & Puerto" para obtener información sobre cómo configurar la IP. (página 24)

CONEXIÓN A LA RED A TRAVÉS DE PPPoE

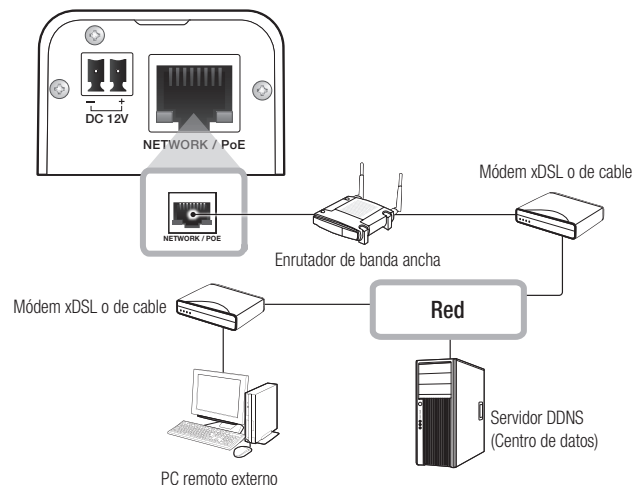


1. Conecte el PC del usuario directamente con el codificador de red.
2. Ejecute el Instalador de IP y cambie la dirección IP del codificador para que pueda usar el navegador web de su equipo para conectarse a Internet.
3. Utilice el navegador de Internet para conectar a Web Viewer.
4. Vaya a la página **[Config.]**.
5. Vaya a **[Red]** – **[DDNS]** y configure los ajustes de DDNS.
6. Vaya a la página de configuración **[Basic]** – **[IP & Puerto]**, establezca el tipo de IP para **[PPPoE]** e introduzca el ID de servicio de red y la contraseña.
7. Conecte el codificador, que se retiró de su PC, directamente al módem.
8. Reinicie el codificador.

- Para configurar los ajustes de DDNS, consulte **"DDNS"**. (página 26)
- Para registrar los ajustes de DDNS, consulte **"Registro con DDNS"**. (página 27)
- Consulte **"IP & Puerto"** para obtener información sobre cómo configurar la IP. (página 24)

CONEXIÓN A LA RED USANDO EL ROUTER

Se utiliza para un ambiente de red pequeño como hogares, oficinas pequeñas y tiendas normales.

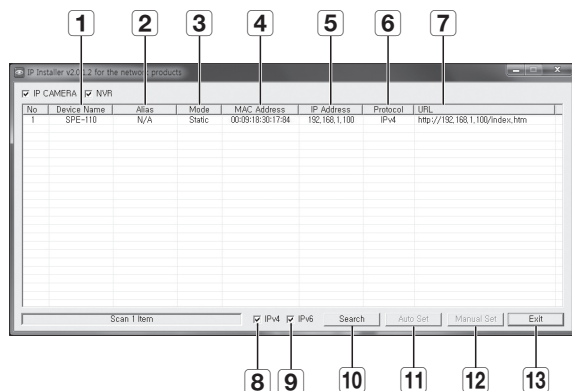


Configurar la red del ordenador local conectado a un Enrutador de banda ancha

Configure la configuración de red del ordenador local conectado a un enrutador de banda ancha, siga las instrucciones siguientes.

- Seleccione : **<Network>** → **<Properties>** → **<Local Area Connection>** → **<General>** → **<Properties>** → **<Internet Protocol (TCP/IP)>** → **<Properties>** → **<Obtain an IP address automatically>** o **<Use the following IP address>**.
- Siga las siguientes instrucciones si selecciona **<Use the following IP address>**:
 - ej.1) Si la dirección (LAN IP) del enrutador de banda ancha es 192.168.1.1
Dirección IP : 192.168.1.100
Máscara de subred : 255.255.255.0
Puerta de enlace por defecto : 192.168.1.1
 - ej.2) Si la dirección (LAN IP) del enrutador de banda ancha es 192.168.0.1
Dirección IP : 192.168.0.100
Máscara de subred : 255.255.255.0
Puerta de enlace por defecto : 192.168.0.1
 - ej.3) Si la dirección (LAN IP) del enrutador de banda ancha es 192.168.xxx.1
Dirección IP : 192.168.xxx.100
Máscara de subred : 255.255.255.0
Puerta de enlace por defecto : 192.168.xxx.1
- Para obtener la dirección del enrutador de banda ancha, véase la documentación del producto.
- 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 15)

BOTONES UTILIZADOS EN IP INSTALLER



Elemento	Descripción
1 Device Name	Nombre del modelo del codificador conectado. Haga clic en la columna para clasificar la lista por nombre de modelo. No obstante, la búsqueda se detendrá si se hace clic durante la búsqueda.
2 Alias	Esta función no está actualmente implantada.
3 Mode	Muestra <Static>, <Dynamic> o <PPPoE> para el estado de conexión de red.
4 MAC(Ethernet) Address	Dirección de Ethernet para el codificador conectado. Haga clic en la columna para ordenar la lista por dirección Ethernet. No obstante, la búsqueda se detendrá si se hace clic durante la búsqueda.
5 IP Address	Dirección IP. Haga clic en la columna para ordenar la lista por dirección IP. No obstante, la búsqueda se detendrá si se hace clic durante la búsqueda.
6 Protocol	Configuración de red para el codificador. El ajuste predeterminado de fábrica es "IPv4". Los codificadores con la configuración IPv6 mostrarán "IPv6".
7 URL	La dirección URL de DDNS que permite acceder desde Internet externa. Sin embargo, esto se reemplazará con la <IP Address> del codificador si el registro DDNS ha fallado.
8 IPv4	Escanea codificadores con la configuración IPv4.

Elemento	Descripción
9 IPv6	Escanea codificadores con la configuración IPv6. Se activa únicamente en un entorno compatible con IPv6.
10 Search	Escanea codificadores que están actualmente conectados a la red. No obstante, este botón aparecerá atenuado si no se marca ni IPv4 ni IPv6.
11 Auto Set	IP Installer configura automáticamente los ajustes de red.
12 Manual Set	Debe configurar manualmente los ajustes de red.
13 Exit	Salida 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 Vision.
- 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 Vision (<https://www.HanwhaVision.com>) en el menú <Support> - <Online Tool>.

CONFIGURACIÓN DE IP ESTÁTICA

Configuración de red manual

Ejecute <IP Installer_v2.XX.exe> para visualizar la lista de búsqueda del codificador.
En el arranque inicial, tanto [Auto Set] como [Manual Set] aparecerán atenuados.

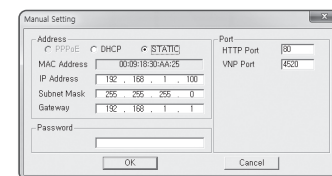
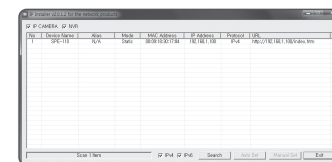


- Para los codificadores que se encuentran con la configuración de IPv6, estos botones aparecerán atenuados ya que los codificadores no admiten esta función.

- Seleccione un codificador en la lista de búsqueda.
Verifique la dirección MAC en la etiqueta adjunta al codificador.
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> del codificador aparecen en los valores previamente configurados.
- En el panel <Address>, facilite la información necesaria.
 - MAC Address : No es necesario configurar la dirección MAC, ya que está preestablecida y se muestra en la pegatina adjunta al codificador.



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



Si no se utiliza un Enrutador de banda ancha

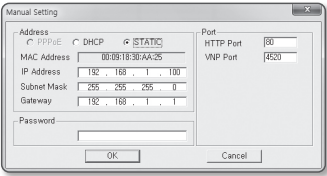
Para el ajuste de <IP Address>, <Subnet Mask> y <Gateway>, póngase en contacto con el administrador de red.

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

- HTTP Port : Se utiliza para acceder al codificador utilizando el navegador de Internet, predeterminado en 80.
- VNP Port : se utiliza para controlar la transferencia de señales de video, por defecto en 4520.

5. Introduzca la contraseña.

Introduzca la contraseña de la cuenta "admin", que se utilizó para acceder al codificador.



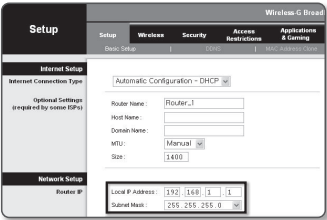
- A efectos de seguridad, se recomienda utilizar una combinación de números, letras del alfabeto en mayúsculas y minúsculas, y caracteres especiales para su contraseña.
- Si desea cambiar la contraseña, consulte "Cambiar contraseña de administrador" de la configuración de usuario. (página 23)

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 router de banda ancha será la <Subnet Mask> del codificador.
- Gateway : La <Local IP Address> del router de banda ancha será la <Gateway> del codificador.



<Ejemplo de router>

- 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 15)

Si el router de banda ancha tiene más de un codificador conectado

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

Categoría		Codificador 1	Codificador 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

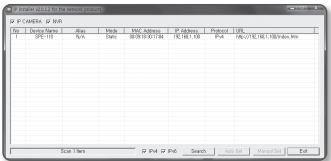
- Si el <HTTP Port> está configurado con un valor distinto de 80, debe proporcionar el número de <Port> en la barra de direcciones del navegador de Internet antes de poder acceder al codificador. ej.) http://Dirección IP : HTTP Port http://192.168.1.100:8080

Configuración automática de red

Ejecute <IP Installer_v2.XX.exe> para visualizar la lista de búsqueda del codificador. En el arranque inicial, tanto [Auto Set] como [Manual Set] aparecerán atenuados.

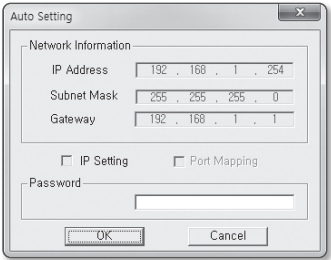
- Para los codificadores que se encuentran con la configuración de IPv6, estos botones aparecerán atenuados ya que los codificadores no admiten esta función.

1. Seleccione un codificador en la lista de búsqueda. Verifique la dirección MAC en la etiqueta adjunta al codificador. 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", que se utilizó para acceder al codificador.



- A efectos de seguridad, se recomienda utilizar una combinación de números, letras del alfabeto en mayúsculas y minúsculas, y caracteres especiales para su contraseña.
- Si desea cambiar la contraseña, consulte "Cambiar contraseña de administrador" de la configuración de usuario. (página 23)

4. Haga clic en [OK]. La configuración automática de la red queda completada.



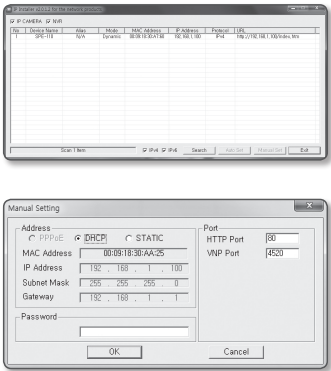
CONFIGURACIÓN DE IP DINÁMICA

Configuración del entorno de IP dinámica

- Ejemplo de entorno de IP dinámica
 - Si el servidor DHCP asigna una dirección IP a un router de banda ancha, con codificadores conectados
 - Si conecta el codificador directamente al módem usando los protocolos DHCP
 - Si las IP se asignan mediante el servidor DHCP interno a través de la LAN

Comprobación de la IP dinámica

1. Ejecute IP Installer en el ordenador local del usuario.
Los codificadores asignados con la dirección <Dynamic IP> se muestran en la lista.
2. Seleccione un codificador en la lista de búsqueda.
3. Haga clic en el botón [Manual Set] y verifique la dirección <Dynamic IP> del codificador.
Si quita la marca de selección de <DHCP>, puede cambiar la IP a <Static>.

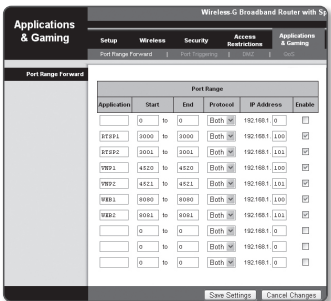


CONFIGURACIÓN DE REENVÍO DEL RANGO DE PUERTOS (ASIGNACIÓN DE PUERTOS)

Si ha instalado un router de banda ancha con un codificador conectado, debe configurar el reenvío de rango de puertos en el router de banda ancha para que un PC remoto pueda acceder al codificador.

Reenvío manual del rango de puertos

1. 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.
2. Seleccione <TCP> y <UDP Port> para cada codificador conectado al router de banda ancha.
El número de cada puerto que se configurará en el router de IP debe establecerse de acuerdo con el número de puerto designado en <Config> - <Basic> - <IP & Puerto> en el visor web del codificador.



<Ejemplo de router>

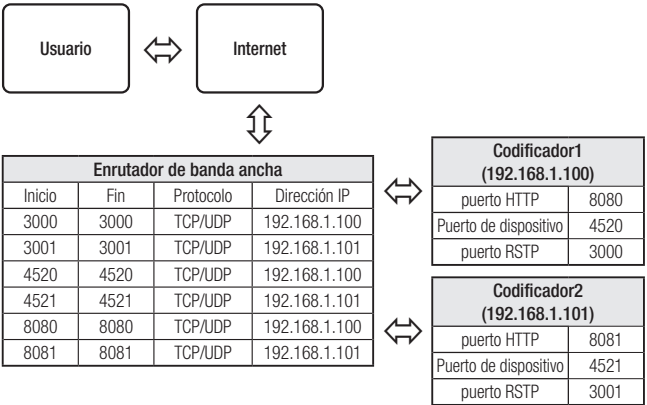
3. Una vez hecho, haga clic en [Save Settings].
Se guardarán los ajustes.

- 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 de rango de puertos para varios codificadores 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 cada puerto usando la pantalla de configuración del codificador.

Cuando Codificador1 y Codificador2 están conectados a un router:



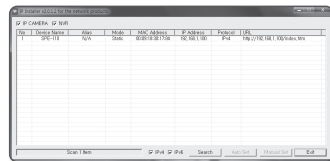
- El enrutamiento de puerto se puede hacer sin una configuración adicional del router si este está adaptado para la función UPnP (Universal Plug and Play).
Después de conectar el codificador de red, seleccione la casilla del menú <Conexión rápida> en <Wisenet DDNS> en "Configuración -> Red -> DDNS".

CONEXIÓN AL CODIFICADOR DESDE UN PC LOCAL COMPARTIDO

1. Ejecute Instalador IP.
Buscará codificadores conectados y los mostrará como una lista.
2. Haga doble clic en un codificador para acceder.
El navegador de Internet se inicia y se conecta al codificador.



- El acceso al codificador también se puede obtener escribiendo la dirección IP del codificador en la barra de direcciones del navegador de Internet.



CONEXIÓN AL CODIFICADOR DESDE UN PC REMOTO A TRAVÉS DE INTERNET

Como no se permite el uso del Instalador de IP en un equipo remoto que no está en el clúster de la red del router de banda ancha, los usuarios pueden acceder a los codificadores dentro de la red de un router de banda ancha utilizando la URL DDNS del codificador.

1. Before you can access an encoder in the Broadband Router network, you should have set the port range forward for the Broadband Router.
2. Desde el PC remoto, inicie el navegador de Internet y escriba la dirección URL DDNS del codificador o la dirección IP del router de banda ancha en la barra de direcciones.
ej.) <http://ddns.hanwha-security.com/ID>

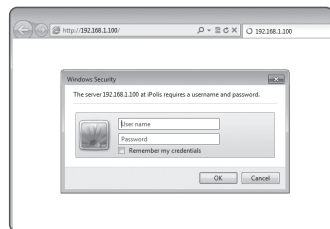


- Para registrar los ajustes de DDNS, consulte "Registro con DDNS". (página 27)

CONEXIÓN AL CODIFICADOR

Procedimiento normal

1. Inicie el explorador de Internet.
2. Escriba la dirección IP del codificador 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. Escriba la dirección IP y el número de puerto HTTP del codificador 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. Escriba la URL DDNS del codificador 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 del codificador buscado.
En el sistema operativo Windows, en el menú de red, haga clic en el nombre del codificador buscado
- 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 del codificador buscado.
En el sistema operativo Mac, en la pestaña Bonjour de Safari, haga clic en el nombre del codificador buscado.
- Aparece la ventana de inicio de sesión.

Para comprobar la dirección de DDNS

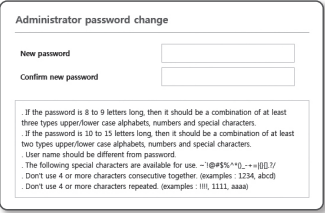
Si el codificador está conectado directamente al módem de cable DHCP, módem DSL o módem PPPoE, la dirección IP de su red se cambiará cada vez que intente conectarse al servidor ISP .
Si este es el caso, no se le informará de la dirección IP modificada por el DDNS.

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.

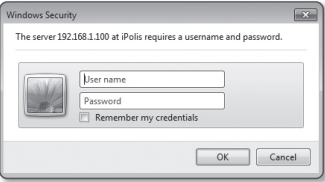


- Para una nueva contraseña que tenga entre 8 y 9 dígitos, debe utilizar por lo menos 3 mayúsculas/ minúsculas, 3 números y 3 caracteres especiales. Para una contraseña que tenga entre 10 y 15 dígitos, debe utilizar por lo menos 2 de los tipos mencionados.
 - Caracteres especiales que se permiten: ~!@#%&^*()_-=+[]{}?/
- 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

Cada vez que acceda al codificador, aparecerá la ventana de inicio de sesión. Introduzca la ID de usuario y la contraseña para acceder al codificador.

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.



- Cuando acceda al visor web del codificador, preste especial atención a la seguridad comprobando si los datos de la imagen están 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 video si el tamaño de pantalla es del 100%. Si se reduce la relación existe el riesgo de cortar la imagen en los bordes.

UTILIZACIÓN DE LA PANTALLA EN DIRECTO



Elemento	Descripción
1 Live	Moves to the Live screen.
2 Config.	Va a la pantalla de configuración.
3 Pantalla del visor	Muestra en pantalla el vídeo en directo. ■ Puede utilizar la rueda del ratón para activar el zoom digital en la pantalla del visor.
4 Ayuda en línea	La ayuda en línea proporciona descripciones detalladas de cada función.

Elemento	Descripción	
5 Tipo de perfil	Puede seleccionar un tipo de perfil en <Perfil de video> bajo el menú de configuración <Basic>. - Haga clic en el icono para mostrar el nombre del perfil actual. i Si el video se reproduce en la página de monitoreo, pueden aparecer imágenes secundarias en la pantalla bajo las siguientes condiciones: - La resolución se ha cambiado debido a un cambio de perfil. - Los datos de entrada se han ralentizado debido a un retardo de red cuando el perfil se ha cambiado. - Se ha cambiado el tamaño y la ubicación de la ventana del navegador.	
6 PTZ	PTZ	Controla las operaciones de PANORÁMICA/INCLINACIÓN/ZOOM.
	Enfoque manual ( / )	Ajusta el enfoque de la pantalla a una distancia cercana o distante.
	Zoom acercamiento ()	Arrastre la barra del lado derecho de la interfaz de usuario hacia arriba o haga clic en el botón [] para acercar la pantalla. Cuanto más lejos esté la posición de la barra desde el centro, más rápido se ampliará la pantalla.
	alejar zoom ()	Arrastre la barra del lado derecho de la interfaz de usuario hacia abajo o haga clic en el botón [] para alejar la pantalla. Cuanto más lejos esté la posición de la barra desde el centro, más rápido se alejará la pantalla.
	Para desplazar la pantalla ()	Se mueve en la dirección donde se encuentra el cursor.
7 Información de acceso del perfil	Menú OSD	Puede controlar las funciones de la cámara conectada.
	Puede leer la información del perfil.	
8 Reproducción	Pantalla completa ()	Haga doble clic en la pantalla de video y el video actual se reproducirá en la pantalla completa del monitor.
	Ajustar a la pantalla ()	Un modo de vista en el que el tamaño del video de la cámara se ajusta automáticamente al tamaño del navegador web.
	Tamaño del archivo original ()	Modo de vista en el que se reproduce el video en la resolución real.
	Mantener la relación de aspecto ()	Modo de vista que ajusta la relación de aspecto para adaptarse mejor a la resolución.
9 Captura	Guarda la imagen actual como un archivo de imagen.	
10 Contador de píxeles	Comprueba el número de píxeles en el área seleccionada de la pantalla de video.	

Para capturar la instantánea

- Haga clic en [Captura ()] en la escena que va a capturar.
- Cuando se guarda un video capturado, aparece un mensaje de notificación. La imagen capturada se guarda en la carpeta designada para cada navegador.



- Si la pantalla no es capturado por el navegador Internet Explorer en Windows 7 o superior, ejecute el navegador Internet Explorer con el privilegio de administración

Para ocupar la pantalla completa

- Haga clic en el icono [Pantalla completa ()].
- Con esto el Visor ocupará toda la pantalla.
- Para salir del modo de pantalla completa, haga clic de nuevo en el botón [Pantalla completa ()] o presione la tecla [ESC] del teclado.

Contar el número de píxeles

- Haga clic en el icono [Contador de píxeles ()] para activarlo..
- Arrastre el ratón sobre el video para seleccionar un área.
- El número de píxeles en el área seleccionada se visualiza en la pantalla.

Controlar PTZ

- Haga clic en el icono [PTZ ()].
- Mueva el mando de desplazamiento [] el teclado de Mover Pantalla para mover la dirección de la cámara, o acerque o aleje moviendo la barra en la parte derecha de la interfaz de usuario hacia arriba o hacia abajo.
- Seleccione [ ] del enfoque de la pantalla para ajustar el enfoque.



- Es posible que algunas funciones no funcionen en un navegador o códec específico.

Para aplicar el preajuste

- Preajuste :Aplica el preajuste guardado.
Consulte “**PTZ externo**” para conocer la configuración preestablecida detallada (pág. 25)
 - Movimiento: Aplica el preajuste guardado.
 - Configuración: Especifica el preajuste.

Para comprobar el estado del perfil

Puede comprobar la información del perfil.

1. Haga clic en el icono [Estado (ⓘ)].
2. La pantalla de información de acceso al perfil se actualiza siempre que la pantalla esté habilitada.
 - Acceso de perfil: muestra información del perfil recién añadido.
 - Perfil: muestra información del códec recién añadido.
 - Velocidad de bits(kbps): muestra la velocidad de bits real y la velocidad de bits definida.
 - Velocidad de cuadro(fps): muestra la velocidad de fotogramas real y la velocidad de fotogramas definida.
 - N° de usuarios simultáneos: muestra el número de usuarios simultáneos que acceden al perfil.
 - Usuario actual: Muestra información sobre los usuarios que acceden a Web Viewer y ven el vídeo de vigilancia.
 - Perfil: muestra el nombre del perfil al que ha accedido el usuario.
 - Velocidad de bits(kbps): muestra la velocidad de bits actual.
 - Estado de conexión de red: Muestra si la red está funcionando correctamente.
 - Dirección IP : muestra la dirección IP del usuario actual.

CONFIGURACIÓN

Puede configurar la información básica del codificador, PTZ, vídeo y audio, red, evento, análisis y configuración del sistema.

1. En la pantalla en vivo, haga clic en el botón **[Config. (⚙️)]**.
2. Aparece la pantalla de configuración.

CONFIGURACIÓN BÁSICA

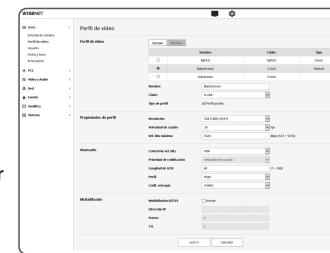
Entrada de cámara

1. En el menú de configuración, seleccione la ficha **<Basic (📺)>**.
2. Haga clic en **<Entrada de cámara>**.
 - Tipo de vídeo : CVBS/AHD/CVI/TVI
 - Resolución : SD/1M/2M/4M
 - Modo : Auto



Perfil de vídeo

1. En el menú de configuración, seleccione la ficha **<Basic (📺)>**.
2. Haga clic en **<Perfil de vídeo>**.
3. Establezca cada elemento en el perfil de vídeo. Incluso si se cambió la configuración del perfil actual al que se accedió, la configuración anterior se usará para la salida.
4. Seleccione las propiedades de cada perfil. Para obtener más detalles, consulte **"Para añadir / modificar un perfil de vídeo"**. (página 22)
5. Seleccione un tipo de perfil.
 - Es posible que el menú contextual difiera dependiendo del tipo de códec seleccionado.
6. Una vez hecho, haga clic en **[Aplicar]**.



Para añadir / modificar el perfil de video

La configuración del perfil puede añadirse o modificarse para incluir diferentes perfiles según las condiciones de grabación.

1. En **<Perfil de vídeo>**, haga clic en el botón **<Agregar>**.
 2. Facilite el nombre y seleccione un códec.
 3. Especifique las condiciones en las que se aplicará el códec.
 4. Especifique los detalles del códec seleccionado incluida la resolución y la y la velocidad de fotogramas.
 - Resolución : define el tamaño del vídeo de los archivos H.264 y MJPEG.
 - Vel. fotograma : configure el número máximo de fotogramas de vídeo por segundo.
 - Vel. bits máxima : configure la velocidad máxima de bits del vídeo cuando el control de la velocidad de bits se configura a VBR.
- !** ■ Como la velocidad de bits se puede ajustar de forma limitada según la resolución, la velocidad de fotogramas y la complejidad de la pantalla la velocidad de bits real puede ser mayor que la velocidad de bits máxima. Por tanto, debe tener en cuenta las condiciones de uso al ajustar el valor.
- Velocidad de bits de destino : Configure la velocidad de bits deseada cuando el control de la velocidad de bits se configura a CBR.
 - Control de vel. bits : Para la compresión, puede seleccionar entre velocidad de bits constante y velocidad de bits variable. La velocidad de bits fija significa que la velocidad de bits de transmisión de red queda fija mientras se varía la calidad de vídeo o la frecuencia de imágenes; velocidad de bits variable significa que se aplica una alta prioridad en la calidad de vídeo mientras varía la velocidad de bits.
- !** ■ Después de configurar la velocidad de bits fija para el control de bits, si selecciona el modo de prioridad de calidad de vídeo, la frecuencia de imagen transmitida real puede diferir de la frecuencia de imagen configurada (según la complejidad de la pantalla) a fin de garantizar la calidad óptima del vídeo para la velocidad de bits dada.
- Prioridad de codificación : Puede establecer la prioridad de transmisión de vídeo para establecer la frecuencia de imágenes o la compresión.
 - Longitud de GOV : Indica la distancia (en terminus de número de marcos) entre dos I-Frames consecutivos en una secuencia de vídeo cuando se ha seleccionado el codec H.264. (Un I-Frame + 0~varios P-Frames).
 - Perfil : Puede seleccionar el perfil del códec H.264.
 - Codif. Entropía : Esta es la codificación de longitud variable utilizando estadísticas de sintaxis. Utiliza técnicas de compresión sin pérdidas. Puede configurar el método de codificación de entropía. La tasa de compresión de CABAC es mejor que CAVLC.

- Multicast (RTSP) : permite especificar el uso del protocolo RTSP.
 - Dirección IP : introduzca una dirección IPv4 con la que puede conectar a la red IPv4.
 - Puerto : especifica el puerto de comunicaciones de vídeo.
 - TTL : puede definir TTL para el paquete RTP.



- Si establece la dirección de multidifusión en 224.0.0.0~224.0.0.255, la multidifusión puede no funcionar correctamente en todos los entornos.
En ese caso, le recomendamos que cambie la dirección de multidifusión.

¿Cuál es la longitud de GOV?

GOV (grupo de planos de objetos de vídeo) es un conjunto de fotogramas de vídeo para compresión H.264, que indica un conjunto de fotogramas existentes entre el I-Frame inicial y el siguiente I-Frame. GOV se compone de 2 tipos de fotogramas: I-Frame y P-Frame.

I-Frame es el esquema base de la compresión y contiene datos para una sola imagen completa. El P-Frame sólo contiene los datos que se han cambiado en relación con el I-Frame precedente.

Para el códec H.264, puede establecer la longitud de GOV.

Si se establece un perfil de grabación con el codec H.264 la longitud GOV será la frecuencia de imagen / 2.

Usuario

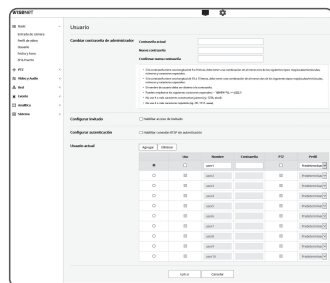
1. En el menú de configuración, seleccione la ficha <Basic ()>.
2. Haga clic en <Usuario>.

3. Facilite la información de usuario necesaria.

- Cambiar contraseña de administrador : Cambia la contraseña del administrador.



- A efectos de seguridad, se recomienda utilizar una combinación de números, letras del alfabeto en mayúsculas y minúsculas, y caracteres especiales para su contraseña.
- Se recomienda cambiar la contraseña una vez cada tres meses.
- La longitud de la contraseña y los límites se muestran como sigue.
 - Una combinación de, al menos, 3 mayúsculas, minúsculas, caracteres numéricos y caracteres especiales: de 8 a 9 caracteres.
 - Una combinación de al menos dos tipos de mayúsculas, minúsculas, números y caracteres especiales: 10 a 15 caracteres.
 - En caso de ser diferente de la ID.
 - No utilice más de 4 caracteres consecutivos juntos. (ejemplos: 1234, ABCD)
 - No use 4 o más caracteres repetidos. (ejemplos: !!!!, 1111, aaaa)
 - Caracteres especiales que se permiten. : ~!@#\$%^&*()_+=![]?/
 - Después de la configuración de fábrica, se inicializan las contraseñas de administrador y usuario. Es necesario para restablecer la contraseña.
 - Cuando acceda a la página web del codificador por primera vez o acceda a ella después de la inicialización, se le llevará al menú de configuración de contraseña de administrador.
 - En este menú, debe volver a iniciar sesión con la nueva contraseña antes de utilizar los menús de la página web del codificador.
 - Si la contraseña existente no se corresponde, al cambiar la contraseña de administrador, no podrá cambiar la contraseña.
 - Después de cambiar su contraseña, si hay un codificador conectado a un cliente CMS o NVR, deberá volver a registrarlo con la nueva contraseña. Si el codificador todavía está conectado con la misma contraseña, la cuenta puede estar bloqueada debido a que un cliente esté usando la contraseña anterior.
- Si intenta iniciar sesión con la cuenta registrada, y 5 o más veces consecutivas falla en la autenticación de contraseña, la cuenta puede ser bloqueada durante treinta segundos.
- Cuando se cambia la contraseña mientras varias conexiones están activas desde un PC, el navegador podría no funcionar correctamente. En ese caso, vuelva a conectar con el servidor.



- Config. invitado : si selecciona <Habilitar acceso de invitado>, la cuenta de invitado puede acceder a la pantalla de Web viewer pero sólo puede ver la pantalla de Live Viewer.
 - El ID/contraseña de la cuenta de invitado es <guest/guest>, y no se puede cambiar.
- Config. autenticación : si selecciona <Habilitar conexión RTSP sin autenticación>, puede acceder a RTSP sin iniciar sesión y ver el vídeo.
- Usuario actual : Si selecciona <Uso>, puede definir o cambiar los permisos de usuario.
 - El administrador puede configurar el control PTZ.
 - Control PTZ : Seleccione <PTZ>.
 - Perfil : si selecciona <Est.>, sólo puede ver el vídeo del perfil predeterminado; si se selecciona <Todos>, puede ver los vídeos completos del perfil.



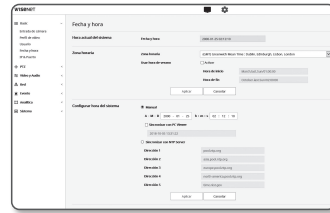
- Las funciones ONVIF disponibles para un usuario registrado con autorización para utilizar dichas funciones están limitadas a los usuarios con permisos concedidos para ello.

4. Una vez hecho, haga clic en [Aplicar].

Fecha y hora

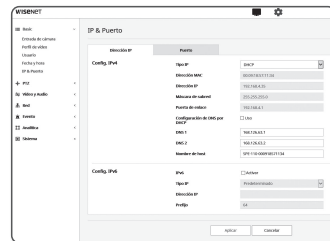
1. En el menú de configuración, seleccione la ficha <Basic ()>.
2. Haga clic en <Fecha y hora>.
3. Especifique la hora y la fecha que se aplicará al codificador.
 - Hora actual del sistema : muestra los ajustes de hora actual del sistema.
 - Zona horaria : especifique la zona horaria local basándose en la GMT.
 - Usar hora de verano : si se marca, la hora se fijará una hora antes de la zona horaria local para el período de tiempo especificado. Esta opción sólo aparecerá en áreas en las que se aplica DST.
 - Configurar hora del sistema : especifique la fecha y hora que se aplicará en el sistema.
 - Manual : Establece la hora actual del codificador manualmente. Cuando selecciona la casilla <Sincronizar con PC Viewer>, la hora del visor web se ajusta a la hora visualizada en el PC que ejecuta el visor web.
 - Sincronizar con NTP Server : sincronice con la hora de la dirección de servidor especificada.
4. Una vez hecho, haga clic en [Aplicar].

-  ■ Si selecciona <Sincronizar con PC Viewer>, la zona horaria estándar sería la misma que la zona horaria actual del PC.



IP & Puerto

1. En el menú de configuración, seleccione la ficha <Basic ()>.
2. Haga clic en <IP & Puerto>.
3. Haga clic en <Dirección IP>.
4. Establezca el <Config. IPv4>.
 - Tipo IP : selecciona un tipo de conexión IP.
 - Manual : Establece la dirección IP, la máscara de subred, la puerta de enlace, DNS1, DNS2 y el nombre de host.
 - DHCP : Establece DNS1, DNS2 y nombre de host.
 - PPPoE : Establece DNS1, DNS2, nombre de host, ID y contraseña.
 - Si lo define en <Manual>, debe especificar manualmente la IP, máscara de subred, puerta de enlace, DNS 1 y 2.
 - Dirección MAC : muestra la dirección MAC.
 - Dirección IP : muestra la dirección IP actual.
 - Máscara de subred : muestra la <Máscara de subred> para definir la IP.
 - Puerta de enlace : muestra la <Puerta de enlace> para definir la IP.
 - DNS1/DNS2 : muestra la dirección del servidor DNS (Servicio de nombres de dominios).
 - Nombre de host : muestra el nombre de host.



5. Establezca el <Config. IPv6>.

- Defínalo en <Uso> para utilizar la dirección IPv6.
 - Est. : se utiliza la dirección IPv6 predeterminada.
 - DHCP : muestra y utiliza la dirección IPv6 obtenida desde el servidor DHCP.
 - Manual : introduzca manualmente una dirección IP y una puerta de enlace y utilícela.
-  ■ El sistema de direcciones IP se definirá por defecto en DHCP. Si no se encuentra el servidor DHCP, se recuperarán automáticamente los ajustes anteriores.
- Una vez completada la edición, haga clic en [Aplicar] para aplicar los cambios y se saldrá del explorador. Tras un instante, conecte de nuevo con la IP modificada.

6. Haga clic en <Puerto>.

7. Introduzca cada elemento en el menú del puerto según sea necesario.
 - No está disponible ni el rango de puertos entre 0 y 1023 ni el puerto 3702.
 - HTTP : puerto HTTP utilizado para acceder a la encoder a través del explorador Web. El valor predeterminado es 80 (TCP).
 - La política de seguridad, no permite ajustar el puerto HTTP para los exploradores Safari y Google Chrome en 65535.
 - HTTPS : En esta versión, se ha reforzado la seguridad del protocolo de comunicación web HTTP. Se puede utilizar cuando se establece el modo HTTPS en SSL. El valor inicial se establece en 443 (TCP).
 - El rango de ajuste disponible es 1024 ~ 65535. (Por razones de seguridad, en el navegador Safari o Google Chrome, no puede usar 65535 como puerto HTTPS).
 - RTSP : se utiliza para transferir videos en el modo RTSP; el valor predeterminado es 554.
 - Tiempo agotado: Cuando se conecta a RTSP, esta función restablece la conexión si no hay respuesta durante un cierto tiempo.



- Si se cambió el puerto HTTP, el explorador se cierra. Posteriormente, a dirección debe contener el puerto HTTP recién asignado con la IP. Ej.: Dirección IP: 192.168.1.100, Puerto HTTP: Asignado 8080 → http://192.168.1.100:8080 (Si el puerto HTTP se establece en 80, no hay necesidad de especificar el número de puerto.)
- Se recomienda usar RTSP y HTTPS para evitar que se restablezca la información de la imagen.

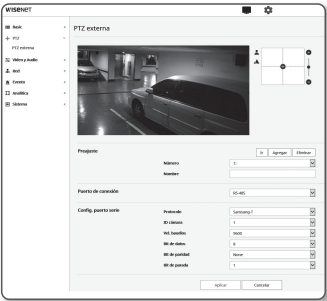
8. Una vez hecho, haga clic en [Aplicar].

CONFIGURACIÓN PTZ

PTZ externa

Establece el valor de conexión de la cámara PTZ externa para que el PTZ se pueda controlar a través de la cámara conectada al terminal RS-485 del codificador.

- En el menú de configuración, seleccione la ficha <PTZ (↕)>.
- Haga clic en <PTZ externa>.
- Configure el puerto de conexión.
 - RS-485 : Seleccione esto si desea controlar la cámara y el AUX remoto a través del terminal RS-485.
 - Coaxial : Ajuste para el control de la cámara. Se puede controlar PTZ y OSD.
- Configure el puerto serie. Si selecciona <RS-485> como puerto de conexión, puede configurar el modo de comunicación RS-485 de la cámara PTZ conectada.
 - Protocolo : Seleccione el mismo protocolo que la cámara, entre Samsung-T/Pelco-D/Pelco-P.
 - ID videocámara : muestra la identificación fija de la cámara.
 - Vel. baudios : velocidad de transferencia de las comunicaciones RS-485.
 - Datos : especifique los bits de datos.
 - Paridad : especifique el bit de paridad.
 - Bit parada : especifique el bit de parada.
- Una vez hecho, haga clic en [Aplicar].



■ Para esta operación, el codificador y la cámara PTZ deben estar conectados normalmente. Además, el puerto serie debe configurarse para operar la cámara PTZ.

■ Verifique las funciones admitidas por la cámara cuando está conectada. Algunas funciones pueden estar deshabilitadas según la especificación de la cámara o el protocolo. Consulte la siguiente tabla para más detalles.

Funciones aceptadas por cada protocolo

Protocolo	Control P	Velocidad de movimiento P	Control T	Velocidad de movimiento T	Control de Zoom	Velocidad de movimiento del zoom	Control de enfoque	Velocidad de control de enfoque	Guardar preajuste	Movimiento predefinido	Observaciones
SAMSUNG-T	0	0	0	0	0	0	0	X	0	0	
PELCO-D	0	0	0	0	0	0	0	X	0	0	
PELCO-P	0	0	0	0	0	0	0	X	0	0	

- Haga clic en el cursor [⬆] del panel táctil de la pantalla para controlar el movimiento de la pantalla.
 - Para desplazar la pantalla: desplace el curso en la dirección que desee.
 - Para regular la velocidad de movimiento de la pantalla: Cuanto más lejos se encuentra el cursor del centro, más rápido se mueve en la pantalla.
- Regule el movimiento del zoom.
 - Zoom acercamiento: desplace hacia arriba la barra que se encuentra a la derecha de UI, o pulse el botón [⬆]. Cuanto más lejos esté la barra del centro, más rápido se ampliará la pantalla.
 - Alejar zoom: desplace hacia abajo la barra que se encuentra a la derecha de UI, o pulse el botón [⬇]. Cuanto más lejos esté la barra del centro, más rápido se reducirá el tamaño de la pantalla.
- Ajuste el enfoque.
 - Enfoque manual (⬆ / ⬇) : Ajusta el enfoque de la pantalla para una distancia corta o una distancia larga.

■ El control de panorámica/inclinación/zoom solo es posible cuando el codificador está conectado a la cámara PTZ y <Serial setup> está configurado normalmente.

Para añadir una posición predefinida

- Seleccione el número de posición predefinida que va a añadir.
- Defina el nombre de la posición predefinida.
- Pulse el botón [Agregar].

Para suprimir una posición predefinida

- Seleccione el número de posición predefinida que va a añadir.
- Pulse el botón [Eliminar].

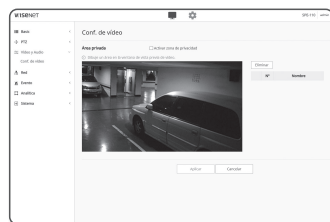
Para mover la posición predefinida

- Seleccione un número de predet. que desee mover.
- Pulse el botón [Ir].

h2> CONFIGURACION VIDEO

h3> Conf. de vídeo

1. En el menú de configuración, seleccione la ficha <Video & Audio (🔊)>.
2. Haga clic en <Conf. de vídeo>.
3. Especifique la zona de privacidad.
4. Una vez hecho, haga clic en [Aplicar].



h3> Para definir la zona privada

Puede especificar un área concreta del vídeo de la cámara para protegerla por privacidad.

1. Seleccione la casilla <Activar zona de privacidad>.
2. Haga clic en [Aceptar].
3. Haga clic y arrastre sobre el vídeo para seleccionar un área.
4. Introduzca el nombre y seleccione el color, y haga clic en [Aceptar].
5. Si desea eliminar un nombre de la lista, selecciónelo y haga clic en [Eliminar].

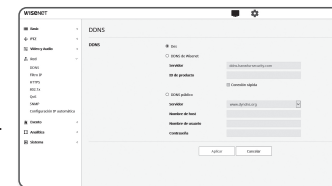
h2> CONFIGURACIÓN RED

h3> DDNS

DDNS es una abreviatura de Dynamic Domain Name Service que convierte la dirección IP de un codificador en un nombre de host general para que el usuario pueda recordarlo fácilmente.

- Puede utilizar el servicio DDNS sólo si Internet está conectado.

1. En el menú de configuración, seleccione la ficha <Red (🌐)>.
2. Haga clic en <DDNS>.
3. Seleccione el tipo de conexión <DDNS>.
4. Introduzca las opciones de DDNS según el tipo seleccionado.



- DDNS de Wisenet : se selecciona si utiliza el servidor de DDNS facilitado por Hanwha Vision.
 - ID de producto : introduzca el ID de producto registrado con el servicio Wisenet DDNS.
 - Conexión rápida : establece el reenvío automático de puertos cuando se utiliza con un enrutador compatible con UPnP (Universal Plug and Play).
- Si desea usar el servicio DDNS sin usar un centro que admita la función UPnP, haga clic en Conexión Rápida, después vaya al menú central y active el puerto de reenvío para su centro.
Para mayor información acerca de cómo puede establecer un puerto de reenvío para su hub, diríjase a "Configuración de Reenvío del Rango de Puertos (Asignación de Puertos)". (página 15)
- DDNS público : Seleccione uno de los servidores DDNS públicos que se facilitan cuando utilice un servidor DDNS público.
 - Servidor : permite seleccionar el servicio de DDNS público deseado.
 - Nombre de host : introduzca el nombre del host registrado en el servidor DDNS.
 - Nombre de usuario : introduzca el nombre de usuario del servicio DDNS.
 - Contraseña : introduzca la contraseña del servicio DDNS.

5. Una vez hecho, haga clic en [Aplicar].

- Si se selecciona <Conexión rápida>, asegúrese de seleccionar el servicio Wisenet DDNS.

Registro con DDNS

Para registrar el producto con DDNS de Wisenet

1. Visite el sitio Web de DDNS de Wisenet (<http://ddns.hanwha-security.com>) y regístrese con una cuenta creada.

2. En la barra de menú superior, seleccione <MY DDNS>.



3. Haga clic en la pestaña [Register Product] .

4. Introduzca el ID del producto.

5. Seleccione una <Type> y especifique el <Model>.

6. Especifique la ubicación del producto con una descripción en caso necesario.

7. Haga clic en [Product Registration].

El producto se añadirá a la lista de productos que puede comprobar.

Conectarse al DDNS de Wisenet en la configuración del codificador

1. En la página de configuración de DDNS, defina <DDNS> en <DDNS de Wisenet>.
2. Facilite el <ID de producto> especificado al registrar el ID del producto en el sitio DDNS.
3. Haga clic en [Aplicar].
Una vez que se establezca correctamente la conexión, aparecerá en pantalla el mensaje <(Correcto)>.

Configuración de DDNS público en la configuración del codificador

1. Abra la página de ajustes de DDNS y seleccione <DDNS público> para <DDNS>.
2. Introduzca el nombre de host del sitio, nombre de usuario y contraseña.
3. Haga clic en el botón [Aplicar].
Si la conexión se establece correctamente, aparece <(Correcto)>.
4. Una vez hecho, haga clic en [Aplicar].



- Para utilizar debidamente el servicio DDNS, es necesario configurar tanto DDNS como el reenvío de puertos del enrutador. Para la configuración del reenvío de puertos, consulte "Configuración de reenvío del rango de puertos (Asignación de puertos)". (página 15)

Filtro IP

Puede crear una lista de IPs a las que desee otorgar o denegar acceso.

1. En el menú de configuración, seleccione la ficha <Red ()>.
2. Haga clic en <Filtro IP>.
3. Seleccione <Tipo de filtro>.
 - Denegar : si se selecciona, se restringirá el acceso desde las IPs añadidas.
 - Permitir : si se selecciona, se permitirá el acceso sólo desde las IPs añadidas.
4. Haga clic en el botón [Agregar].
Se creará la lista de IP.
5. Facilite la IP a la que desee otorgar o denegar el acceso.
Cuando introduzca una dirección IP y un prefijo, la lista de direcciones IP disponibles aparecerá en la columna de rango del filtro del lado derecho.



- Si se selecciona <Permitir> para Filtrado IP y <Config. IPv6> de <IP & Puerto> se establece en <Uso>, deben asignarse las direcciones IPv4 e IPv6 del ordenador que se esté configurando.
- La dirección IP del equipo utilizado para realizar la configuración actual no se puede añadir a <Denegar>, debe añadirse a <Permitir>.
- Sólo aparecerán las direcciones IP que estén definidas en <Uso> en la columna del filtro.

6. Seleccione una IP para borrarla de la lista.
Haga clic en el botón [Eliminar].
7. Una vez hecho, haga clic en [Aplicar].

HTTPS

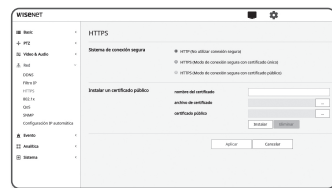
Puede seleccionar un sistema de conexión seguro o instalar el certificado público para este fin.

1. En el menú de configuración, seleccione la ficha <Red (🔧)>.

2. Haga clic en <HTTPS>.

3. Seleccione un sistema de conexión seguro.

- Para acceder al codificador usando el modo HTTPS, debe escribir la dirección IP del codificador en formato de "https://<IP_Encoder>". Si no puede configurar los ajustes de Web viewer en el modo HTTPS con Internet Explorer, edite las opciones de Internet como se indica a continuación: <Menú → Herramientas → Opciones de Internet → Avanzado → Seguridad → Quite la marca de TLS 1.0 y marque TLS 1.1, TLS 1.2>



4. Busque el certificado público que desea instalar en el codificador.

Para instalar el certificado en el codificador, debe proporcionar un nombre de certificado (puede asignarlo arbitrariamente el usuario), un archivo de certificado emitido por la autoridad de certificación y un archivo de clave.

- La opción <HTTPS (Modo de conexión segura con certificado público)> sólo se activará si se ha instalado un certificado público.

5. Una vez hecho, haga clic en [Aplicar].

Instalación del certificado

1. Introduzca el nombre del certificado.
2. Haga clic en el botón [Explorar (🔍)], seleccione el archivo de certificado público y el archivo de la clave para su instalación y, a continuación, haga clic en el botón [Instalar].

Eliminación del certificado

1. Haga clic en el botón [Eliminar].
2. Para borrar un certificado público, debe acceder al descodificador de vídeo de red en el modo de <HTTP (No utilizar conexión segura)> o <HTTPS (Modo de conexión segura con certificado único)>.

802.1x

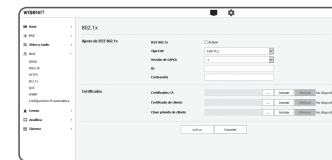
Al conectar a red, puede elegir si utilizar el protocolo 802.1x e instalar el certificado.

1. En el menú de configuración, seleccione la ficha <Red (🔧)>.

2. Haga clic en <802.1x>.

3. Defina <Ajuste de IEEE 802.1x>.

- IEEE 802.1x : especifica el uso del protocolo 802.1x.
- Tipo EAP : Seleccione EAP-TLS o LEAP.
- Versión de EAPOL : seleccione la versión 1 o 2.
- ID : Introduzca el ID de certificado de cliente en EAP-TLS y el ID de usuario en LEAP.
- Contraseña : Introduzca la contraseña de la clave privada del cliente en EAP-TLS y la contraseña de usuario en LEAP. No tiene que escribir la contraseña en EAP-TLS si utiliza un archivo de clave que no está encriptado.



- Si el dispositivo de red conectado no admite el protocolo 802.1x, el protocolo no funcionará debidamente aunque lo defina.
- LEAP es un método de autenticación de baja seguridad. Sólo se debe usar en un entorno donde EAP-TLS no esté disponible.

4. Instale/elimine el certificado.

Sólo se necesita el certificado para EAP-TLS.

- Certificados CA : seleccione un certificado público que contenga la clave pública.
- Certificado de cliente : seleccione un certificado público que contenga la clave de certificado de cliente.
- Clave privada de cliente : seleccione un certificado público que contenga la clave privada de cliente.

5. Una vez hecho, haga clic en [Aplicar].

Para instalar/eliminar los certificados relacionados con 802.1x

1. Pulse el botón [Explorar] en cada elemento y seleccione un certificado para instalarlo.
2. Si no hay instalado ningún certificado, aparecerá "No disponible" al lado del elemento seleccionado.
3. Pulse el botón [Instalar] para empezar la instalación con un mensaje que indica "Instalado" al lado del elemento.
4. Pulse el botón [Eliminar] para eliminar el certificado.

QoS

Puede especificar la prioridad para asegurar la velocidad de transferencia estándar para un IP específico.

1. En el menú de configuración, seleccione la ficha <Red (🏠)>.
2. Haga clic en <QoS>.
3. Haga clic en el botón [Agregar].
Se creará la lista de IP.
4. Introduzca una dirección IP a la que vaya a aplicar QoS.

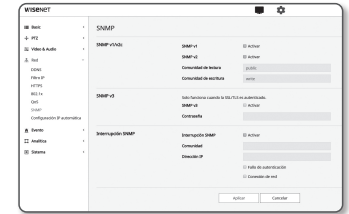


- El prefijo predeterminado para IPv4 es 32. Para DSCP, el valor predeterminado se define en 63.
 - Sólo pueden priorizarse las direcciones IP definidas en <Uso>.
5. Seleccione una IP para borrarla de la lista.
Haga clic en el botón [Eliminar].
 6. Una vez hecho, haga clic en [Aplicar].

SNMP

Con los protocolos SNMP, el administrador del sistema o de red puede controlar los dispositivos de red en un sitio remoto y configurar los ajustes del entorno.

1. En el menú de configuración, seleccione la ficha <Red (🏠)>.
2. Haga clic en <SNMP>.
3. Especifique la <SNMP>.



- Activar SNMP v1 : se activará la versión 1 de SNMP.
 - Activar SNMP v2c : se activará la versión 2 de SNMP.
 - Comunidad de lectura : facilite el nombre de la comunidad de lectura en la que puede acceder a la información de SNMP. El valor predeterminado es <public>.
 - Comunidad de escritura : facilite el nombre de la comunidad de escritura en la que puede acceder a la información de SNMP. El valor predeterminado es <write>.
 - Activar SNMP v3 : se activará la versión 3 de SNMP.
 - Contraseña: especifique la contraseña predeterminada para la versión 3 de SNMP.
 - La contraseña predeterminada puede estar expuesta a riesgos de piratería, por lo que recomendamos que cambie la contraseña después de instalar el producto.
Tenga en cuenta que otros problemas que sucedan por no cambiar la contraseña será responsabilidad del usuario.
 - La contraseña debe tener entre 8 y 16 caracteres de longitud.
 - Actvar SNMP Trap: SNMP trap se utiliza para enviar los eventos y las condiciones importantes al administrador del sistema.
 - Comunidad: Introduzca el nombre de la comunidad de captura para recibir mensajes.
 - Dirección IP: Introduzca la dirección IP a la que se enviarán los mensajes.
 - Notificación de fallo de autenticación: Indica si se produce alguna actividad cuando la información de la comunidad no es válida.
 - Conexión de red: Indica si se produce alguna actividad cuando la conexión de la red se restaura.
4. Una vez hecho, haga clic en [Aplicar].

- ! ■ SNMP v3 sólo puede definirse cuando el modo de conexión seguro sea HTTPS.
Consulte "HTTPS". (página 28)
- Si no utiliza SNMP v3 puede producirse un problema de seguridad.

Configuración IP automática

Puede configurar la IP disponible para el acceso y la búsqueda del codificador de forma automática.

1. En el menú de configuración, seleccione la ficha <Red (🏠)>.

2. Haga clic en <Configuración IP automática>.

3. Defina <Dirección local de enlace IPv4>.

Se puede asignar una dirección IP adicional para evaluar el codificador desde la red local de enlace.

- Configuración automática: Indica la activación o desactivación de la dirección IPv4 de enlace local.
- Dirección IP: Muestra la dirección IP asignada.
- Máscara de subred: Muestra la máscara de subred de la dirección IP asignada.

4. Defina <UPnP descubrimiento>.

Los codificadores pueden buscarse automáticamente en el cliente y en el sistema operativo en compatibilidad con el protocolo UPnP.

- UPnP descubrimiento: Especifica la activación o desactivación de búsqueda de UPnP.
- Nombre fácil de usar: Muestra el nombre del codificador.

El nombre se muestra en el formato de WISENET-<Model Name>-<MAC Address>.

- En el sistema operativo Windows, que básicamente es compatible con UPnP, se muestran los codificadores conectados a la red.

5. Defina <Bonjour>.

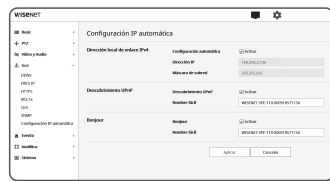
Los codificadores pueden buscarse automáticamente en el cliente y en el sistema operativo en compatibilidad con el protocolo Bonjour.

- Bonjour: Especifica la activación o desactivación de Bonjour.
- Nombre fácil de usar: Muestra el nombre del codificador.

El nombre se muestra en el formato de WISENET-<Model Name>-<MAC Address>.

- En el sistema operativo Mac, que admite Bonjour por defecto, los codificadores conectados se muestran automáticamente en el marcador Bonjour del navegador web Safari.
Si los favoritos de Bonjour no aparecen, compruebe la configuración de Favoritos en el menú "Preferencias".

6. Una vez hecho, haga clic en [Aplicar].



CONFIGURACIÓN DE EVENTOS

Configuración de eventos

Puede configurar fácilmente los elementos de detección del evento y acceder a la configuración detallada.

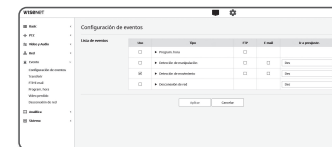
1. En el menú de configuración, seleccione la ficha <Evento (🏠)>.

2. Haga clic en <Configuración de eventos>.

3. Active los elementos que prefiera en la lista Evento.

4. Una vez hecho, haga clic en [Aplicar].

- Para configurar los ajustes detallados de eventos, haga clic en un tipo deseado. Se le redirigirá a la configuración detallada.



Entregar

La detección de eventos se puede usar junto con una cámara adicional con una función de preajuste PTZ. Cuando se detecta un evento, la cámara PTZ de interfuncionamiento se mueve a la posición preestablecida y puede realizar la supervisión.

1. En el menú de configuración, seleccione la ficha <Evento (🏠)>.

2. Haga clic en <Transferir>.

- Cámara receptora : Registre la cámara que se va a interconectar con la detección de eventos. Haga clic en [Agregar] en la parte superior del menú para ingresar la dirección IP, el puerto, la ID, la contraseña de la cámara que se va a utilizar, y el número preestablecido al que se moverá cuando detecte un evento.
 - La transferencia se puede utilizar para la detección de movimiento/detección de manipulación/clasificación de sonido/detección de eventos IVA.
 - Solo funciona normalmente si se especifica el preajuste configurado en la cámara del receptor.
 - La transferencia admite solo un preajuste por área.

3. Una vez hecho, haga clic en [Aplicar].



FTP / E-mail

Puede configurar los ajustes del servidor de FTP/Email de forma que pueda transferir las imágenes tomadas en la cámara al PC si se produce un evento.

1. En el menú de configuración, seleccione la ficha **<Evento (🏠)>**.

2. Haga clic en **<FTP / E-mail>**.

3. Seleccione **<Config. FTP>** o **<Config. E-mail>** e introduzca / seleccione el valor que desee.

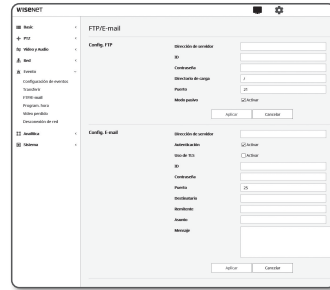
• Config. FTP

- Dirección de servidor : introduzca la dirección IP del servidor de FTP a la que transferir las imágenes de la alarma o del evento.
- ID : introduzca el ID de usuario con el que desea iniciar sesión en el servidor de FTP.
- Contraseña : introduzca la contraseña de cuenta de usuario para iniciar sesión en el servidor de FTP.
- Directorio de carga : especifique la ruta de FTP a la que va a transferir las imágenes de la alarma o del evento.
- Puerto : el puerto predeterminado del servidor de FTP es 21; no obstante, puede utilizar un número de puerto diferente según los ajustes del servidor de FTP.
- Modo pasivo : seleccione **<Act>** si tiene que conectar en modo pasivo debido a cortafuegos o a los ajustes del servidor de FTP.

• Config. E-mail

- Dirección de servidor : introduzca la dirección SMTP del servidor de correo electrónico a la que transferir las imágenes de la alarma o del evento.
- Autenticación : permite seleccionar si utilizar autorización.
- Uso de TLS : especifica el uso de TLS.
- ID : introduzca el ID de usuario para iniciar sesión en el servidor de email.
- Contraseña : introduzca la contraseña de cuenta de usuario para iniciar sesión en el servidor de email.
- Puerto : el puerto predeterminado del servidor de email es 25; no obstante, puede utilizar un número de puerto diferente según los ajustes del servidor de email.
- Receptor : introduzca la dirección del receptor de email.
- Emisor : introduzca la dirección del emisor del mensaje de correo electrónico. Si la dirección del emisor es incorrecta, es posible que el mensaje de correo del emisor lo clasifique como correo basura el servidor de email y no se envíe.
- Asunto : introduzca el asunto del email.
- Cuerpo : facilite el texto del mensaje. Adjunte las imágenes de la alarma o del evento al mensaje de correo electrónico que está preparando.

4. Una vez hecho, haga clic en **[Aplicar]**.



Programación de hora

Puede configurar los ajustes para transmitir imágenes a intervalos regulares en una operación programada independientemente de la ocurrencia de un evento.

1. En el menú de configuración, seleccione la ficha **<Evento (🏠)>**.

2. Haga clic en **<Program. hora>**.

3. Defina o no **<Activar>**.

4. Especifique el **<Intervalo de transferencia>**.

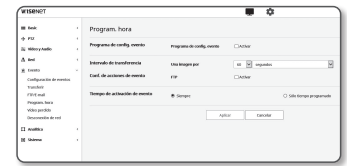
5. Especifique el **<Tiempo de activación de evento>**.

- Siempre : Ejecuta siempre la acción definida. Cuando ocurre un evento, realiza la acción definida.
 - Si se define en **<Siempre>**, no es posible cambiar la hora de activación.
- Sólo tiempo programado : Periódicamente realiza una acción específica a la hora y día predeterminados.
 - [1 min | 30 min | 1 h] : Establece el formato de visualización de la hora en el eje vertical.
 - [Reinicializar] : reinicia todos los ajustes.

6. Seleccione una acción que se activará cuando se produzca el evento.

- FTP : Establece si FTP se transfiere o no cuando se produce un evento de programación.
 - Consulte la sección **"FTP / E-mail"** para más detalles. (página 31)

7. Una vez hecho, haga clic en **[Aplicar]**.



Vídeo perdido

Puede configurarse para generar un evento y notificar a los usuarios en caso de desconexión de la cámara y, como resultado, la pérdida de vídeo.

1. En el menú de configuración, seleccione la ficha **<Evento (🏠)>**.

2. Haga clic en **<Vídeo perdido>**.

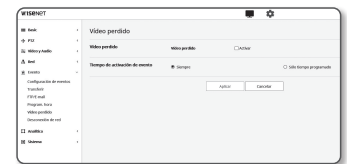
3. Seleccione el canal a establecer.

4. Defina o no **<Activar>**.

5. Configure el tiempo de activación.

- Para obtener más información acerca de **<Tiempo de activación de evento>**, consulte **"Programación de hora"**. (página 31)

6. Una vez hecho, haga clic en **[Aplicar]**.



Detección de red

Cuando la red está físicamente desconectada, se considera como un evento que debe guardarse.

1. En el menú de configuración, seleccione la ficha <Evento (🏠)>.

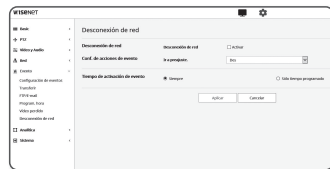
2. Haga clic en <Detección de red>.

3. Defina o no <Activar>.

4. Configure el calendario de movimiento del evento y las condiciones de movimiento del evento.

- Ir a predef. : Se desplaza a la ubicación del ajuste predeterminado cuando ocurre el evento.
 - El movimiento preestablecido solo es posible cuando el codificador y la cámara PTZ están conectados.
 - Para más información sobre <Tiempo de activación de evento> y <Conf. de acciones de evento>, consulte "Programación de hora". (página 31)

5. Una vez hecho, haga clic en [Aplicar].



CONFIGURAR LOS AJUSTES DE ANÁLISIS

Detección de movimiento

Puede configurar los ajustes para generar una señal de evento cuando se detecta un movimiento.

1. En el menú de configuración, seleccione la ficha <Analítica (🔍)>.

2. Haga clic en <Detección de movimiento>.

3. Defina o no <Activar detección de movimiento>.

4. Establezca un <Área ROI> y <Excluir área>.

Puede configurar hasta 4 áreas.

Puede especificar los ajustes de nivel y sensibilidad por separado para cada área.

Al hacer clic en cuatro puntos de la pantalla, puede crear una forma cuadrilateral.

5. Configure los ajustes para cada elemento.

- Sensibilidad : Establece la sensibilidad de la detección de movimiento para cada área. Disminuya la sensibilidad en un entorno donde el fondo y el objeto se distinguen claramente y aumente la sensibilidad en un entorno oscuro donde el fondo y el objeto no pueden distinguirse con claridad.

6. Seleccione si usar o no la transferencia.

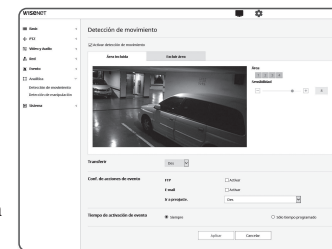
Cuando se detecta un movimiento en el área de detección configurada, una cámara específica se mueve a una posición preestablecida de PTZ específica.

- Puede especificar cámaras por área de detección.

7. Configure el calendario de movimiento del evento y las condiciones de movimiento del evento.

- Para más información sobre <Tiempo de activación de evento> y <Conf. de acciones de evento>, consulte "Programación de hora". (página 31)

8. Una vez hecho, haga clic en [Aplicar].



- Use grabación continua en lugar de grabación de eventos de detección de movimiento en áreas donde la detección de movimiento es frecuente.
- Como el registro se registra una vez cada 5 minutos, los datos protegidos del registro de detección de movimiento pueden dañarse cuando se apaga.
- El tamaño detectado de un objeto puede diferir del tamaño real según sea su forma.
- En los siguientes casos, el rendimiento de detección de movimiento puede verse afectado o puede producirse un mal funcionamiento.
 - El color o el brillo del objeto es similar al fondo.
 - Pequeñas actividades alrededor del área del borde del campo de visión de la cámara.
 - Continúan sucediendo de forma aleatoria varios movimientos debido al cambio de escena, a cambios rápidos de iluminación o a otras razones.
 - Un objeto fijo continúa moviéndose en la misma posición.
 - Movimientos con un cambio de posición menor como la aproximación a la cámara o la desaparición de la misma.
 - Un objeto en movimiento que se acerca demasiado a la cámara.
 - Un objeto se oculta tras otros objetos.
 - Un objeto demasiado rápido (para la detección correcta, un objeto debe encontrarse solapado en fotogramas contiguos).
 - Reflejos / objetos borrosos / sombras debido a la luz potente como la luz directa del sol, la iluminación o faros.
 - Con fuertes tormentas de nieve, lluvia, viento o al amanecer / anochecer.

Detección de sabotaje

Puede establecer que se detecten los intentos de sabotaje y activar eventos, como el cambio repentino de la dirección de encuadre de la cámara, el bloqueo del objetivo y otros cambios de escena generales del vídeo.

1. En el menú de configuración, seleccione la ficha <Analítica (🔍)>.

2. Haga clic en <Detección de sabotaje>.

3. Defina o no <Activar detección de manipulación>.

4. Ajuste la sensibilidad.

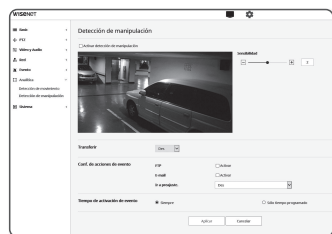
Cuanto mayor sea el valor establecido, más sensible será la reacción de la cámara (rango: 1 a 3).

5. Seleccione si usar o no la transferencia.

6. Configure el calendario de movimiento del evento y las condiciones de movimiento del evento.

■ Para más información sobre <Tiempo de activación de evento> y <Conf. de acciones de evento>, consulte "Programación de hora". (página 31)

7. Una vez hecho, haga clic en [Aplicar].



! ■ La detección se reiniciará después de la estabilización durante un cierto período de tiempo (unos 5 segundos). Durante la estabilización, la detección no está disponible.

■ Si se generan frecuentemente alarmas falsas, debe disminuir gradualmente la sensibilidad para minimizarlas.

■ Si utiliza una sensibilidad baja, las alarmas pueden generarse incluso con cambios muy pequeños en la pantalla, pero se puede producir una falsa detección en respuesta a cambios en objetos en movimiento o brillo.

■ En los siguientes casos, la función de detección de atemperado puede funcionar incorrectamente.

- Monitorización de entorno con fondo simple, noche y bajo nivel de luz ambiental.
- Fuertes vibraciones de la cámara o cambios repentinos en la iluminación

CONFIGURACIÓN DEL SISTEMA

Información del sistema

1. En el menú de configuración, seleccione la ficha <Sistema (⚙️)>.

2. Haga clic en <Información del sistema>.

3. Compruebe la información de la codificador o facilite detalles de acuerdo con el entorno de red.

• Modelo : nombre del modelo del producto.

• No. de serie : No. de serie del producto.

• Nombre del dispositivo : facilite el nombre del dispositivo que aparecerá en la pantalla en directo.

• Ubicación : Especifique la ubicación donde está instalado el codificador.

• Descripción : Proporcione información detallada sobre la ubicación del codificador.

• Notas : Proporcione una explicación sobre el codificador para una mejor comprensión.

• Idioma : Seleccione el idioma que desee para la OSD de Web Viewer.

✍️ ■ El idioma predeterminado se define en <English>.

• Tipo de dispositivo : Establezca el tipo de producto.

Para más detalles, consulte la "Guía de configuración del tipo de dispositivo" (página 36).

4. Una vez hecho, haga clic en [Aplicar].



Actualizar / Reiniciar

1. En el menú de configuración, seleccione la ficha <Sistema (⚙️)>.

2. Haga clic en <Actualizar / Reiniciar>.

3. Seleccione el elemento que desee y defínalo de la forma apropiada.

• Actualizar : realiza la actualización del sistema.

Al volver a conectar, el visor web no se ejecutará normalmente si la caché del navegador no está completamente clara.

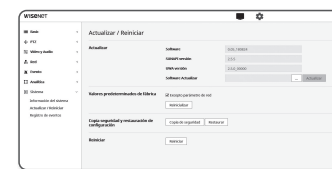
• Valores predeterminados de fábrica : Inicializa toda la información de configuración, incluida la configuración del codificador, a la configuración de fábrica (sin embargo, los registros no se inicializan).

- Si selecciona la casilla <Excepto parámetro de red>, la configuración de red se excluirá y se restablecerá.

■ El sistema de dirección IP se definirá de forma predeterminada en DHCP si reinicia la cámara. Si no se encuentra el servidor DHCP, se recuperarán automáticamente los ajustes anteriores.

• Copia seguridad y restauración de configuración : hace una copia de seguridad de los ajustes actuales del sistema antes de realizar el proceso de restauración. El sistema se reinicia automáticamente tras una copia de seguridad o una restauración.

• Reiniciar : reinicia el sistema.



Para realizar la actualización

1. Haga clic en **[Explorar (...)]** y especifique un archivo para la actualización.
2. Haga clic en **[Actualizar]**.
3. Aparece una barra de progreso de **"Actualizar"** para mostrar el estado de actualización.
4. Una vez completada la actualización, el navegador se cierra y el codificador se reinicia.



- Es posible que el proceso de actualización tarde hasta 10 minutos.
Si termina a la fuerza el proceso de actualización, la actualización no se completará debidamente.
- Durante el reinicio del sistema, no se realizará el acceso con Web Viewer.
- Puede descargar la versión más reciente desde el sitio Web de Hanwha Vision.

Para hacer una copia de los ajustes actuales

1. Haga clic en **[Copia de seguridad]**.
2. Se guarda un archivo en formato de archivo **".bin"** en **"Library"** -> **"Document"** -> **"Downloads"**.

Para restaurar los ajustes de la copia de seguridad

1. Para restaurar los ajustes de copia de seguridad, haga clic en **[Restaurar]**.
2. Seleccione un archivo de copia de seguridad deseado.

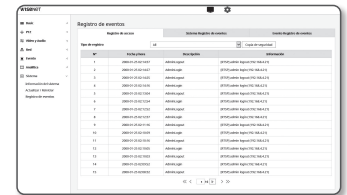


- Si realiza la copia de seguridad o la restauración, el navegador web se cerrará y el codificador se reiniciará.
- Si se intenta recuperar el archivo de configuración guardado como copia de seguridad en otro modelo, es posible que algunas funciones no funcionen correctamente y que sea necesario cambiar la configuración manualmente.

Registro de eventos

Puede comprobar el registro del sistema o el registro de eventos.

1. En el menú de configuración, seleccione la ficha **<Sistema ()>**.
2. Haga clic en **<Registro de eventos>**.
3. Seleccione un tipo de registro.
 - Registro de acceso : Puede comprobar la información de registro que contiene el acceso del usuario y el tiempo de acceso.
 - Registro del sistema : puede comprobar los registros del sistema en los casos en los que se graben cambios del sistema incluida la información de hora.
 - Registro de eventos : puede comprobar los registros de eventos incluida la información de hora.
4. En la lista de registros de la derecha, seleccione un elemento que buscar.
 - Si seleccione **<All>** en la lista desplegable de la parte superior izquierda, aparecerán todos los registros del tipo de registro aplicable.
5. Si en una página no se puede mostrar todos los registros disponibles, utilice los botones inferiores para desplazarse al elemento anterior, siguiente o al último.
6. Haga clic en el botón **<Copia de seguridad>** para guardar todos los datos de registro del modo seleccionado actualmente en el "valor de sello de tiempo creado por el codificador en el archivo modelname-mode-encoder.txt" en la carpeta de descarga del navegador.



- Cada página muestra 15 registros con el más reciente en la parte superior.
- Cada registro contiene hasta 1000 registros. Después de 1000 registros, estos se guardan y se borra el registro más antiguo cuando se genera un nuevo registro.

ESPECIFICACIONES

Opciones		Descripción
Video	Canal de entrada	1CH BNC 1.0 Vp-p/compuesto 75Ω NTSC/PAL
	Señal de entrada y resolución	CVBS, AHD(720p, 1080p, 4MP), CVI(720p,2MP), TVI(720p,2MP) detección automática
Funcionamiento	Detección de movimiento	Apagado/Encendido (zonas del rectángulo 4ea)
	Máscara de privacidad	Apagado/Encendido (zonas del rectángulo 4ea)
	Se activa la alarma	Detección de movimiento, pérdida vídeo, alteración
	Evento de alarma	Subida de archivo a través de FTP, E-Mail
	Interfaz de control remoto	1ea RS-485/422
	Protocolo RS-485	SAMSUNG-T, PELCO-P/D
	Control coaxial	NTSC/PAL: Pelco-C (Coaxitron) AHD: ACP(Protocolo AHD Coax)
Red	Ethernet	1 RJ-45 10/100Base-T
	Formato de compresión de vídeo	H.264 (MPEG-4 Parte 10/AVC): Principal/Base/Alto, MJPEG
	Resolución	2560x1440, 1920x1080, 1280x720, 640x360, 928x480(N), 704x480(N), 704x240(N), 352x240(N), 928x576(P), 704x576(P), 704x288(P), 352x288(P)
	Velo. máx. de fotogramas	- Transmisión principal 4MP : 15fps/CH, 1080p/720p/WD1/4CIF/CIF : 30fps/CH(N), 25fps/CH(P) - Transmisión secundaria WD1/4CIF : 12fps/CH, 2CIF/CIF/QVGA/QCIF : 30fps/CH(N), 25fps/CH(P) - MJPEG : 2fps @ 1920x1080, 1280x720, 960H, D1
	Método de control de vel. de bits	H.264 : CBR o VBR MJPEG : CBR
	Capacidad de flujo de datos	Transmisión múltiple (hasta 3 perfiles) - Puede registrar hasta 10 perfiles en total.
	IP	IPv4, IPv6

Opciones		Descripción
Red	Protocolo	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, ONVIF, 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)
	Método de flujo de datos	Unicast / Multicast
	Acceso máx. de usuarios	6 usuarios en modo Unicast
	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
	Visor Web	SO admitido : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Navegador compatible : Google Chrome 63, MS Edge 41, Mozilla Firefox 57 (sólo compatible con Window 64bit), Apple Safari 11 (sólo compatible con Mac OS X), Microsoft IE 11
	Software de gestión central y grabador	SmartViewer, SSM, WiseNet Mobile Viewer, NVR(Hanwha Vision, serie P/X/Q)
Ambiental	Temperatura / Humedad de funcionamiento	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% HR
	Tensión/corriente de entrada	CC12V, PoE(IEEE 802.3af)
Eléctrico	Consumo de energía	Max 3,6 W (DC), Max 4.0 W (PoE)
	Color / Material	Blanco(Plástico), Plata(Metal)
Mecánico	Dimensiones	Al 43,0 x An 29,2 x Prof 94,15mm
	Peso	104g

ESPECIFICACIONES COMPATIBLES DETALLADAS DEL VISOR WEB

Categoría		Windows 7	Windows 10	Windows 7/10			Mac
		IE 11		Edge	Chrome	Firefox	Safari (Ver. 10.1 o posterior / Ver. 11 o posterior)
Función en vivo	Capturar	Compatible	Compatible	Compatible	Compatible	Compatible	No compatible (compatible/compatible)
	Recodificación de instancia	No compatible	No compatible	Compatible	Compatible	Compatible	No compatible (compatible/compatible)
	Recuento de píxeles	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible (Compatible/Compatible)
	Visualización de eventos	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible (Compatible/Compatible)
Configuración común	Todas las funciones	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible

GUÍA DE CONFIGURACIÓN DEL TIPO DE DISPOSITIVO

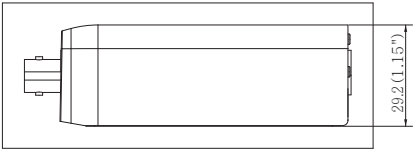
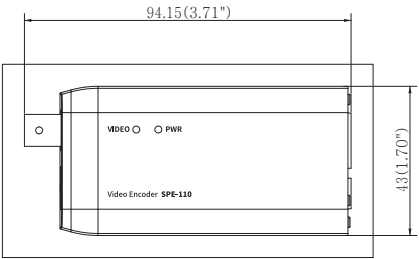
Consulte la tabla de a continuación para conectar su codificador al SSM.

Para más detalles, consulte “Configuración del sistema” en el manual.

	SSM 2.0 o inferior	SSM 2.1 o superior
Tipo de dispositivo	NWC	Encoder

VISTA DEL PRODUCTO

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.	- 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". - 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.
No puedo acceder al codificador desde un navegador web.	- Compruebe para asegurarse de que la configuración de red del codificador es la adecuada. - Compruebe para asegurarse de que todos los cables de red se han conectado bien. - Si está conectado mediante DHCP, verifique que el codificador pueda adquirir direcciones IP dinámicas sin ningún problema. - Si el codificador está conectado a un router de banda ancha, verifique que el reenvío de puertos esté configurado correctamente.
El Visualizador se desconecta durante el control.	- Los Visualizadores conectados se desconectan debido a cualquier cambio en las configuraciones de codificador o de red. - Compruebe todas las conexiones de red. - Si el codificador está conectado a través de una red PPPoE, es posible que el visor se desconecte en condiciones de red deficientes.
El codificador conectado a la red no se detecta en el programa de instalación de IP.	Desactive la configuración del firewall de su PC y luego busque el codificador nuevamente.
Se superponen imágenes.	Verifique si dos o más codificadores están configurados para una misma dirección de multidifusión en lugar de estarlo para direcciones diferentes. Si se usa una sola dirección para múltiples codificadores, las imágenes pueden superponerse.

PROBLEMA	SOLUCIÓN
No aparece imagen.	Si el método de transmisión está configurado para multidifusión, verifique si hay un router que admita multidifusión en la LAN a la que está conectado el codificador.
<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.	- Verifique los ajustes en la secuencia siguiente: - Compruebe los ajustes de <Fecha y hora>. <Detección de movimiento> debe definirse en <Activar>. - Compruebe si la opción <E-mail> del menú <Config. de evento> está marcada para ser utilizada.
Se ha recibido el vídeo, pero no aparece nada en la pantalla. Sólo se muestra una pantalla de pérdida vídeo.	- Compruebe si el vídeo de la cámara conectada al codificador funciona correctamente. A veces esto sucede cuando la cámara de vídeo no se recibe correctamente. - Verifique si la alimentación de la cámara es correcta. - A veces, este problema puede ocurrir en un canal con una señal de vídeo débil de un distribuidor de vídeo que está conectado a varios sistemas. En este caso, introduzca la fuente de vídeo de la cámara directamente en el codificador. Esto podría resolver el problema.
No hay respuesta, incluso si hago clic en el menú [PTZ] de la pantalla en vivo.	Configuración → PTZ → PTZ externo → Verifique si los protocolos actuales y otras configuraciones del dispositivo PTZ están configurados correctamente según la cámara PTZ.
Olvidé la contraseña	- Contacte con el administrador del codificador para obtener ayuda. - Realice un restablecimiento de fábrica presionando el botón [RESET]. Tenga en cuenta que esto también inicializará los valores de configuración.

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GPL SW

Component Name	License	URL
Base Kernel	GPL 2.0	
Busybox	GPL 2.0	http://www.busybox.net/downloads/snapshots
iproute2-4.3.0	GPL 2.0	
iptables-1.4.21	GPL 2.0	http://ftp.netfilter.org/pub/iptables
ethtool-4.2	GPL 2.0	
mtdd-1.5.2	GPL 2.0	ftp://ftp.infradead.org/pub/mtdd-utils
mi-diag-2.11	GPL 2.0	
rp-pppoe-3.11	GPL 2.0	http://www.roaringpenguin.com/pppoe/
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	http://www.webdav.org/neon/

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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 webserver and takes care of opload. 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.cctv@hanwha.com.

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- Version 1.1

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

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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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