

WISENET

ТЕПЛОВИЗИОННАЯ СЕТЕВАЯ КАМЕРА

Руководство пользователя

TNO-4030T/TNO-4040T/TNO-4041T
TNO-4050T/TNO-4051T
TNO-4030TR/TNO-4040TR/TNO-4041TR



Тепловизионная Сетевая Камера

Руководство пользователя

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❖ Первоначальный ID администратора - "admin", а пароль следует задать при первом входе в систему.

Для надежной защиты личной информации и предотвращения ущерба от кражи данных меняйте пароль каждые три месяца.

Имейте в виду, что ответственность за безопасность а также за любые проблемы, связанные с ненадлежащим обращением с паролем, несет пользователь.

ВАЖНЫЕ ПРАВИЛА ТЕХНИКИ БЕЗОПАСНОСТИ

1. Прочтите эти правила.
2. Сохраните эти правила.
3. Принимайте во внимание все предупреждения.
4. Следуйте всем правилам.
5. Не используйте изделие вблизи воды.
6. Очищайте загрязненные места на поверхности изделия мягкой, сухой или влажной тряпкой. (Не используйте моющие средства либо косметические продукты, содержащие спирт, растворители. либо ПАВ, либо смазочные материалы, поскольку они могут привести к деформации или повреждению продукта.)
7. Не загромождайте никакие вентиляционные отверстия. Выполните установку изделия в соответствии с инструкциями изготовителя.
8. Не устанавливайте изделие рядом с источниками тепла, такими, как радиаторы, решетки системы отопления, или другими устройствами, которые генерируют тепло (включая усилители).
9. В целях безопасности не отказывайтесь от использования вилок поляризованного или заземляющего типа. Вилка поляризованного типа имеет два ножевых контакта, один из которых шире другого. Вилка заземляющего типа имеет два контакта и третий заземляющий штырь. Широкое лезвие третьего заземляющего штыря предусмотрено для вашей безопасности. Если вилка поставляемого вместе с аппаратом шнура питания не подходит для вашей розетки, попросите опытного электрика заменить старую розетку.
10. Не наступайте на шнур питания и не допускайте его защемления, особенно вблизи от штепсельной вилки, в месте подключения к розетке и там, где шнур выходит из изделия.
11. Пользуйтесь только теми приспособлениями/ принадлежностями, которые рекомендованы изготовителем.
12. Используйте устройство только с тележкой, подставкой, штативом, кронштейном и столом, указанными производителем или приобретенными вместе с устройством. Во избежание травм вследствие опрокидывания тележки с устройством соблюдайте осторожность при ее передвижении.
13. Отсоединяйте устройство от сети во время грозы или если оно не используется в течение длительного времени.
14. Все работы, связанные с техническим обслуживанием изделия, должны выполняться квалифицированными специалистами по техническому обслуживанию. Обслуживание изделия требуется выполнять, когда изделие получило какое-либо повреждение, например, был поврежден его шнур питания или вилка шнура питания, внутрь изделия попала жидкость или посторонние предметы, изделие подверглось воздействию дождя или влаги, изделие не работает должным образом, а также после падения изделия.
15. Данное изделие предназначено для питания от утвержденных источников питания с маркировкой "Class 2" или "LPS" с номинальным выходом 24 В перемен. тока (50/60 Гц), не менее 0.91А, либо 12 В пост. тока, не менее 0.83А.
16. Если при установке изделия прилагать чрезмерные усилия, возможно повреждение с нарушением работы камеры. Если с силой устанавливать устройство, пользуясь неподходящими инструментами, возможно повреждение устройства.
17. Не допускается установка устройства в местах, где присутствуют или могут появляться химические вещества или пары масла. Поскольку пищевые масла, например, соевое, могут вызвать повреждение или привести к деформации устройства, не устанавливайте его на кухне или вблизи кухонного стола. В противном случае возможна порча устройства.
18. При установке устройства будьте осторожны, не допускайте попадания химических веществ на его поверхность. Некоторые химические растворители, например, очистители или клеящие вещества, могут сильно повредить поверхность продукта.
19. Если монтировать/демонтировать устройство не рекомендованным образом, нельзя гарантировать выполнение функций/соответствие характеристик устройства. Устанавливайте устройство, обратившись к разделу "Установка и подключение" в руководстве пользователя.
20. Установка или эксплуатация устройства в воде может привести к значительному повреждению изделия.



ПРЕДУПРЕЖДЕНИЕ

ВО ИЗБЕЖАНИЕ ПОВРЕЖДЕНИЙ, СЛЕДСТВИЕМ КОТОРЫХ МОЖЕТ БЫТЬ ПОЖАР ИЛИ ПОРАЖЕНИЕ ЭЛЕКТРИЧЕСКИМ ТОКОМ, НЕ ДОПУСКАЙТЕ ПОПАДАНИЯ ДАННОГО ИЗДЕЛИЯ ПОД ДОЖДЬ ИЛИ В УСЛОВИЯ ВЫСОКО Й ВЛАЖНОСТИ. ЗАПРЕЩАЕТСЯ ВСТАВЛЯТЬ КАКИЕ-ЛИБО МЕТАЛЛИЧЕСКИЕ ПРЕДМЕТЫ В ВЕНТИЛЯЦИОННЫЕ РЕШЕТКИ ИЛИ ДРУГИЕ ОТВЕРСТИЯ В ОБОРУДОВАНИИ.

Не подвергайте устройству воздействию жидкостей. Не следует также ставить на него предметы, наполненные жидкостью, например вазы.

Во избежание травм данное устройство должно быть надежно закреплено на стене/потолке в соответствии с инструкциями по установке.

ВНИМАНИЕ

	ВНИМАНИЕ ОПАСНОСТЬ ПОРАЖЕНИЯ ЭЛЕКТРИЧЕСКИМ ТОКОМ. НЕ ОТКРЫВАТЬ	
ВНИМАНИЕ : ВО ИЗБЕЖАНИЕ ПОРАЖЕНИЯ ЭЛЕКТРИЧЕСКИМ ТОКОМ, НЕ СНИМАЙТЕ ЗАДНЮЮ КРЫШКУ.ВНУТРИ НЕТ ДЕТАЛЕЙ, ОБСЛУЖИВАЕМЫХ ПОЛЬЗОВАТЕЛЕМ. ДЛЯ ТЕХНИЧЕСКОГО ОБСЛУЖИВАНИЯ ОБРАЩАЙТЕСЬ К КВАЛИФИЦИРОВАННОМУ СПЕЦИАЛИСТУ.		

ОПИСАНИЕ ГРАФИЧЕСКИХ ОБОЗНАЧЕНИЙ



Молния со стрелкой в равностороннем треугольнике предупреждает пользователя об "опасном напряжении" в корпусе изделия, которое может представлять риск поражения электрическим током.



Восклицательный знак в равностороннем треугольнике предупреждает пользователя о важных инструкциях по работе и обслуживанию в руководстве, которое прилагается к устройству.

Класс Конструкции I

Устройства КЛАССА I следует подключать к ЭЛЕКТРО розетке с защитным заземлением.

Батарея

Не подвергайте батареи (батареиный блок) чрезмерному нагреванию под воздействием солнечных лучей, огня и т.п.

Отключение устройства

Отсоедините вилку кабеля питания от устройства в случае повреждения. Обратитесь к местному специалисту по ремонту.

При использовании за пределами США с соединениями одобренными соответствующим органом, может использоваться кодировка HAR.

ВНИМАНИЕ

Существует риск взрыва при замене батареи на батарею несоответствующего типа. Утилизируйте использованные батареи в соответствии с инструкциями.

Настоящие инструкции по обслуживанию предназначены только для квалифицированных специалистов.

Во избежание поражения электрическим током не следует выполнять работы по обслуживанию, описанные в инструкциях по эксплуатации, если вы не обладаете соответствующей квалификацией.

Выходной разъем CVBS устройства предназначен для облегчения монтажа и не рекомендуется использовать его для целей мониторинга.

К источнику входного питания может подсоединяться только одна камера.

Оборудование ITE подключается только к сети питания по Ethernet без маршрутизации на оборудование наружной установки.

Внимательно прочитайте приведенные ниже правила техники безопасности.

- Не ставьте устройство на неровную поверхность.
- Не устанавливайте устройство на поверхность, подверженную прямым солнечным лучам, рядом с нагревательным оборудованием или в очень холодном месте.
- Не устанавливайте это устройство вблизи электропроводящего.
- Не следует ремонтировать устройство самостоятельно.
- Не следует ставить на устройство стаканы с водой.
- Не устанавливайте поблизости источники магнитного поля.
- Не допускайте заграждения вентиляционных отверстий.
- Не ставьте тяжелые предметы на устройство.
- При установке/демонтаже камеры надевайте защитные перчатки. Высокая температура поверхности изделия может вызвать ожог.

Руководство пользователя содержит инструкции по использованию продуктов.

В руководстве используются следующие обозначения.

- Справка : сведения по использованию устройства
- Примечание : На случай возможных повреждений имущества или вреда здоровью людей в результате несоблюдения инструкций
- ✳ Прочтите это руководство по безопасности перед использованием устройств и сохраните его в безопасном месте.

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РЕКОМЕНДУЕМАЯ КОНФИГУРАЦИЯ ПК

- Процессор : Intel(R) Core(TM) i7 3,4 ГГц или больше
- ОЗУ: 8 ГБ или больше
- Поддерживаемые ОС : MS Windows, Mac OS X
- Рекомендуемый браузер: Google Chrome
Поддерживаемые браузеры: MS Explorer, MS Edge, Mozilla Firefox (только 64-битная Windows), Apple Safari (только Mac OS X)

※ Подробные данные о версиях проверенных ОС и браузеров см. в приложении.

РЕКОМЕНДУЕМЫЕ ХАРАКТЕРИСТИКИ КАРТ ПАМЯТИ МИКРО SD/SDHC/SDXC

- Рекомендуемая емкость : от 16 до 256 Гбайт (типа MLC)
- Для данной камеры рекомендуются карты памяти следующих типов указанных производителей.
 - Производитель : SanDisk, Transcend
 - Линейка изделий: С длительным сроком службы

РЕКОМЕНДУЕМЫЕ ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ NAS

- Рекомендуемый объем : Рекомендуемый объем – не менее 200 ГБ.
- Одновременный доступ : К одному устройству NAS может иметь доступ максимум шестнадцать камер.
- Для этой модели камеры рекомендуется использование NAS со следующими техническими характеристиками производителя.










Рекомендуемые продукты	Доступные размеры
QNAP NAS	Максимальное количество камер для одновременного доступа - 16.
Synology NAS	Максимальное количество камер для одновременного доступа - 16.










- Если предполагается использование оборудования NAS не только для хранения видеоматериалов, количество одновременно доступных камер может быть сокращено.

КОМПЛЕКТ ПОСТАВКИ (TNO-4030T/4040T/4050T/4030TR/4040TR)







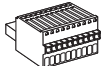

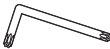
Проверьте наличие всех принадлежностей в комплекте поставки камеры.
(У изделий, продаваемых в разных странах, принадлежности могут отличаться.)






Внешний вид	Название элемента	Количество	Описание
	Камера	1	
	Руководство пользователя, Установщик ПО на диске CD	1	
	Краткое Руководство (необязательно)	1	
	Гарантийный талон (необязательно)	1	
	Кабель для тестирования монитора	1	Используется для подключения камеры к портативному устройству отображения
	Шаблон	1	Руководство по установке устройства
	Клеммник питания	1	Вставлен в разъем электропитания
	Соединительный блок аудио/тревожной сигнализации	1	Вставляется в вилку аудио/тревожной сигнализации
	Шнур питания	1	Вставляется в разъем питания

Внешний вид	Название элемента	Количество	Описание
	Г-образный ключ	1	Используется для снятия и замены крышки купола
	Звуковой кабель/кабель тревоги	1	Подключается в звуковой разъем и разъем тревоги
	Самонарезающий винт	4	Используются для установки на стену или потолок
	Светозащитная бленда	1	Защищает камеру от воздействия прямых солнечных лучей.
	Держатель светозащитной бленды	1	Используется для закрепления светозащитной бленды на камере
	BASE WALL MOUNT	1	Для подвешивания камеры на стене переходник необходимо отрегулировать.
	Кабельная втулка	1	Используется для подключения локальной сети кабелем Ø7~8.5.

КОМПЛЕКТ ПОСТАВКИ (TNO-4041T/4051T/4041TR)

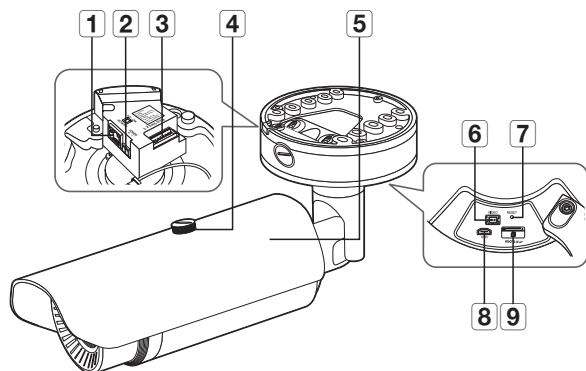
Проверьте наличие всех принадлежностей в комплекте поставки камеры.
(У изделий, продаваемых в разных странах, принадлежности могут отличаться.)

Внешний вид	Название элемента	Количество	Описание
	Камера	1	
	Руководство пользователя, Установщик ПО на диске CD	1	
	Краткое Руководство (необязательно)	1	
	Гарантийный талон (необязательно)	1	
	Кабель для тестирования монитора	1	Используется для подключения камеры к портативному устройству отображения
	Клеммник питания	1	Вставлен в разъем электропитания
	Соединительный блок аудио/тревожной сигнализации	1	Вставляется в вилку аудио/тревожной сигнализации
	Шнур питания	1	Вставляется в разъем питания
	Звездообразный ключ	1	Используется для крепления РТ-кронштейна к основному корпусу

Внешний вид	Название элемента	Количество	Описание
	Звуковой кабель/кабель тревоги	1	Подключается в звуковой разъем и разъем тревоги
	Светозащитная бледа	1	Защищает камеру от воздействия прямых солнечных лучей.
	Держатель светозащитной бледы	1	Используется для закрепления светозащитной бледы на камере
	Влагозащитная заглушка	1	Используется для перекрытия части отверстия, через которую не выходит кабель.
	Влагозащитный адаптер	1	Диапазон сечений кабеля: Ø2 мм (минимум) – Ø6 мм (максимум) Используется для подключения кабелей (Например: кабеля питания) ※ Имеющиеся кабельные сальники от камеры применимы для кабеля Ø4,5 мм (минимум) ~ Ø10 мм (максимум)

ОБЩИЙ ОБЗОР (TNO-4030T/4040T/4050T/4030TR/4040TR)

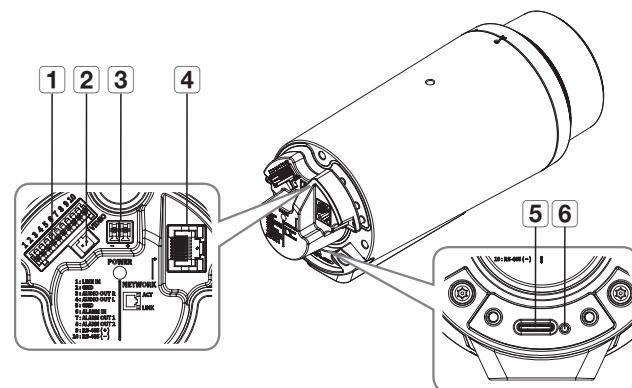
Внешний вид & Компоненты



Элемент	Описание
1 Порт Сеть	Подсоединение кабеля PoE или Ethernet для установки сетевого подключения.
2 Порт питания	Используется для подключения кабеля питания.
3 Разъем аудио и кабеля сигнала тревоги	Порт для подключения аудиокабеля и кабеля сигнализации.
4 Держатель светозащитной бленды	Используется для закрепления светозащитной бленды на камере.
5 Светозащитная бленда	Защищает камеру от воздействия прямых солнечных лучей.
6 Порт тестирования выходного сигнала монитора	Порт вывода для тестирования выходного видеосигнала наблюдения. Подсоедините мобильный дисплей к порту с помощью кабеля для тестирования видеонаблюдения и проверьте видео.
7 Кнопка сброса	Восстановление заводских настроек по умолчанию для всех параметров камеры. Для перезагрузки системы нажмите и удерживайте в течение 5 секунд. ❗ Если сбросить настройки камеры, то сетевые настройки позволят активировать DHCP. Если в сети сервер DHCP отсутствует, необходимо запустить программу IP Installer, чтобы изменить основные настройки сети IP-адрес, маска подсети, шлюз и проч., прежде чем подключаться к сети.
8 Порт Micro-USB	Порт для подключения адаптера Wi-Fi. Можно просмотреть видео об установке через приложения, установленные на смартфоне. См. "Подключение к адаптеру Wi-Fi" на стр. 15. ■ Аппаратный ключ Wi-Fi и переходник OTG продаются отдельно.
9 Гнездо для карты памяти Micro SD	В это гнездо можно вставить карту памяти MicroSD.

ОБЩИЙ ОБЗОР (TNO-4041T/4051T/4041TR)

Внешний вид & Компоненты



Элемент	Описание
1 Разъем аудио и кабеля сигнала тревоги	Порт для подключения аудиокабеля и кабеля сигнализации.
2 Порт тестирования выходного сигнала монитора	Порт вывода для тестирования выходного видеосигнала наблюдения. Подсоедините мобильный дисплей к порту с помощью кабеля для тестирования видеонаблюдения и проверьте видео.
3 Порт питания	Используется для подключения кабеля питания.
4 Порт Сеть	Подсоединение кабеля PoE или Ethernet для установки сетевого подключения.
5 Гнездо для карты памяти Micro SD	В это гнездо можно вставить карту памяти MicroSD.
6 Кнопка сброса	Восстановление заводских настроек по умолчанию для всех параметров камеры. Для перезагрузки системы нажмите и удерживайте в течение 5 секунд. ❗ Если сбросить настройки камеры, то сетевые настройки позволят активировать DHCP. Если в сети сервер DHCP отсутствует, необходимо запустить программу IP Installer, чтобы изменить основные настройки сети IP-адрес, маска подсети, шлюз и проч., прежде чем подключаться к сети.

УСТАНОВКА (TNO-4030T/4040T/4050T/4030TR/4040TR)

- ! Эта камера водонепроницаема и соответствует стандарту IP66, однако штекер внешнего кабеля водонепроницаемым не является. Рекомендуется установить это устройство под карнизом во избежание выпутания кабеля наружу.

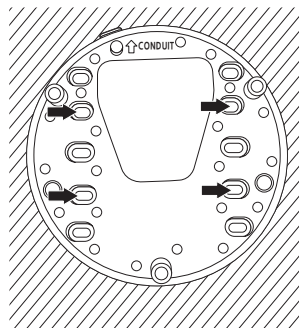
Меры предосторожности, принимаемые перед установкой

Прежде чем устанавливать камеру, обязательно прочтите приведенные далее инструкции.

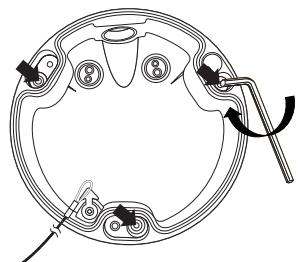
- Установку необходимо выполнять в таком месте (на потолке или стене), которое может выдержать вес в пять раз превышающий вес камеры, включая установочный кронштейн.
- Кабели с поврежденной или снятой изоляцией могут стать причиной повреждения устройства или возгорания.
- С целью предосторожности попросите посторонних лиц покинуть место установки. На всякий случай уберите все посторонние личные вещи.
- Не используйте отверстие, предназначенное для подсоединения солнечного козырька, в иных целях.
- Если при установке изделия прилагать чрезмерные усилия, возможно повреждение с нарушением работы камеры. Если с силой устанавливать устройство, пользуясь неподходящими инструментами, возможно повреждение устройства.

Установка

1. Для фиксации опорного настенного крепления используйте четыре прилагающихся самонарезных винта.

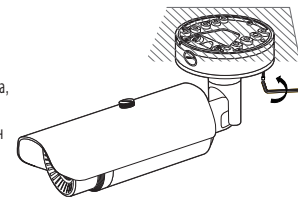


2. Подвесьте кабель системы безопасности сверху на крюк, похожий на стрелку, расположенный на нижней крышке.
3. Подключите требующиеся кабели к соединителям камеры.
4. После размещения нижней крышки на опорном настенном креплении, прилагающимся угловым гаечным ключом установите и закрепите три винта.
5. После размещения камеры на нижней крышке, прилагающимся угловым гаечным ключом установите три винта на верхней крышке.



6. С помощью прилагаемого углового ключа настройте направление обзора камеры.

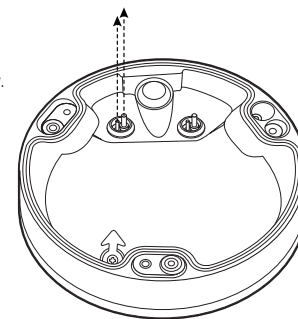
- ! Для регулировки положения камеры на кронштейне отверните винты кронштейна, настройте камеру и затяните винты. Если пытаться регулировать положение при затянутых винтах с приложением силы, это может привести к появлению трещин и другим проблемам.



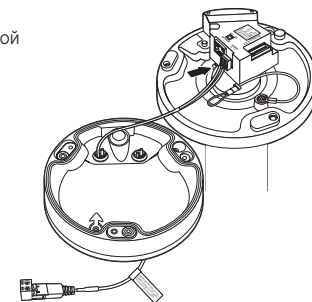
Соединение водонепроницаемого шнура питания и кабеля LAN

1. Оторвите выступающую часть резиновой крышки на нижней стороне нижней крышки, как показано на рис. ниже.

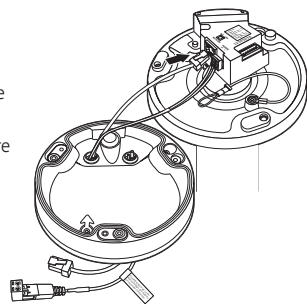
- ! Для подключаемого кабеля локальной сети используйте соответствующую втулку.
 - Базовая камера: используйте кабель Ø5-6.5.
 - Прилагаемые компоненты: Используйте кабель Ø7-8.5.



2. Вставьте кабель питания в небольшое отверстие, образовавшееся при отрывании выступающей части резиновой заглушки, как описано в п. 1 выше.
3. Соедините шнур питания с клеммником питания.

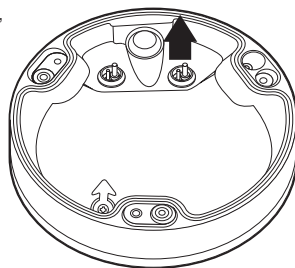


4. Вставьте кабель LAN в большое отверстие, возникшее при извлечении выступающей части резиновой пробки на шаге 1, описанном выше.
5. Удалите оболочку с помощью кабельного резака и выровняйте кабели.
6. Подключите кабель LAN с помощью коннектора LAN и вставьте его в инструмент LAN.
7. Подключите готовый кабель к порту Ethernet.

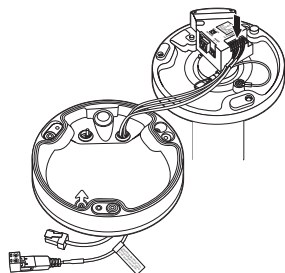


Подключение кабеля аудио и сигнализации

1. Удалите резиновую крышку на нижней стороне нижней крышки, как показано на рис. ниже.



2. Вставьте кабель аудио/сигнализации через отверстие, образующееся при снятии резинового колпачка №1, и подключите кабель к соединителю сигнализации.
3. Выровняйте кабель таким образом, чтобы он не повредился и не пережимался во время установки камеры.
4. Введите в отверстие резиновый колпачок, расположенный на кабеле аудиосигнала/сигнализации.

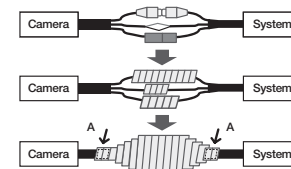


Наружный монтаж

При монтаже этого устройства вне здания, пожалуйста, обеспечьте его водонепроницаемость с помощью водонепроницаемой ленты бутылкачука (ее можно купить в магазине) так, чтобы вода не протекла в щель кабеля, выведенного наружу.

1. Connectez à des câbles, tels que E / S et audio.
2. Оберните черный кабельный кожух (Зона А) и зону присоединения кабеля водонепроницаемой лентой (бутылкачук) так, чтобы лента бутылкачука перекрывалась больше чем на половину.

- ! Если не обеспечена надлежащая водонепроницаемость кабельного кожуха, это может стать причиной течи. Удостоверьтесь, что кабель обмотан толстым слоем ленты.
- Водонепроницаемая лента сделана из бутылкачука, который может растягиваться по длине более чем в два раза.



УСТАНОВКА (TNO-4041T/4051T/4041TR)

- ! Эта камера водонепроницаема и соответствует стандарту IP66, однако штекер внешнего кабеля водонепроницаемым не является. Рекомендуется установить это устройство под карнизом во избежание выступаania кабеля наружу.

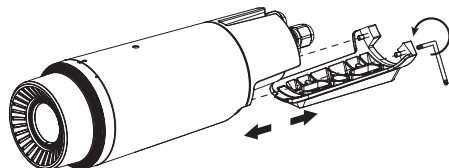
Меры предосторожности, принимаемые перед установкой

Прежде чем устанавливать камеру, обязательно прочтите приведенные далее инструкции.

- Установку необходимо выполнять в таком месте (на потолке или стене), которое может выдержать вес в пять раз превышающий вес камеры, включая установочный кронштейн.
- Кабели с поврежденной или снятой изоляцией могут стать причиной повреждения устройства или возгорания.
- С целью предосторожности попросите посторонних лиц покинуть место установки. На всякий случай уберите все посторонние личные вещи.
- Не используйте отверстие, предназначенное для подсоединения солнечного козырька, в иных целях.
- Если при установке изделия прилагать чрезмерные усилия, возможно повреждение с нарушением работы камеры. Если с силой устанавливать устройство, пользуясь неподходящими инструментами, возможно повреждение устройства.

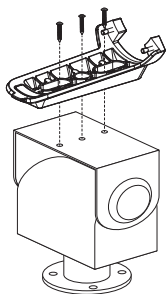
Установка

1. С помощью звездообразного ключа отделите РТ-кронштейн от основного корпуса.




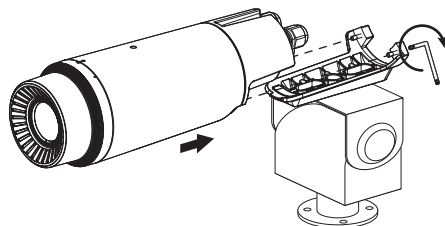
2. Снятые привод РТ и РТ-кронштейн крепите винтами через три отверстия, как показано на рисунке.

 Не предоставлен драйвер Пан/Наклона




3. С помощью звездообразного ключа скрепите РТ-кронштейн и основной корпус.

 Для регулировки положения камеры на кронштейне отверните винты кронштейна, настройте камеру и затяните винты. Если пытаться регулировать положение при затянутых винтах с приложением силы, это может привести к появлению трещин и другим проблемам.

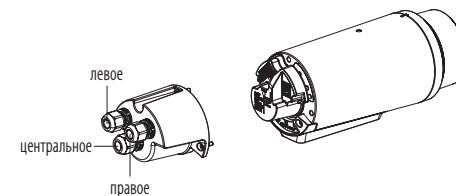


Соединение водонепроницаемого шнура питания и кабеля LAN

1. Оторвите выступающую часть резиновой крышки на нижней стороне нижней крышки, как показано на рис. ниже.

 Для подключаемого кабеля локальной сети используйте соответствующую втулку.

- Базовая камера: используйте кабель Ø5~6.5.
- Прилагаемые компоненты: Используйте кабель Ø7~8.5.




2. Вставьте кабель питания в центральное отверстие, получившееся после удаления выступающей части резиновой заглушки на шаге 1 выше.
3. Соедините шнур питания с клеммником питания.
4. Вставьте кабель локальной сети в правое отверстие, получившееся после удаления выступающей части резиновой заглушки на шаге 1 выше.
5. Удалите оболочку с помощью кабельного резака и выровняйте кабели.
6. Подключите кабель LAN с помощью коннектора LAN и вставьте его в инструмент LAN.
7. Подключите готовый кабель к порту Ethernet.
8. Вставьте кабель соединительного блока в левое отверстие, получившееся после удаления выступающей части резиновой заглушки на шаге 1 выше.

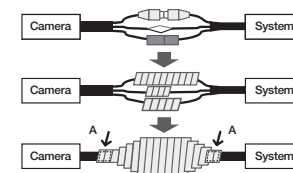
Наружный монтаж

При монтаже этого устройства вне здания, пожалуйста, обеспечьте его водонепроницаемость с помощью водонепроницаемой ленты бутылкаучка (ее можно купить в магазине) так, чтобы вода не протекла в щель кабеля, выведенного наружу.

1. Connectez à des câbles, tels que E / S et audio.
2. Оберните черный кабельный кожух (Зона А) и зону присоединения кабеля водонепроницаемой лентой (бутылкаучук) так, чтобы лента бутылкаучка перекрывалась больше чем на половину.

 Если не обеспечена надлежащая водонепроницаемость кабельного кожуха, это может стать причиной течи. Удостоверьтесь, что кабель обмотан толстым слоем ленты.

Водонепроницаемая лента сделана из бутылкаучка, который может растягиваться по длине более чем в два раза.

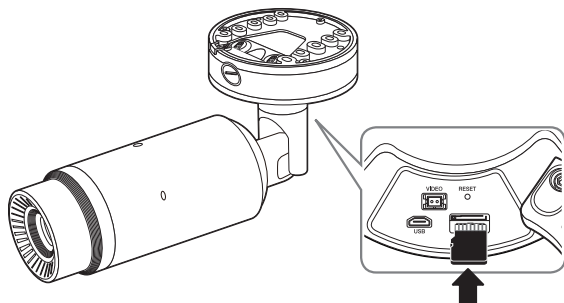


УСТАНОВКА/ИЗВЛЕЧЕНИЕ КАРТЫ ПАМЯТИ МИКРО SD

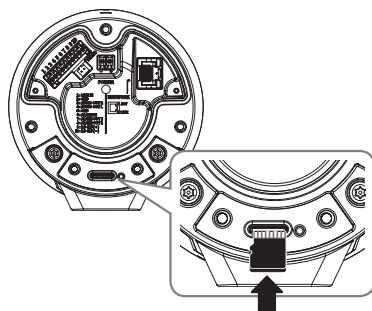
- ❗ Перед установкой карты Микро SD отключите кабель питания от камеры.
- Правильно расположенная карта памяти Микро SD вставляется без усилия. Принудительная установка карты памяти Микро SD не той стороной может привести к ее повреждению.
- Не рекомендуется вставлять или вынимать карту памяти Микро SD во время дождя или при высокой влажности.

Установка карты памяти Микро SD

Вставьте карту памяти Микро SD в направлении стрелки, как показано на рисунке.



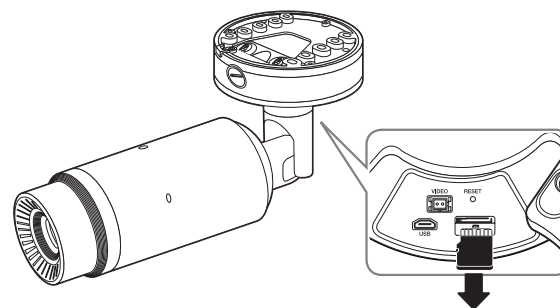
<TNO-4030T/4040T/4050T/4030TR/4040TR>



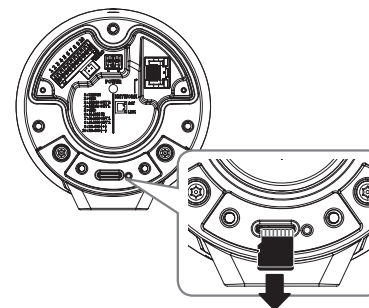
<TNO-4041T/4051T/4041TR>

Извлечение карты памяти Микро SD

Мягко нажмите на выступающий конец карточки как показано на диаграмме, чтобы извлечь карточку из гнезда.



<TNO-4030T/4040T/4050T/4030TR/4040TR>



<TNO-4041T/4051T/4041TR>

- ❗ При слишком сильном нажатии на карту памяти Микро SD она может "выстрелить" из разъема при отпуске пальца.
- Перед извлечением карты памяти SD в меню <Накопитель>, установите устройство в состояние <Выкл.>, нажмите кнопку [Применить] и выключите камеру.
- Если Вы выключите камеру или извлечете из продукта карту памяти Микро SD, содержащую данные, то эти данные могут быть потеряны или повреждены.

ИНФОРМАЦИЯ О КАРТОЧКЕ ПАМЯТИ (НЕ ВКЛЮЧЕНО)

Что такое карточка памяти?

Карточка памяти - это устройство для внешнего хранения данных, разработанное чтобы обеспечить совершенно новый способ записи и обмена видео, аудио и текстовой информации посредством цифровых устройств.

Выбор наиболее подходящей карточки памяти

Данная камера поддерживает карты памяти Микро SD/SDHC/SDXC.

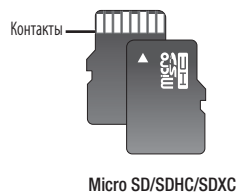
Могут возникнуть проблемы при использовании карточек других моделей и других производителей.

Для данной камеры рекомендуются карты памяти следующих типов указанных производителей.

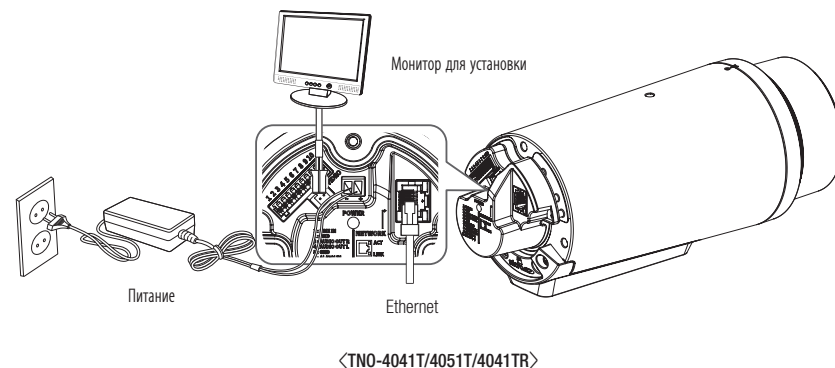
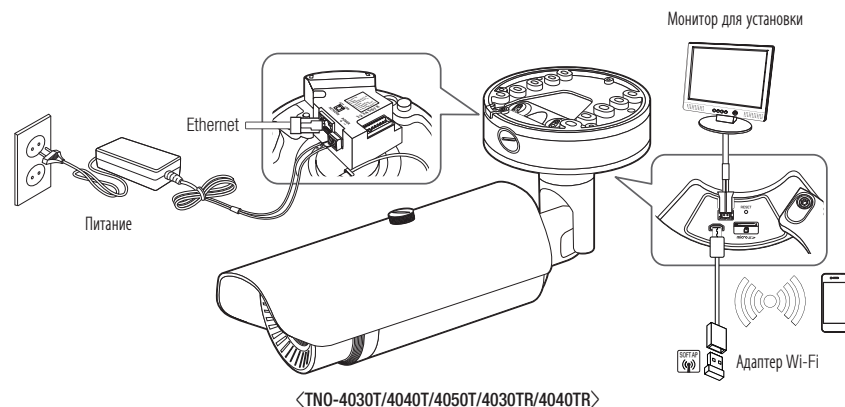
- Производитель : SanDisk, Transcend
- Линейка изделий : С длительным сроком службы

Для данной видеокамеры рекомендуется использовать карты памяти емкостью от 16 до 256 Гбайт (типа MLC).

На характеристики воспроизведения может влиять быстрдействие карты памяти.



ПОДКЛЮЧЕНИЕ К ДРУГОМУ УСТРОЙСТВУ



- ! Выходной разъем CVBS устройства предназначен для облегчения монтажа и не рекомендуется использовать его для целей мониторинга.
- Выходной разъем Микро USB устройства предназначен для облегчения монтажа и не рекомендуется использовать его для целей мониторинга.
- Если экран "застывает" на 1-2 секунды в определенные интервалы времени, либо когда имеется изменение температуры в окружающей зоне - это нормально; просто происходит процесс калибровки экрана.

Подключение к сети Ethernet

Подключите кабель Ethernet к локальной сети или к Интернету.

Подключение Wi-Fi (TNO-4030T/4040T/4050T/4030TR/4040TR)

Настройка камеры

1. Подключите переходник OTG (5-контактный) и аппаратный ключ Wi-Fi к соединителю micro USB.

Smartphone Setup

1. Установите приложение для установки Wisenet.
2. После включения Wi-Fi выберите SSID камеры.
3. Запустите приложение для установки Wisenet.
4. После входа в камеру будет подключено видео (первоначальный пароль: 4321)
 - Во время первоначального подключения без входа в систему видео будет воспроизводиться.
5. Угол обзора камеры можно регулировать во время просмотра видео на смартфоне.

Рекомендуемый производитель адаптеров

Производитель	Модель
NETIS	WF2123 n300
EDIMAX	EW-7811Un
IP Time	N100mini
TP-LINK	TL-WN823N V1
ASUS	USB-N13
NETGEAR	WNA3100M

Источник питания

Подключите все провода кабеля питания (+, -) к соответствующему порту камеры с помощью отвертки.

- ! При одновременной подаче питания PoE и 12 В постоянного тока либо PoE и 24 В переменного тока оборудование будет использовать питание от внешнего источника (переменный ток 24 В, постоянный ток 12 В).
 - Также для подачи питания к видеокамере используется маршрутизатор с поддержкой PoE.
 - Применяемая технология PoE должна быть совместима с протоколами IEEE 802.3af.
 - Для питания оборудования рекомендуется использовать один источник из следующих: PoE, постоянный ток 12 В, переменный ток 24 В.
- Подключая кабель питания, будьте очень внимательны, чтобы не перепутать полярность.
- После первоначальной подачи питания требуется время для стабилизации экрана. По этой причине калибровка экрана выполняется при первом включении.
- Если необходимо подключить внешнее устройство, перед началом работы его необходимо выключить.
- Сначала соедините устройство и шнур адаптера питания, а затем включите кабель питания в стенную розетку.

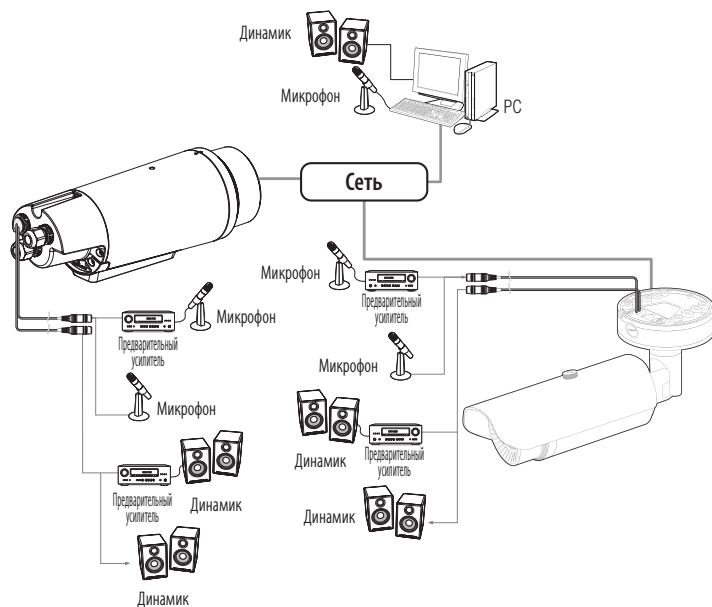
Спецификация на силовую кабель для каждой модели

Входная мощность	Тип проводов (AWG)	Длина кабеля (макс.)
DC 12V	#18	19m
	#16	30m
AC 24V	#20	26m
	#18	40m

Спецификация сетевого кабеля

Пункт	Содержание	Примечание
Разъем	RJ45	
Ethernet	10/100Base-T	10/100 Mbps
Кабель	UTP категории 5е	
Макс. расстояние	100 м	
Поддержка питания по Ethernet	IEEE 802.3af	

Подсоединение звукового ввода/вывода



1. Подключите микрофон к порту AUDIO IN камеры или соедините порты AUDIO IN и LINE OUT усилителя, к которому подсоединен микрофон.
2. Подключите динамик к порту AUDIO OUT камеры или соедините порты AUDIO OUT и LINE OUT усилителя, к которому подсоединен динамик.
3. Проверьте характеристики для аудиовхода.

• Аудиокодек

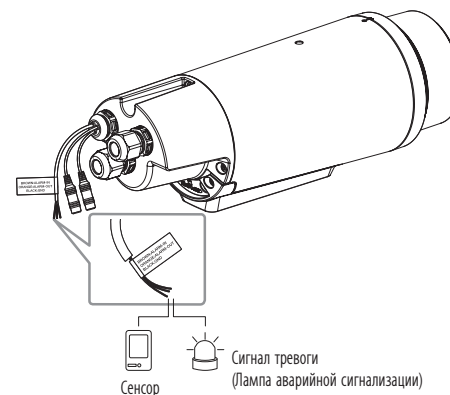
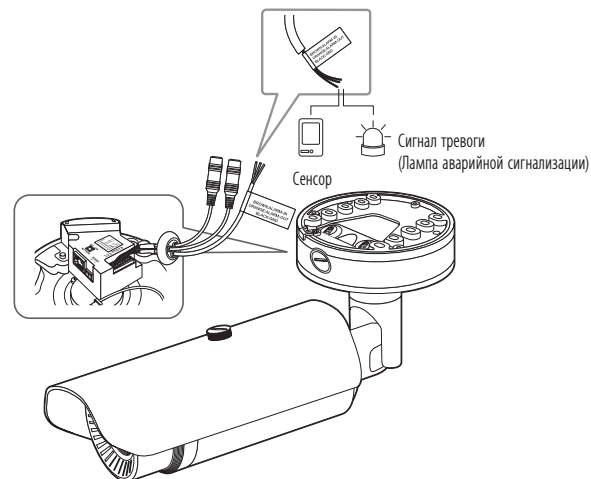
- Аудио вход : G.711 PCM (скорость передачи: 64кбит/с / частота дискретизации: 8кГц), G.726 АДИКДМ (скорость передачи: 16кбит/с , 24кбит/с , 32кбит/с / частота дискретизации: 8кГц), AAC (скорость передачи: 48кбит/с / частота дискретизации: 16кГц)
- Аудио выход : G.711 PCM (скорость передачи: 64кбит/с / частота дискретизации: 8кГц)

• Дуплексное аудио

- **Звуковой вход** : Выбираемый (микрофон/линейный вход), поддерживаемое напряжение: 2,5 В постоянного тока (4 мА), входное сопротивление: 2 кОм
- **Звуковой выход** : Линейный выход (монофонический штекер 3,5 мм), максимальный сигнал: 1 В (действующее значение)
- **Сопротивление выходного канала Line out** : 600 Ом

Подключение к блоку портов ввода-вывода

Подсоедините кабель ввода/вывода сигнала тревоги к соответствующему порту платы.



- **ALARM-IN** : Используется для подключения сенсора входного сигнала тревоги или наружного сенсора день/ночь.
- **ALARM-OUT** : Используется для передачи выходных сигналы тревоги.
- **GND** : Общий порт для ввода/вывода тревожной сигнализации.

! Если устройства (например, проблесковый световой маяк или сирена), превышающие допустимый уровень напряжение и тока, указанный в технических спецификациях, подсоединяются при помощи метода открытого коллектора, это может привести к сбою. При подключении устройств, напряжение и ток которых превышают значения, указанные в спецификации, см. Раздел «Монтажная диаграмма выхода тревоги».

Настройка RS-485 (TNO-4041T/4051T/4041TR)

Все перечисленные выше функции будут доступны, только если сетевая камера правильно подключена к ресиверу с поддержкой функций панорамирования/наклона. Кроме того, для функций панорамирования/наклона необходимо правильно указать последовательный порт.

- ❗ Проверьте функции, поддерживаемые приемником, если он подсоединен. Некоторые функции могут быть отключены в зависимости от характеристики приемника и протокола. См. следующую таблицу для получения более подробной информации.

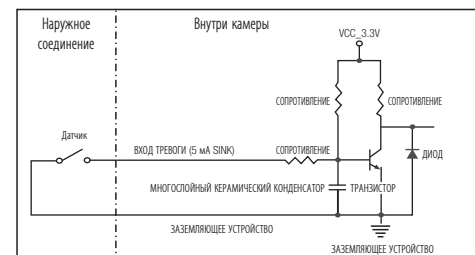
Функции, поддерживаемые для каждого протокола

Протокол	Управление Р	Скорость движения Р	Управление Т	Скорость движения Т	Предустановка	Примечания
SAMSUNG-T	0	0 (1~6)	0	0 (1~6)	0	
PELCO-D	0	0 (1~6)	0	0 (1~6)	0	
PELCO-P	0	0 (1~6)	0	0 (1~6)	0	
SUNGJIN	0	X	0	X	0	Направление РТ (Вверх, вниз, влево, вниз)
PANASONIC	0	0 (1~6)	0	0 (1~6)	0	
HONEYWELL	0	0 (1~6)	0	0 (1~6)	0	
AD	0	0 (1~6)	0	0 (1~6)	0	
VICON	0	0 (1~6)	0	0 (1~6)	0	
GE	0	0 (1~6)	0	0 (1~6)	0	
BOSCH	0	0 (1~6)	0	0 (1~6)	X	

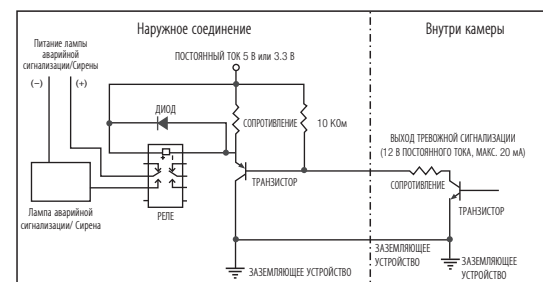
Подключение к внешнему датчику

Подсоедините один провод двухпроводного кабеля датчика к порту [ALARM IN], а другой провод - к порту [GND].

Монтажная схема входа тревоги



Монтажная диаграмма выхода тревоги

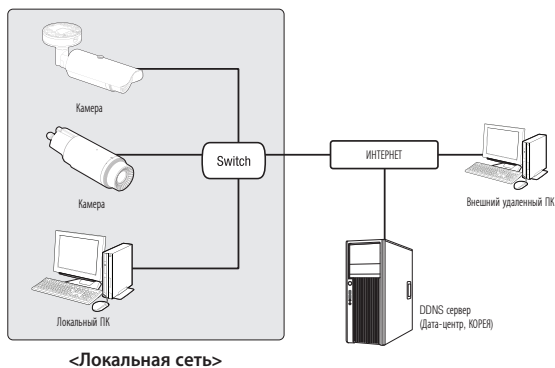


Можно выставить сетевые настройки согласно сетевой конфигурации.

ПОДКЛЮЧЕНИЕ КАМЕРЫ НАПРЯМУЮ К ЛОКАЛЬНОЙ СЕТИ

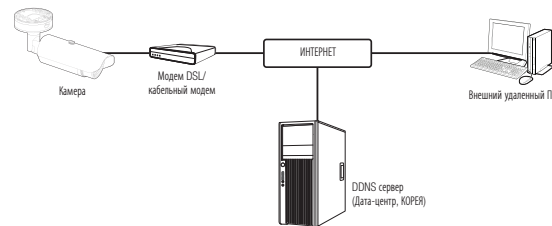
Подключение к камере через локальный ПК в локальной сети

1. Запустите Интернет-браузер на локальном ПК.
2. Введите адрес IP-роутера в адресной строке браузера.



- Удаленный ПК во внешней сети или в Интернете не может подключиться к камере, установленной в интранет, если не задана правильная переадресация портов или установлен фаервол. В этом случае обратитесь к системному администратору для устранения проблемы.
- Для задания IP-адреса, маски подсети, шлюза, порта HTTP, порта VNP и типа IP в установщике IP можно использовать первоначальный пароль "4321". Для лучшей защиты после изменения сетевого интерфейса войдите в web viewer и поменяйте пароль.
- Согласно заводским настройкам по умолчанию, IP-адрес назначается сервером DHCP автоматически. Если сервер DHCP отсутствует, будет задан следующий IP-адрес: 192.168.1.100. Чтобы изменить IP-адрес, используйте программу IP Installer. Для получения дополнительных сведений о программе IP Installer см. раздел "**Настройка статического IP-адреса**". (стр. 20)

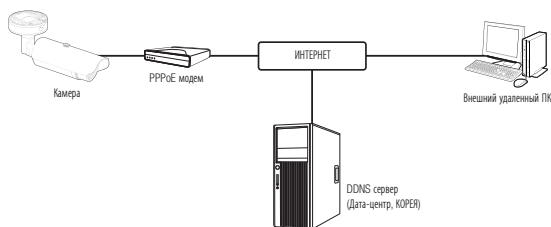
ПРЯМОЕ ПОДКЛЮЧЕНИЕ КАМЕРЫ К МОДЕМУ DSL/КАБЕЛЬНОМУ МОДЕМУ С ПОДДЕРЖКОЙ ПРОТОКОЛА DDNS



1. Подсоедините напрямую ПК пользователя с сетевой камерой.
2. Запустите программу IP Installer и измените IP-адрес камеры, чтобы использовать веб-браузер на рабочем столе для подключения к Интернету.
3. Установите подключение к интерактивной программе просмотра в веб-браузере.
4. Перейдите на страницу **[Настройка]**.
5. Перейдите на страницу **[Сеть] - [DDNS]** и настройте параметры DDNS.
6. Перейдите по меню **[Basic] - [IP & Порт]** и задайте тип IP для **[DHCP]**.
7. Подсоедините камеру, отключенную от ПК, непосредственно к модему.
8. Перезапустите камеру.

- За информацией об установке DDNS обратитесь к онлайнной справке программы Web Viewer.
- За информацией о задании формата IP-адреса обратитесь к онлайнной справке программы Web Viewer.

ПОДКЛЮЧЕНИЕ КАМЕРЫ НАПРЯМУЮ К МОДЕМУ PPPoE



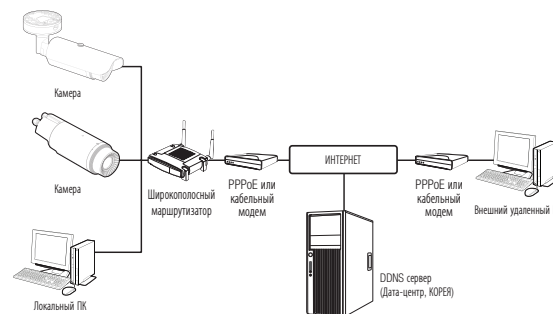
1. Подсоедините напрямую ПК пользователя с сетевой камерой.
2. Запустите программу IP Installer и измените IP-адрес камеры, чтобы использовать веб-браузер на рабочем столе для подключения к Интернету.
3. Установите подключение к интерактивной программе просмотра в веб-браузере.
4. Перейдите на страницу **[Настройка]**.
5. Перейдите на страницу **[Сеть]** - **[DDNS]** и настройте параметры DDNS.
6. Перейдите по меню **[Basic]** - **[IP & Порт]** на страницу настроек, задайте тип IP для **[PPPoE]** и введите ID и пароль сетевой службы.
7. Подсоедините камеру, отключенную от ПК, непосредственно к модему.
8. Перезапустите камеру.



- За информацией об установке DDNS обратитесь к онлайнной справке программы Web Viewer.
- За информацией о задании формата IP-адреса обратитесь к онлайнной справке программы Web Viewer.


ПОДКЛЮЧЕНИЕ КАМЕРЫ К ШИРОКОПОЛОСНЫЙ МАРШРУТИЗАТОР ЧЕРЕЗ PPPoE/КАБЕЛЬНЫЙ МОДЕМ

Используется в небольших сетях внутри домов, в маленьких офисах и обычных магазинах.

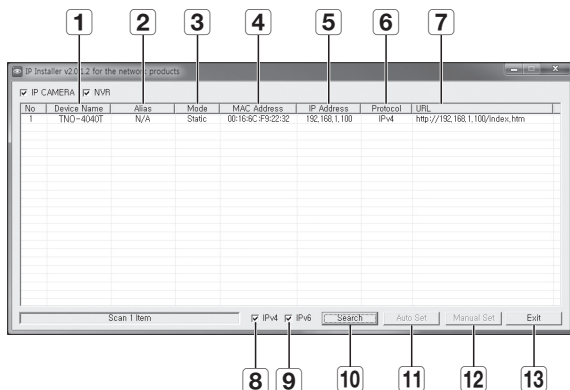


Настройка сетевых параметров локального ПК, подключенного к Широкополосный маршрутизатор

При настройке сетевых параметров локального ПК, подключенного к Широкополосный маршрутизатор, руководствуйтесь нижеприведенной инструкцией.

- Выберите : **<Network>** → **<Properties>** → **<Local Area Connection>** → **<General>** → **<Properties>** → **<Internet Protocol (TCP/IP)>** → **<Properties>** → **<Obtain an IP address automatically>** или **<Use the following IP address>**.
 - Следуйте данным инструкциям, если было выбрано **<Use the following IP address>**:
 - а) Если адрес (LAN IP) Широкополосный маршрутизатор 192.168.1.1
IP-адрес : 192.168.1.100
Маска подсети : 255.255.255.0
Основной шлюз : 192.168.1.1
 - а) Если адрес (LAN IP) Широкополосный маршрутизатор 192.168.0.1
IP-адрес : 192.168.0.100
Маска подсети : 255.255.255.0
Основной шлюз : 192.168.0.1
 - а) Если адрес (LAN IP) Широкополосный маршрутизатор 192.168.xxx.1
IP-адрес : 192.168.xxx.100
Маска подсети : 255.255.255.0
Основной шлюз : 192.168.xxx.1
-  ■ Чтобы узнать адрес Широкополосный маршрутизатор, обратитесь к документации изделия.
- Дополнительную информацию о переназначении портов на широкополосном маршрутизаторе см. в разделе **"Настройка Переназначения Диапазона Портов (Распределение Портов)"**. (Стр. 22)

ЭЛЕМЕНТЫ ЭКРАННОГО МЕНЮ ПРОГРАММЫ IP INSTALLER



Элемент	Описание
1 Device Name	Название модели подключенной камеры. Щелкните этот столбец, чтобы отсортировать список по названиям моделей. Поиск прекратится, если щелкнуть мышью до его окончания.
2 Alias	Эта функция сейчас недоступна.
3 Mode	Текущее состояние сетевого соединения: <Static>, <Dynamic> или <PPPoE>.
4 MAC(Ethernet) Address	Адрес Ethernet для подключенной камеры. Щелкните этот столбец, чтобы отсортировать список по адресам Ethernet. Поиск прекратится, если щелкнуть мышью до его окончания.
5 IP Address	IP-адрес. Щелкните этот столбец, чтобы отсортировать список по IP-адресам. Поиск прекратится, если щелкнуть мышью до его окончания.
6 Protocol	Настройка сети для конкретной камеры. Заводская настройка по умолчанию "IPv4". Камера с настройкой IPv6 отображается как "IPv6".
7 URL	DDNS URL-адрес для доступа из внешней сети Интернет. Этот адрес будет заменен на <IP Address> камеры, если произойдет сбой регистрации DDNS.
8 IPv4	Поиск камер с настройкой IPv4.

Элемент	Описание
9 IPv6	Поиск камер с настройкой IPv6. Активируется в среде, где имеется поддержка IPv6.
10 Search	Поиск камер, подключенных в данный момент к сети. Эта кнопка будет неактивной, если ни IPv4, ни IPv6 не выбраны.
11 Auto Set	Программа IP Installer автоматически настраивает параметры сети.
12 Manual Set	Настройка сети вручную.
13 Exit	Выход из программы IP Installer.

- При использовании программы IP Installer используйте только версию, представленную на диске установки CD, или используйте последнюю версию этой программы, если доступно. Последнюю версию можно загрузить с веб-сайта Hanwha Techwin.
- Если поддерживаемой ОС является Windows 8.1, рекомендуется вместо IP Wisenet использовать Диспетчер устройств Wisenet. Программу Диспетчер устройств Wisenet можно загрузить, посетив веб-сайт Hanwha Techwin (<http://www.hanwha-security.com>) из меню <Технический справочник> - <Онлайнный инструмент>.

НАСТРОЙКА СТАТИЧЕСКОГО IP-АДРЕСА

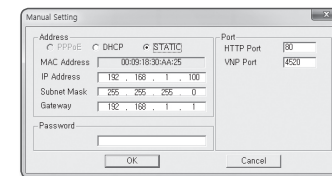
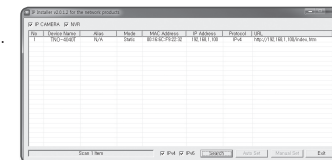
Настройка сети вручную

Запустите <IP Installer_v2.XX.exe>, чтобы получить доступ к списку поиска камеры. Кнопки [Auto Set] и [Manual Set] будут неактивны при первом запуске программы.

- Для обнаруженных камер с настройкой IPv6 эти кнопки также будут неактивны, так как эти камеры не поддерживают данную функцию.

1. Выберите камеру в списке поиска. Проверьте MAC-адрес, указанный на наклейке видеокamеры. Кнопки [Auto Set] и [Manual Set] станут активными.
2. Нажмите кнопку [Manual Set]. Появится диалоговое окно Manual Setting. <IP Address>, <Subnet Mask>, <Gateway>, <HTTP Port> и <VNP Port> камеры отображаются в заданных величинах.
3. В разделе <Address> укажите необходимую информацию.
 - MAC (Ethernet) Address : Указанный на наклейке MAC-адрес отображается автоматически и не требует установки дополнительных пользовательских настроек.

- Соответствующие параметры IP устанавливаются только, когда DHCP не проверена.



В случае отсутствия Широкополосный маршрутизатор

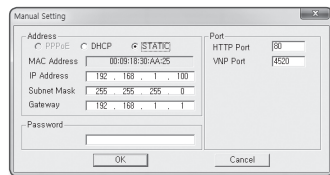
Узнайте значения параметров <IP Address>, <Subnet Mask> и <Gateway> у своего сетевого администратора.

4. В разделе <Port> укажите необходимую информацию.

- HTTP Port : Используется для получения доступа к камере через веб-обозреватель. Значение по умолчанию - 80.
- VNP Port : используется для управления передачей видеосигнала. Значение по умолчанию - 4520.

5. Введите пароль.

Укажите пароль учетной записи "admin", которая использовалась для доступа к камере.



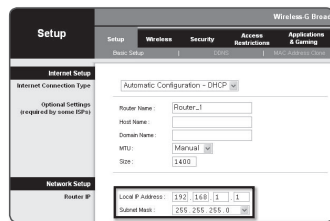
- ! По соображениям безопасности для пароля рекомендуется использовать сочетание цифр, строчных и прописных букв, а также специальных символов.
- За информацией об изменении пароля обратитесь к онлайнной справке программы Web Viewer.

6. Нажмите кнопку [OK].

Ручная настройка сети завершена.

В случае использования Широкополосный маршрутизатор

- IP Address : введите адрес, который соответствует IP-диапазону, заданному Широкополосный маршрутизатор.
пр) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254
- Subnet Mask : параметр <Subnet Mask> Широкополосный маршрутизатор соответствует параметру <Subnet Mask> камеры.
- Gateway : параметр <Local IP Address> Широкополосный маршрутизатор соответствует параметру <Gateway> камеры.



- ✍ Параметры могут различаться в зависимости от модели Широкополосный маршрутизатор.
Для получения дополнительных сведений см. руководство пользователя соответствующего маршрутизатора.
- Дополнительную информацию о переадресации портов на широкополосном маршрутизаторе см. в разделе "Настройка Переадресации Диапазона Портов (Распределение Портов)". (Стр. 22)

Если к Широкополосный маршрутизатор подключено несколько камер

Настройте параметры, связанные с IP-адресом и портами, в соответствии друг с другом.

пр)

Категория	Камера №1	Камера №2	
Настройки, связанные с 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
Настройки, связанные с портами	HTTP Port	8080	8081
	VNP Port	4520	4521

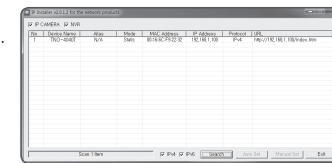
- ✍ Если для параметра <HTTP Port> выбрано значение свыше 80, необходимо указать номер <Port> в адресной строке веб-обозревателя, прежде чем получить доступ к камере.
пр) http://IP-адрес : Порт HTTP
http://192.168.1.100:8080

Автоматическая настройка сети

Запустите <IP Installer_v2.XX.exe>, чтобы получить доступ к списку поиска камеры. Кнопки [Auto Set] и [Manual Set] будут неактивными при первом запуске программы.

- ✍ Для обнаруженных камер с настройкой IPv6 эти кнопки также будут неактивными, так как эти камеры не поддерживают данную функцию.

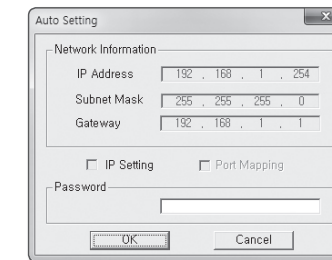
1. Выберите камеру в списке поиска.
Проверьте MAC-адрес, указанный на наклейке видеокamеры. Кнопки [Auto Set] и [Manual Set] станут активными.
2. Нажмите кнопку [Auto Set].
Появится диалоговое окно Auto Setting.
Значения параметров <IP Address>, <Subnet Mask> и <Gateway> будут установлены автоматически.



3. Введите пароль.

Укажите пароль учетной записи "admin", которая использовалась для доступа к камере.

- ! По соображениям безопасности для пароля рекомендуется использовать сочетание цифр, строчных и прописных букв, а также специальных символов.
 - За информацией об изменении пароля обратитесь к онлайнной справке программы Web Viewer.
4. Нажмите кнопку [OK].
Автоматическая настройка сети завершена.



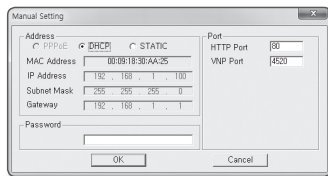
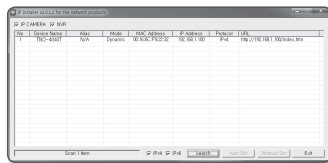
НАСТРОЙКА ДИНАМИЧЕСКОГО IP-АДРЕСА

Настройка динамического IP-окружения

- Примеры динамического IP-окружения
 - Сервер DHCP назначает IP-адрес Широкополосный маршрутизатор с подключенными камерами.
 - Прямое подключение камеры к модему с помощью протоколов DHCP
 - Внутренний сервер DHCP назначает IP-адреса по локальной сети.

Просмотр динамического IP-адреса

1. Запустите программу IP Installer на локальном компьютере. В списке отобразятся видеокamеры с адресами, заданными в поле <Dynamic IP>.
2. Выберите видеокamеру в результатах поиска.
3. Нажмите кнопку [Manual Set] и проверьте данные в поле <Dynamic IP>. Если снять флажок <DHCP>, то значение параметра IP можно изменить на <Static>.

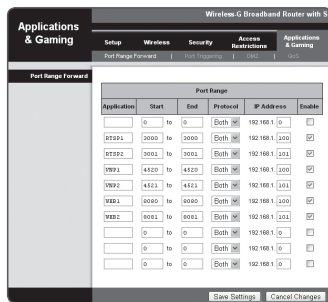


НАСТРОЙКА ПЕРЕАДРЕСАЦИИ ДИАПАЗОНА ПОРТОВ (РАСПРЕДЕЛЕНИЕ ПОРТОВ)

После установки Широкополосный маршрутизатор с подключенными камерами необходимо настроить для него переадресацию диапазона портов, чтобы с удаленного компьютера можно было получить доступ к подключенным камерам.

Переадресации диапазона портов вручную

1. В меню настроек Широкополосный маршрутизатор выберите <Applications & Gaming> - <Port Range Forward>. Сведения о настройке переадресации диапазона портов для Широкополосный маршрутизатор стороннего производителя см. в его руководстве пользователя.
2. Выберите <TCP> и <UDP Port> для каждой камеры, подключенной к Широкополосный маршрутизатор. Номер каждого из портов, конфигурируемых в IP-маршрутизаторе, следует устанавливать в соответствии с номером, назначенным в пункте меню <Настройка> - <Basic> - <IP & Порт> в Web viewer камеры.



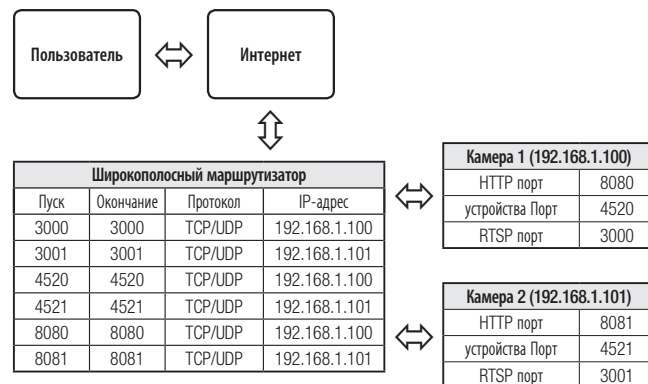
3. Затем нажмите кнопку [Save Settings]. Заданные настройки будут сохранены.

- Выше приведены инструкции для Широкополосный маршрутизатор CISCO.
- Параметры могут различаться в зависимости от модели Широкополосный маршрутизатор. Для получения дополнительных сведений см. руководство пользователя соответствующего маршрутизатора.

Настройка переадресации диапазона портов для нескольких сетевых камер

- Правило переадресации порта для Широкополосный маршрутизатор можно задать с веб-страницы его настроек.
- С помощью экрана настройки камеры можно изменить все порты.

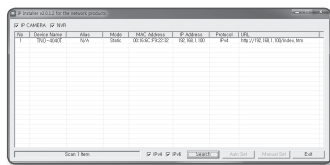
Когда камера 1 и камера 2 подключены к маршрутизатору:



- Переадресация портов выполняется без дополнительной настройки роутера, если роутер поддерживает функцию UPnP (включи и работай). После соединения с сетевой камерой установите из меню <Быстрое соединение> флажок <Wisenet DDNS> в пункте "Настройки" -> <Сеть -> DDNS".

ПОДКЛЮЧЕНИЕ К КАМЕРЕ С ЛОКАЛЬНОГО КОМПЬЮТЕРА ОБЩЕГО ДОСТУПА

1. Запустите программу IP Installer.
Она выполнит поиск подключенных камер и составит список найденных.
2. Дважды щелкните нужную камеру, чтобы получить к ней доступ.
Запустится веб-обозреватель и подключится к выбранной камере.



- Получить доступ к найденной камере можно и другим способом: просто введите IP-адрес камеры в адресную строку веб-обозревателя.

ПОДКЛЮЧЕНИЕ К КАМЕРЕ С УДАЛЕННОГО КОМПЬЮТЕРА ЧЕРЕЗ ИНТЕРНЕТ

Поскольку программа IP Installer запущена на удаленном компьютере, который находится вне сетевого кластера Широкополосный маршрутизатор, доступ к камерам в сети Широкополосный маршрутизатор можно получить, используя URL-адрес DDNS камеры.

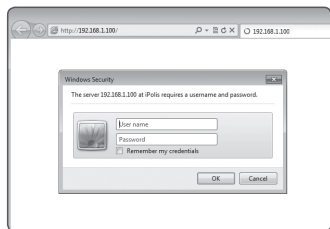
1. Прежде чем получить доступ к камере в сети Широкополосный маршрутизатор, необходимо настроить переадресацию диапазона портов для Широкополосный маршрутизатор.
2. На удаленном компьютере запустите веб-обозреватель и введите DDNS URL-адрес камеры или IP-адрес Широкополосный маршрутизатор в адресную строку.
пр) <http://ddns.hanwha-security.com/ID>

- За информацией о регистрации DDNS обратитесь к онлайн-справке программы Web Viewer.

ПОДКЛЮЧЕНИЕ К КАМЕРЕ

Обычный порядок действий

1. Запустите веб-обозреватель.
2. Введите IP-адрес камеры в адресную строку.
пр) IP-адрес (IPv4) : 192.168.1.100
→ http://192.168.1.100
- появится диалоговое окно входа.
 - IP-адрес (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111
→ http://[2001:230:abcd:ffff:0000:0000:ffff:1111] - появится диалоговое окно входа.



Номер порта HTTP отличен от 80

1. Запустите веб-обозреватель.
2. Введите IP-адрес и номер порта HTTP камеры в адресную строку.
пр) IP-адрес: 192.168.1.100: номер порта HTTP(8080)
→ http://192.168.1.100:8080 - появится диалоговое окно входа.

Использование URL-адреса

1. Запустите веб-обозреватель.
2. Введите DDNS URL-адрес камеры в адресную строку.
пр) URL-адрес: http://ddns.hanwha-security.com/ID
- появится диалоговое окно входа.

! ■ Сетевое подключение выключено только в среде LAN.

Просмотр DDNS-адреса

Если камера подключена напрямую к кабельному модему DHCP, модему DSL или модему PPPoE, то IP-адрес вашей сети будет изменяться при каждом подключении к серверу поставщика услуг Интернета. В этом случае вам не будет сообщаться об изменении IP-адреса, выполненном DDNS.

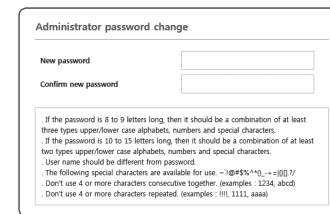
Если вы регистрируете устройство с динамическим IP-адресом на сервере DDNS, то во время доступа к этому устройству вы всегда можете проверить, как изменился его IP-адрес.

Чтобы зарегистрировать устройство на сервере <DDNS>, посетите веб-сайт http://ddns.hanwha-security.com. Сначала зарегистрируйте камеру, а затем задайте <Сеть> - <DDNS> для <Wisenet DDNS> в программе Web Viewer, а также укажите <Код продукта>, который использовался для регистрации DDNS.

УСТАНОВКА ПАРОЛЯ

Когда доступ к продукту выполняется первый раз, необходимо зарегистрировать пароль входа в систему. Когда откроется окно **“Смена пароля”**, введите новый пароль.

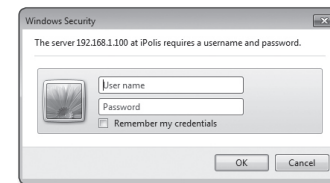
- ! ■ Для нового пароля от 8 до 9 символов, необходимо использовать не менее 3 символов из числа следующих: строчные/прописные буквы, цифры и специальные символы. Для пароля от 10 до 15 символов необходимо использовать не менее 2 типов указанных символов.
 - Допускаются следующие специальные символы : ~!@#\$\$%^&^*()_+={}|~?/
- Для лучшей защиты пароля не рекомендуется повторять одинаковые символы либо символы, последовательно расположенные на клавиатуре.
- При утрате пароля можно нажать кнопку [RESET] для инициализации продукта. Не теряйте пароль, сохраните его в записной книжке или запомните.



ВХОД

При каждом доступе к камере будет появляться окно входа. Укажите идентификатор пользователя и пароль для доступа к камере.

1. Введите **“admin”** в поле ввода <User Name>. Идентификатор администратора **“admin”** постоянный и не подлежит изменению.
 2. Введите пароль в поле ввода <Password>.
 3. Нажмите кнопку [OK].
После входа в систему отобразится экран интерактивной программы просмотра.
- ! ■ При доступе к камере через модуль Web viewer уделите внимание безопасности и проверьте, зашифрованы ли данные, содержащие изображение.
 - Если установить флажок **“Remember my credentials”** во время ввода данных, то в следующий раз и далее вход в систему будет выполняться автоматически без запроса данных.
 - Лучшее качество видео обеспечивается при размере экрана 100%. При уменьшении экрана изображение может быть обрезано по краям.



НАСТРОЙКА WEB VIEWER

1. Щелкните по значку [Настройка (⚙)].
2. Откроется окно настроек.
3. Можно задать по локальной сети базовую информацию о камере, а также настройки видео, аудио, локальной сети, событий, анализа и системы.
4. Выберите <Справка (ℹ)> для просмотра подробного описания каждой функции.

ХАРАКТЕРИСТИКИ

Элементы		Описание				
		TNO-4030T	TNO-4040T	TNO-4050T	TNO-4041T	TNO-4051T
Видео	Устройство обработки изображения	Неохлаждаемый микролометр				
	Размер пикселя	17 мкм				
	Количество эффективных пикселей	640x480				
	NETD	<50mK				
	Видеовыход	CVBS : 1,0 Vp-p / 75Ω композитный, 720x480(N), 720x576(P), Для установки		CVBS : 1,0 Vp-p / 75Ω композитный, 720x480(N), 720x576(P), Для установки		
Объектив	Фокусное расстояние (коэффициент трансфокации)	13 мм, фиксированный	19 мм, фиксированный	35 мм, фиксированный	19 мм, фиксированный	35 мм, фиксированный
	Макс. относительное отверстие	F1.0				
	Угловое поле зрения	Г:48,6°/В:36,4° Гл.:61,6	Г:32°/В:24,3° Гл.:39,2°	Г:17,2°/В:13° Гл.:22°	Г:32°/В:24,3° Гл.:39,2°	Г:17,2°/В:13° Гл.:22°
	Регулятор фокусировки	5м	11м	36м	11м	36м
	Мин. расстояние до объекта	Фиксированный				
Рабочие характеристики	Название камеры	Выкл. / Вкл - Общемировые: Английские/Цифровые/Специальные символы - Общие: Многострочный (до 5), цвет (серый/зеленый/красный/синий/черный/белый), прозрачность, автоматическое масштабирование по разрешению				
	Цифровая стабилизация изображения	Откл/Вкл. (встроенный гироскопический датчик)				
	Детектор движения	Выкл./Вкл. (8 многоугольных областей с 8 вершинами), функция Hand over				
	Зоны маскирования	Выкл. / Вкл. (32 зон, многоугольных областей) - Цвет: серый, зеленый, красный, синий, черный, белый - Мозаика				
	Переворот/Отражение	Переворот: Вкл. / Выкл.				
		Зеркальное отображение: Вкл./Выкл. Вид вестибуля: 90°/270°				

Элементы	Описание					
	TNO-4030T	TNO-4040T	TNO-4050T	TNO-4041T	TNO-4051T	
Рабочие характеристики	Анализ видео и аудио	Обнаружение вскрытия, передвижения, направления, виртуальная линия, вход/выход, появление/исчезновение, обнаружение звука, детектор движения, классификация звука, обнаружение удара, определение изменения температуры				
	В/В сигнала	Ввод 1шт / Вывод 2шт				
	Удаленное управление	-			RS485	
	Протокол RS-485	-			Pelco D/P, Samsung T, Honeywell, Bosch, Panasonic, Sungin, AD, Vicon, GE	
	Триггеры сигналов тревоги	Вход тревожного сигнала, обнаружение движения, анализ видео и аудио, отключение от локальной сети.				
Сеть	События тревоги	<ul style="list-style-type: none"> Загрузка файлов через FTP, электронную почту Уведомление по электронной почте Местное хранилище данных (SD/SDHC/SDXC) или NAS с записью при отключенной сети и наступлении события Внешний вывод 				
	Аудио вход	На выбор (вход Mic IN /вход Line IN) Сетевое напряжение: 2,5 В постоянного тока (4 мА), входное сопротивление: приблизительно 2 кОм				
	Аудио выход	Линейный выход, максимальный сигнал: 1 В действ.				
	Счетчик пикселей	Поддержка				
	Ethernet	RJ-45 (10/100BASE-T)				
	Формат сжатия видео	H.264 (MPEG-4 часть 10/AVC): Главная/Базовая линия/Высокий, Motion JPEG				
	Разрешение	640x480, 640x360, 320x240				
Сеть	Макс. частота кадров	H.265/H.264 : Макс. 30кадр/с при любых разрешениях Motion JPEG : Макс. 30кадр/с				
	WiseStream II	Поддерживается				
	Настройка качества видео	для H.264/H.265 : Заданной скорости бит для MJPEG : Заданной скорости бит				

Элементы	Описание				
	TNO-4030T	TNO-4040T	TNO-4050T	TNO-4041T	TNO-4051T
Способы управления скоростью передачи бит	для H.264/H.265 : CBR или VBR Motion JPEG : VBR				
Возможности потоковой передачи	Многопотоковая (до 10 профилей)				
Формат сжатия звука	G.711 μ -law /G.726 выбираемый G.726 (ADPCM) 8 КГц, G.711 8 КГц G.726 : 16 Кбит/с, 24 Кбит/с, 32 Кбит/с, 40 Кбит/с AAC-LC: 48 кбит/с при 8/16/32/48 кГц				
Аудиосвязь	Двунаправленная				
IP	IPv4, IPv6				
Протокол	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, Bonjour, LLDP				
Безопасность	Проверка подлинности при входе HTTPS (SSL) проверка подлинности при входе Digest фильтрация IP-адресов регистрация доступа пользователей Способ проверки подлинности 802.1X (EAP-TLS, EAP-LEAP)				
Способ потоковой передачи	Одноадресная / многоадресная				
Макс. количество пользователей	20 пользователей в одноадресном режиме				
Функция Edge Store	SD/SDHC/SDXC (до 256 Гбайт) - Можно загрузить изображения движения, записанные на карте памяти SD/SDHC/SDXC. NAS (сетевое хранилище данных) Локальный ПК для быстрой записи				
Программируемый интерфейс	ONVIF Profile S/G SUNAPI(HTTP API) Открытая платформа				
Язык веб-страницы	Английский, Корейский, Французский, Немецкий, Испанский, Итальянский, Китайский, Русский, Японский, Шведский, Португальский, Чешский, Польский, Турецкий, Голландский, Венгерский, Греческий				

Сеть

Элементы	Описание				
	TNO-4030T	TNO-4040T	TNO-4050T	TNO-4041T	TNO-4051T
Сеть	Веб-обозреватель	Поддерживаемые ОС : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Рекомендуемый браузер: Google Chrome Поддерживаемый браузер : MS Explorer 11, MS Edge, Mozilla Firefox (который поддерживается только Windows 64bit), Apple Safari (который поддерживается только Mac OS X)			
	ПО для центрального управления	SmartViewer, SSM			
Условия	Рабочая температура/влажность	-40°C ~ +60°C (-40°F ~ +140°F) / Относительная влажность менее 90%.			
	Температура хранения/влажность	-50°C ~ +60°C (-58°F ~ +140°F) / Относительная влажность менее 90%.			
	Пыле- и влагозащита	IP66, NEMA 4X			
	Защита от умышленной порчи	IK10	-	IK10	-
Электропитание	Входное напряжение/сила тока	24 В перем. тока, 12 В пост. тока, PoE (IEEE802.3af)			
	Потребляемая мощность	Не более 10,5W ((24 В перем. тока), Не более 9W (12 В пост. тока), Не более 10W (PoE) Стандарт: 8,9 Вт (24 В перем. тока), стандарт: 7,5 Вт (12 В пост. тока), стандарт: 8,6 Вт (PoE)			
Физические характеристики	Цвет/материал	Белый(RAL-9003) / Алюминиевый			
	Размеры (ØxГ)	Ø101.97 x Г401.8mm		Ø101.97 x Г309mm	
	Вес	3,124г	3,126г	2,452г	

Элементы	Описание			
	TNO-4030TR	TNO-4040TR	TNO-4041TR	
Видео	Устройство обработки изображения	Неохлаждаемый микролометр		
	Размер пикселя	17 мкм		
	Количество эффективных пикселей	640x480		
	NETD	<50mK		
	Видеовыход	CVBS : 1,0 Vp-p / 75Ω композитный, 720x480(N), 720x576(P), Для установки USB : Micro USB, тип B, 1280X720, для установки		
Объектив	Фокусное расстояние (коэффициент трансфокации)	13 мм, фиксированный	19 мм, фиксированный	
	Макс. относительное отверстие	F1.0		
	Угловое поле зрения	Г:48,6°/В:36,4°/Гл.:61,6	Г:32°/В:24,3°/Гл.:39,2°	
	Регулятор фокусировки	5м	11м	
	Мин. расстояние до объекта	Фиксированный		
Радиометрия	Диапазон определения температуры	От -20°C до 130°C (-4°F~266°F)		
	Погрешность определения температуры	±5°C (≤100°C), ±20% (>100°C)		
	Определение температуры	Выкл./вкл. (трехзонная оценка цветопередачи, прямоугольные зоны)		
	Дополнительно	Гибридные палитры, мгновенное определение температуры		
Рабочие характеристики	Название камеры	Выкл. / Вкл - Общемировые: Английские/Цифровые/Специальные символы - Общие: Многострочный (до 5), цвет (серый/зеленый/красный/синий/черный/белый), прозрачность, автоматическое масштабирование по разрешению		
	Цифровая стабилизация изображения	Откл/Вкл. (встроенный гироскопический датчик)		
	Детектор движения	Выкл./Вкл. (8 многоугольных областей с 8 вершинами), функция Hand over		
	Зоны маскирования	Выкл. / Вкл. (32 зон, многоугольных областей) - Цвет: серый, зеленый, красный, синий, черный, белый - Мозаика		
	Переворот/Отражение	Переворот: Вкл. / Выкл. Зеркальное отображение: Вкл./Выкл. Вид вестибуля: 90°/270°	Переворот: Вкл. / Выкл. Зеркальное отображение: Вкл./Выкл.	

Элементы	Описание		
	TNO-4030TR	TNO-4040TR	TNO-4041TR
Рабочие характеристики	Анализ видео и аудио	Обнаружение вскрытия, передвижения, направления, виртуальная линия, вход/выход, появление/исчезновение, обнаружение звука, детектор движения, классификация звука, обнаружение удара, определение температуры	
	В/В сигнала	Ввод 1шт / Вывод 2шт	
	Удаленное управление	-	
	Протокол RS-485	-	
	Триггеры сигналов тревоги	Вход тревожного сигнала, обнаружение движения, анализ видео и аудио, отключение от локальной сети.	
	События тревоги	<ul style="list-style-type: none"> Загрузка файлов через FTP, электронную почту Уведомление по электронной почте Местное хранилище данных (SD/SDHC/SDXC) или NAS с записью при отключенной сети и наступлении события Внешний вывод 	
	Аудио вход	На выбор (вход Mic IN /вход Line IN) Сетевое напряжение: 2,5 В постоянного тока (4 мА), входное сопротивление: приблизительно 2 кОм	
	Аудио выход	Линейный выход, максимальный сигнал: 1 В действ.	
	Счетчик пикселей	Поддержка	
	Сеть	Ethernet	RJ-45 (10/100BASE-T)
Формат сжатия видео		H.264 (MPEG-4 часть 10/AVC): Главная/Базовая линия/Высокий, Motion JPEG	
Разрешение		640x480, 640x360, 320x240	
Макс. частота кадров		H.265/H.264 : Макс. 30кадр/с при любых разрешениях Motion JPEG : Макс. 30кадр/с	
WiseStream II		Поддерживается	
Настройка качества видео	для H.264/H.265 : Заданной скорости бит для MJPEG : Заданной скорости бит		

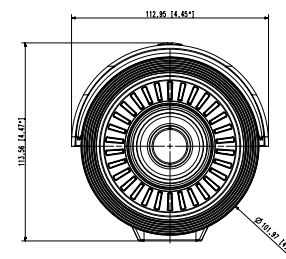
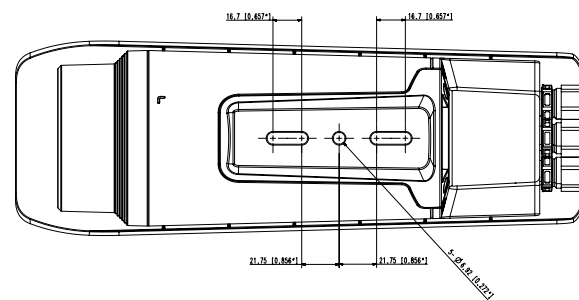
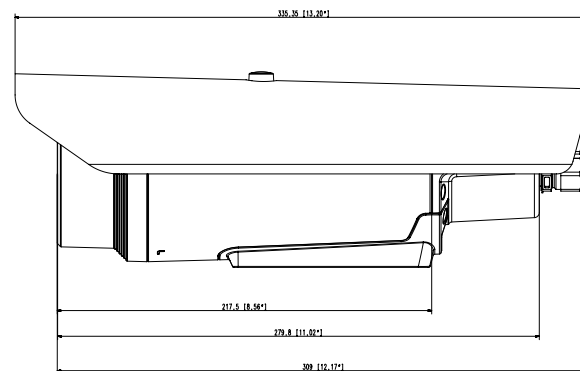
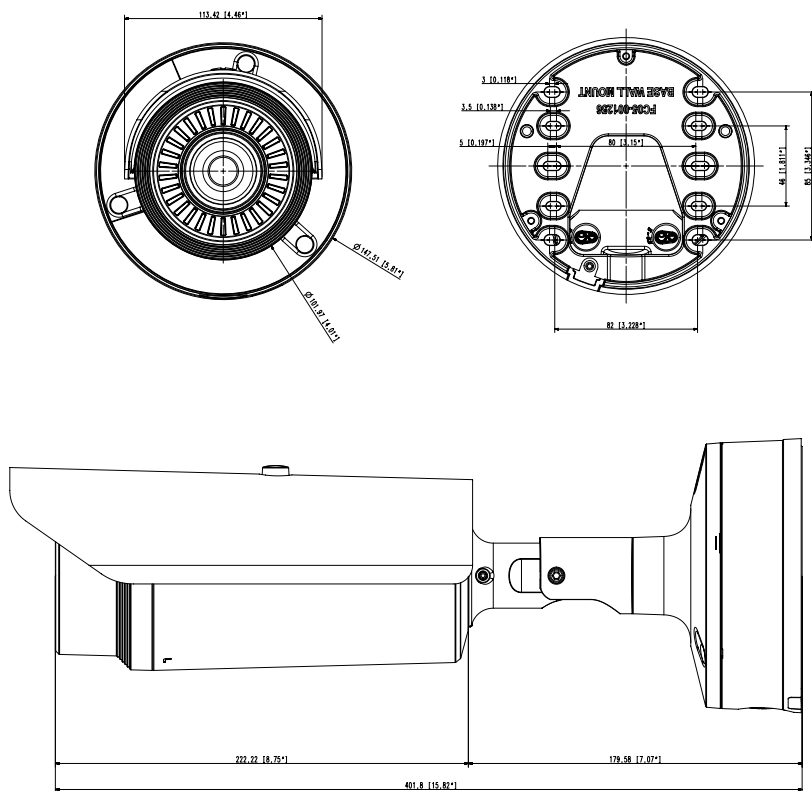
Элементы	Описание		
	TNO-4030TR	TNO-4040TR	TNO-4041TR
Способы управления скоростью передачи бит	для H.264/H.265 : CBR или VBR Motion JPEG : VBR		
Возможности потоковой передачи	Многопотоковая (до 10 профилей)		
Формат сжатия звука	G.711 μ -law /G.726 выбираемый G.726 (ADPCM) 8 КГц, G.711 8 КГц G.726 : 16 Кбит/с, 24 Кбит/с, 32 Кбит/с, 40 Кбит/с AAC-LC: 48 кбит/с при 8/16/32/48 КГц		
Аудиосвязь	Двунаправленная		
IP	IPv4, IPv6		
Протокол	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, Bonjour, LLDP		
Безопасность	Проверка подлинности при входе HTTPS (SSL) проверка подлинности при входе Digest фильтрация IP-адресов регистрация доступа пользователей Способ проверки подлинности 802.1X (EAP-TLS, EAP-LEAP)		
Способ потоковой передачи	Одноадресная / многоадресная		
Макс. количество пользователей	20 пользователей в одноадресном режиме		
Функция Edge Store	SD/SDHC/SDXC (до 256 Гбайт) - Можно загрузить изображения движения, записанные на карте памяти SD/SDHC/SDXC. NAS (сетевое хранилище данных) Локальный ПК для быстрой записи		
Программируемый интерфейс	ONVIF Profile S/G SUNAPI(HTTP API) Открытая платформа		
Язык веб-страницы	Английский, Корейский, Французский, Немецкий, Испанский, Итальянский, Китайский, Русский, Японский, Шведский, Португальский, Чешский, Польский, Турецкий, Голландский, Венгерский, Греческий		

Сеть

Элементы	Описание		
	TNO-4030TR	TNO-4040TR	TNO-4041TR
Сеть	Веб-обозреватель	Поддерживаемые ОС : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Рекомендуемый браузер: Google Chrome Поддерживаемый браузер : MS Explorer 11, MS Edge, Mozilla Firefox (который поддерживается только Windows 64bit), Apple Safari (который поддерживается только Mac OS X)	
	ПО для центрального управления	SmartViewer, SSM	
Условия	Рабочая температура/влажность	-40°C ~ +60°C (-40°F ~ +140°F) / Относительная влажность менее 90%.	
	Температура хранения/влажность	-50°C ~ +60°C (-58°F ~ +140°F) / Относительная влажность менее 90%.	
	Пыле- и влагозащита	IP66, NEMA 4X	
	Защита от умышленной порчи	IK10	
Электропитание	Входное напряжение/сила тока	24 В перем. тока, 12 В пост. тока, PoE (IEEE802.3af)	
	Потребляемая мощность	Не более 10,5W ((24 В перем. тока), Не более 9W (12 В пост. тока), Не более 10W (PoE) Стандарт: 8,9 Вт (24 В перем. тока), стандарт: 7,5 Вт (12 В пост. тока), стандарт: 8,6 Вт (PoE)	
Физические характеристики	Цвет/материал	Белый(RAL-9003) / Алюминиевый	
	Размеры (ØxГ)	Ø101.97 x Г401.8mm	
	Вес	3,124г	3,126г

TNO-4030T/4040T/4050T/4030TR/4040TR

Единицы измерения: мм (дюймы)



ПОИСК И УСТРАНЕНИЕ НЕПОЛАДОК

ПРОБЛЕМА	РЕШЕНИЕ
Если пользователь Windows 10 получает доступ к Web viewer через Chrome или Firefox, громкость микрофона периодически изменяется.	<ul style="list-style-type: none"> Это происходит, когда для микрофона установлен драйвер Realtek. Установите в качестве драйвера микрофона драйвер Windows по умолчанию для звукового устройства с поддержкой High Definition Audio, либо драйвер стороннего поставщика.
Если доступ производится через подключаемый программный модуль Free webviewer на Safari через HTTPS, видео не отображается.	<ul style="list-style-type: none"> При первоначальном доступе к https во всплывающем окне с предложением аутентификации выберите "Просмотр сертификата подлинности" и установите флажок "Всегда доверять при соединении по IP, назначенному программе веб-просмотра". Если модуль веб-просмотра по-прежнему не отображает видео после выбора "Далее" в окне сообщения внизу, нажмите командную кнопку + Q, чтобы выйти из браузера Safari, вновь войдите в систему и следуйте процедуре, приведенной выше.
Нет доступа к камере через веб-браузер.	<ul style="list-style-type: none"> Проверьте на правильность сетевые настройки камеры. Убедитесь в правильности подключения всех сетевых кабелей. Убедитесь в том, что камера получает динамический IP-адрес при использовании DHCP-технологии. Если камера подключена к Широкополосный маршрутизатор, убедитесь в том, что переадресация портов настроена правильно.
Происходит разрыв соединения по время мониторинга видео в экране просмотра.	<ul style="list-style-type: none"> При любом изменении настроек камеры или сети происходит разрыв соединения с наблюдательными терминалами. Проверьте все сетевые соединения. Может произойти разрыв соединения при плохой связи, если камера подключена к PPPoE.
Программа IP Installer не находит камеру, подключенную к сети.	<ul style="list-style-type: none"> Отключите фаервол на своем ПК и заново запустите поиск камеру.
Картинки перекрываются.	<ul style="list-style-type: none"> Убедитесь в том, что две или более камеры не транслируют данные на один и тот же multicast-адрес. Картинки могут перекрываться, если один адрес используется несколькими камерами.
Нет картинки.	<ul style="list-style-type: none"> Если задан метод передачи на группу адресов, убедитесь, что в локальной сети, к которой подключена камера, есть роутер, поддерживающий технологию multicast.

ПРОБЛЕМА	РЕШЕНИЕ
Голос не записывается, даже если заданы настройки входа аудио.	<ul style="list-style-type: none"> Необходимо установить флажок <Аудио вход> в меню <Basic> - <Профиль видео>.
<Детектор движения> в меню <Аналитика> установлено в <Активировать>, но уведомления по электронной почте не приходят, даже когда произошло событие аналитики.	<ul style="list-style-type: none"> Проверьте настройки в следующей последовательности: <ol style="list-style-type: none"> Проверьте настройки параметра <Дата и время>. Для параметра <Детектор движения> необходимо задать значение <Активировать>. Проверьте, выбран ли в меню <Настройка событий> параметр <Настройка событий>.
Сигнал тревоги не выводится на соответствующий порт даже при регистрации события анализа интеллектуального видео.	<ul style="list-style-type: none"> Проверьте настройки для выходных портов сигналов.
Не удается записать данные на карту памяти Micro SD.	<ul style="list-style-type: none"> Проверьте, исправна ли карта памяти.
Карта памяти Micro SD установлена, однако камера работает неверно.	<ul style="list-style-type: none"> Проверьте, в правильном ли направлении вставлена карта памяти. Возможность использования карт памяти, отформатированных на других устройствах, не гарантируется. Снова отформатируйте карту памяти в меню <Настройка> → <Событие> → <Накопитель>.
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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.

We are required to state that

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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

Article 1. Scope of License Agreement

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

Article 2. Definition

1. "T-Kernel" means a real-time operating system controlled and distributed by T-Engine Forum on behalf of the copyright holder thereof.
2. "Source Code" means a source program, including related comments and documentations, for the T-Kernel and the Ported Source Code defined in Article 2.8 which is registered with T-Engine Forum.
3. "Hardware-dependent Part" means the part of the Source Code which depends on hardware and needs to be changed when the Source Code is ported and operated on the target hardware, and is designated and separated as such part.
4. "Compiler-dependent Part" means the part of the Source Code which depends on compiler and needs to be changed when the Source Code is ported and operated on the target hardware, and is designated and separated as such part.
5. "Header File" means the part of the Source Code which contains definitions necessary to develop application programs.
6. "T-Engine Hardware" means the hardware which is manufactured in accordance with the T-Engine Hardware specifications or the μ T-Engine Hardware specifications issued by T-Engine Forum, and registered with T-Engine Forum.
7. "Similar Hardware to T-Engine Hardware" means any hardware (including software which emulates hardware) other than that defined in Article 2.6 above, on which the T-Kernel can be operated.
8. "Ported Source Code" means a source program produced from the Source Code by modifying only its Hardware-dependent Part and/or Compiler-dependent Part to enable it to be operated on the T-Engine Hardware or the Similar Hardware to T-Engine Hardware. The Ported Source Code which is registered with T-Engine Forum shall be included in the Source Code.
9. "Modified Source Code" means a source program modified from the Source Code for the purpose of improving its performance, increasing or decreasing its function, and the like. The Ported Source Code shall not be included in the Modified Source Code.
10. "Binary Code" means an executable code form which is created by compiling programs, which include all or part of the Source Code or the Modified Source Code.
11. "Derivative Work" means the Modified Source Code or the Binary Code.
12. "Embedded Product" means any product which operates with executable code form of the Source Code, the Modified Source Code or the Binary Code loaded on its hardware.
13. "End User" means a consumer who uses the Embedded Product.
14. "System Developer" means any person who develops the Embedded Product by itself or has a third party develop the same, and provides, whether with or without payment, the End User with the Embedded Product.
15. "Distributor of Modification" means any person who produces the Modified Source Code and, whether with or without payment, distributes the same to any third party.

16. "Patch for Modification" means a difference, program, system, or the like in order to create the Modified Source Code from the Source Code or the Binary Code thereof.

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

18. "Source Code User" means a person who uses the Source Code.

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1. to transmit a work to a large number of specific persons through the Internet communication, broadcasting, and the like;
2. to transmit a work to the general public through the Internet communication, broadcasting, and the like automatically in response to a request from the public; and
3. to distribute a copy of a work to the general public or a large number of specific persons.

Article 3. Copyright

1. The copyrights of the Source Code shall be owned by Ken Sakamura.

Article 4. License of Source Code

1. As provided for in this Article, T-Engine Forum shall provide, and grant a license to use, the Source Code free of charge to any person who has taken the necessary procedure for registration as prescribed by T-Engine Forum and agreed to the T-License.

2. The Source Code shall be distributed exclusively by T-Engine Forum. Any person who obtains the Source Code under Article 4.1 above shall not make any re-Distribution of the Source Code.

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4. to distribute the Binary Code created from the Source Code provided by T-Engine Forum hereunder or from the Source Code modified in accordance with the provision of Article 4.3 (1) above.
4. In accordance with the license granted under Article 4.1 above, the System Developer may perform the following acts:

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

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

Article 5. Distribution of Modified Source Code

1. Any of A- members of T-Engine Forum may become the Distributor of Modification by obtaining the approval of T-Engine Forum through the registration procedure as prescribed by the Forum provided that only the department of the A- member which has taken the registration procedure may distribute the Modified Source Code in such a way as provided for in this Article as long as it holds the Amembership.

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

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

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

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

6. Developer with the Patch for Modification. Provided, however, that the Distributor of Modification shall be obligated to confirm that the System Developer is the Source Code User duly licensed under Article 4.1.

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

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

9. The System Developer may, under the same obligation as imposed in Article 4.5, make the Embedded Product available for the End User through use of the Patch for Modification distributed by the Distributor of Modification or the Derivative Works obtained through the Vicarious Execution of Patch Processing.

Article 6. Distribution and Registration of the Ported Source Code

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

Source Code on the T-Engine Hardware or the Similar Hardware to T-Engine Hardware:

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

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

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

3. Any member of T-Engine Forum who requests the distribution mentioned in the preceding paragraph shall accede to the following conditions:

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

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

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

Article 7. Use for Other Purpose

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

Article 8. Limited Warranty

1. T-Engine Forum and the copyright holder of the Source Code warrant that the Source Code does not infringe third party's copyrights. Provided, however, that T-Engine Forum and the copyright holder of the Source Code make no warranty as to the Hardware-dependent Part and/or Compiler-dependent Part set forth in Article 6.2 in the Ported Source Code by any third party.

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3. Any legal dispute which may arise in relation to any breach of this License Agreement shall be subject to the exclusive jurisdiction of the Tokyo District Court.

Article 11. Governing Law and Language

1. This License Agreement shall be governed by and interpreted under the laws of Japan.

2. This License Agreement is executed in both Japanese text and English text provided that the Japanese text shall govern the interpretation and performance of this License Agreement.

Apache License 2.0

Component	Name License	URL
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Julian Seward, jseward@bzip.org

bzip2/libbzip2 version 1.0.5 of 10 December 2007

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iperf-2.0.5	University of Illinois / NCSA Open Source

iperf performance test

Mark Gates

Ajay Tirumala

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Feng Qin

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National Laboratory for Applied Network Research

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Jean-loup Gailly Mark Adler

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

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Правила утилизации батарей данного изделия

(Действительны в Европейском Союзе и иных европейских странах с системами раздельной утилизации.)

Данная маркировка на батарее или упаковке указывает на запрет утилизации изделия с иными бытовыми отходами по окончании срока службы. При наличии маркировки, химические символы Hg, Cd или Pb указывают на содержание в батарее ртути, кадмия или свинца выше контрольных уровней, указанных в директиве ЕС 2006/66. При неправильной утилизации батарей, данные вещества могут нанести вред здоровью человека или окружающей среде. Для защиты природных ресурсов и поддержки повторного использования материалов рекомендуется хранить батареи отдельно от других типов отходов и утилизировать их через местную систему бесплатного возврата батарей.

Замена аккумуляторов, встроенных в данное изделие, пользователем не предусмотрена. Информация по замене аккумуляторов может быть получена у обслуживающей компании.

MEMO

A template for a memo consisting of two vertical columns of horizontal dotted lines for writing. Each column contains 20 lines.

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The logo consists of the letters 'EAC' in a bold, black, sans-serif font. The 'E' and 'A' are connected at the top, and the 'C' is positioned to the right of the 'A'.

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