# **WISE**NET

**ネットワークカメラ** ユーザーマニュアル

QND-6011 QND-6021

CE



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### ✤ 設計および仕様は予告なく変更する場合があります。

◆ デフォルトの管理者IDは"admin"です。パスワードは初めてログインするときに設定する必要があります。 個人情報を安全に保護し、情報窃盗による被害を防ぐため、パスワードは3か月ごとに変更してください。 パスワードの不正管理によって発生したセキュリティおよびその他の問題は、ユーザー側の責任であることに御注意ください。



# 重要な安全ガイド

- 1. 本書の説明をよく読んで下さい。
- 2. 本書の指示を守ってください。
- 3. 全ての警告を留意してください。
- 4. 全ての指示に従って下さい。
- 5. 本機を水の傍で使用しないで下さい。
- 6. 柔らかく乾いた布か湿った布で製品表面の汚れた部分を拭き取ります。 (アルコール成分、溶剤、界面活性剤や油分を含む洗剤や化粧品を使用しないでください。製品の変形や損傷につながる恐れがあります。)
- 7. どの換気孔も塞がないようにして下さい。メーカーの指示に従って取り付けて下さい。
- 8. ラジエーター、熱レジスタ、あるいは熱を発するその他の装置(アンプを含む)などの熱源の傍に設置しないで下さい。
- 9. 分極タイプあるいは接地タイプのプラグの安全目的を必ず守ってください。分極プラグには一方が他方より幅広い2本の足が付います。接地プラグには2本の足とアース(接地)差込み先が付いています。2本の平たい足あるいは3本めの差込み先はユーザーの安全のために付いています。提供されたプラグがお使いのコンセントに合わない場合には、旧式のコンセントの交換について電気技師にご相談下さい。
- 10.特にプラグ、ソケット、機器との接点でコードが踏まれたり引っ張っられたりしないよう電源コードを保護してください。
- 11. メーカーが指定する付属品のみを使用してください。
- 12. カート、スタンド、三脚、ブラケットはメーカー指定のもの、あるいは製品と一緒に 販売されたもののみを使用してください。カート使用する場合、カートと製品を動か す際には転倒による損傷に注意してください。



- 13. 雷雨のときまたは長期間使用しないは場合は、製品の電源プラグを抜いてください。
- 14. 全ての修理は資格のあるサービス・スタッフに任せて下さい。修理は電源コードある いはプラグの損傷、液体をこぼした、または物体を機器内に落としてしまった、機器 を雨や湿度にさらしてしまった、正常に機能しない、あるいは機能の低下など、様々な原因で機器が損傷 した場合に必要となります。
- 15. この製品は「2等級」や「LPS」表示があります。そしてPoE(48V)、0.1 A定格で登録された電源供給デバイ スで電源を供給する仕組みです。
- 16. 本製品接続の外部電源は、絶縁電源を使用してください。
- 17. 製品取付け時に力を入れ過ぎると、カメラが損傷し、誤作動を起こす場合があります。 適切でないツールを使用して製品を力まかせに取り付けると、カメラが損傷する場合があります。
- 18. 化学物質やオイルミストが存在する、または生成される可能性のある場所には製品を取り付けないでください。大豆油のような食用油によって製品が損傷を受けたりゆがんだりするため、キッチンやキッチンテーブル付近には製品を取り付けないでください。 製品に損傷を与える原因となります。
- 19. 製品を取り付ける場合、製品表面が化学物質で汚染されないように注意してください。 クリーナーや接着剤のような化学溶剤は、製品表面に深刻な損傷を与える原因となります。
- 20. 推奨されない方法で製品を取り付け/取り外した場合、製品の機能/性能は保証できません。 ユーザーマニュアルの"取付けと接続"を参照して製品を取付けます。
- 21. 水中での製品の取付けや使用は、製品への深刻な損傷の原因となります。
- 22. 急激な温度変化が発生する場合、ドーム内部に霧が発生することもありますが、映像には問題ありません。

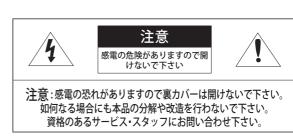
# 警告

注意

火災または感電防止のため、この装置を雨または湿気にさらさないでください。本製品の換 気グリルまたはその他の開口部から金属製物質を差し込まないでください。

製品に液体をこぼしたりかけたりせず、また花瓶のように液体が入った物体を製品の上に載 せたりしないでください。

損傷を防止するため、本製品を設置説明に従って壁/天井にしっかりと取り付けてください。



# グラフィック記号の説明



正三角形内の稲妻型の矢印は、本製品の筐体に人が感電する恐れのある"高圧 電流"が存在することを、ユーザーに警告するものです。



正三角形内の感嘆符は、製品の操作およびメンテナンス(修理)に関する重要 な付属説明書があることをユーザーに知らせるこものです。



# クラス Ι構造

クラスI構造を持つ装置は保護接地接続のある本線ソケットに接続してください。

# バッテリー

電源(バッテリーパックまたは取り付けた状態のバッテリー)は直射日光の当る場所や、熱器 具の近くには置かないでください。

バッテリーは交換できません。

# デバイスの切断

問題がある場合は、装置からメインプラグを抜きます。次にお住まいの地域の修理会社に電話してください。

米国外では、認証機関が採用している取付け金具用のHARコードが使用される場合があります。

# 注意

電池を間違ったタイプと交換すると爆発の危険性があります。 指示に従って使用済み電池を処分してください。

これらの保守説明書は、資格のあるサービススタッフのみが使用するものです。 感電の危険性を低減するために、資格がある場合を除き操作説明書に含まれていない修理は 行わないでください。

入力電源は1台のカメラにのみ使用し、他のデバイスを接続しないでください。

ITEは、外部の施設へルーティングなしで、PoEネットワークのみに接続することになっています。

次に示す安全のための推奨注意事項を熟読してください。

- •本製品は平らな場所に置いてください。
- 直射日光の当たる場所、暖房設備または低温区域の近くには取付けないでください。
- •本製品を導電性の高い物体の近くに置かないでください。
- •本製品は自分で修理しないでください。
- •本製品の上に水の入ったコップを置かないでくだ
- 磁気源のそばに取付けないでください。
- 換気口は塞がないようにしてください。
- •本製品の上に重いものを置かないでください。
- カメラを取り付ける/取り外すときは、保護手袋を着用してください。
   製品表面は高温になるため、やけどの原因となる場合があります。

ユーザーマニュアルは、本製品の使用方法に関するガイドブックです。

このマニュアルで使用する用語の意味を次に示します。

- •参照:製品の使用方法についてのヘルプ情報を示す場合。
- 注意: 指示に従わないことで、ものや人に損害が発生する可能性がある場合。

\*製品を使用する前に安全のためこのマニュアルを読み、大切に保管しておいてください。

特定なインストール環境で無線通信に干渉が発生する場合があります。 製品と周囲の無線通信デバイスの間に電磁波干渉が発生する場合、無線通信デバイスとの間 隔を拡張したり、通信用のアンテナ方向を調整することをお勧めします。



ネットワーク接続と設定

- カメラを直接ローカルネットワークに接続する
   カメラを直接DHCPベースのDSL/ケーブルモ デムに接続する
- 13 IPインストーラに使用するボタン
- 13 静的IPの設定
- 15 動的IP設定
- 15 -トフォワード (ポートマッピング)の設定
- 16 共有ローカルPCからカメラへの接続
- 16 リモートPCからインターネット経由でのカメ ラへの接続

● 概要



### 製品の特徴

• 防塵/防水 (IP42)

生活防水設計で日常生活から発生する水滴やホコリに露出されても安心して使用できます。

- 2メガピクセルビデオサポート
- マルチストリーミング

このネットワークカメラは、複数のCODECを使用して解像度と画質が異なる映像を同時に表示することができます。

• Webブラウザベースの監視

ローカルネットワーク環境で、インターネットWebブラウザを使用して画像を表示します。

• アラーム

イベントが発生すると、関連画像はユーザーが登録した電子メールアドレスやFTPサーバーに送信されるか、 マイクロSDカードやNASに保存されます。

改ざん検知

ビデオ監視に対して改ざんしようとすると検知します。

• 焦点ぼけ検知機能

カメラレンズの焦点ぼけを検出します。

• モーション検知

カメラのビデオ入力からモーションを検知します。

• 切断したネットワークの自動検出

イベントをトリガーする前にネットワーク切断を検知します。

人数カウント統計

ビデオ解析によって指定エリアへ侵入した人数を確認することができます。

ONVIFに準拠

この製品はONVIFプロファイルS&Gをサポートしています。 www.onvif.orgを参照してください。



# お奨めする PC 仕様

- CPU:Intel(R) Core(TM) i7 3.4 GH以降
- RAM:8G以上
- 対応OS:Windows 7, 8.1, 10, Mac OS X 10.12, 10.13, 10.14
- 推奨するブラウザ:Google Chrome
- ・ サポートするブラウザ:MS Explorer 11, MS Edge, Mozilla Firefox (Window 64bitのみ)、Apple Safari (Mac OSXのみ)
- VGA:PCleをサポートする256MB以上のビデオGDDR3以上のメモリをサポートするグラフィックカード
- ※確認済みのOSとブラウザに関する詳細情報は、付録を参照してください。

# 推奨マイクロSD/SDHC/SDXCメモリカード仕様

- 推奨容量:16GB~128GB(MLCタイプ)
- 推奨製造会社:SanDisk、Transcend
- 製品群:High endurance
- カードの製造会社別/タイプ別の互換性は異なる場合があります。

# NAS推奨仕様

- 推奨容量:200GB又はそれ以上を推奨します。
- 同時アクセス:NAS1台で最大16台のカメラ接続を受けられます。
- このカメラのために、NASを以下の製造仕様で利用することを推奨します。

推奨製品	入手可能なサイズ
QNAP NAS	最大16台のカメラが同時にアクセスできます。
Synology NAS	最大16台のカメラが同時にアクセスできます。

NAS装置をビデオ映像の保存以外の目的で使用する場合、利用できるカメラの数は減る場合があります。

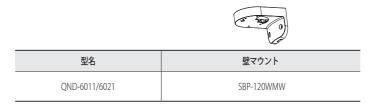
# キット内容

製品パッケージに、カメラと付属品がすべて同梱されていることをご確認ください。 (販売国ごとに付属品が異なるため。)

外観	品目名	数量	説明
	カメラ	1	
Į	クイックガイド (オプション)	1	
$\bigcirc$	保証書 (オプション)	1	
	テンプレート	1	製品設置ガイド
	L型レンチ	1	ドーム型カバーを取り外し、交換するために使用

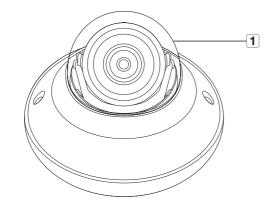
## 設置のためのオプション付属品

設置を容易にするため、適切なオプション付属品を購入できます。

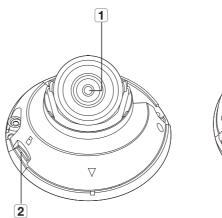




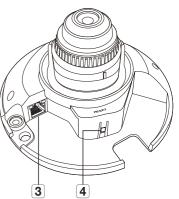
外観



項目	説明	
<b>1</b> ドームカバー	レンズとメインユニットの保護に使用するケースカバー。	



部品



項目	説明
<ol> <li>レンズ</li> </ol>	カメラのレンズ。
2 マイクロSDメモリカードの 区画	マイクロSDメモリカードの区画。
3 PoEコネクタ	ネットワークと接続し、イーサネット経由で配電します。
<ul><li>4 リセット・ボタン</li></ul>	すべてのカメラ設定を工場出荷時のデフォルトに復元します。 約5秒間押し続けてシステムを再起動します。 ■ カメラをリセットすると、DHCPを有効化されるようにネットワーク設定が調整されます。 ネットワーク内にDHCPサーバーがない場合、ネットワークに接続する前に、IPインスト ーラブログラムを実行して、IPアドレス、サブネットマスク、ゲートウェイなどの基本的 なネットワーク設定を変更する必要があります。

## 取付け

### 取付けに関する注意事項

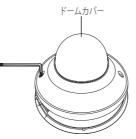
カメラを取り付ける前に、以下の指示をよく読んでください。

- 取付ブラケットを含むカメラの5倍の重量に耐えることができる場所(天井または壁)にインストール する必要があります。
- 引っかかっていたり、はがれたケーブルは製品の損傷または火災の原因となります。
- 安全のため、設置場所に人を近づけないでください。
   また、万が一のため持ち物は取付け場所には置かないでください。

### 取外し

付属で提供されたLレンチでネジを反時計回りに回してドームカバーを 分離してください。

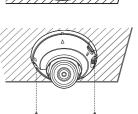
- ネジは、完全に緩める必要はありません。
- 保護フィルムを取り除いてから、ドームカバーの透明な部分を手で握らないでください。



### 取付け

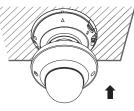
- 1. モニタリングを行う方向を念頭において、テンプレートを貼り付け、 テンプレートに従って穴を開けます。
  - 刻印された < ① > マークがカメラの監視方向を向くようにセットします。
- 2. 二つのタッピングねじを使用してテンプレートで開いたホール2箇 所にカメラを固定させてください。
- **3.** 対応するケーブルを用いカメラ内部の端末を接続します。
- 4. "カメラの監視方向の調整"セクションを参照してレンズを目的 の方向に調整します。(10ページ)
- カメラのレンズは製造の最終工程の段階で、適切な場所に焦点が合わせられているため、レンズには触れないようにしてください。もし触れてしまうと、レンズの焦点がずれるか、異物により汚れるおそれがあります。
- 5. ドームカバーを閉じてLレンチを用いてネジを時計回りに回し、カバ ーを固定させてください。
  - 必要な場合、ドームカバーの側面にある配線ホールのカバーを取り除いてから使用してください。

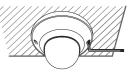




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TEMPLAT

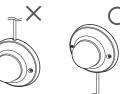




### ■ 壁にインストールする(IP42)

カメラを壁にインストールする場合、生活防水/防塵(IP42)のため、図に示 すようにLANケーブルが下に接続されるように方向を設定してください。





取付けおよび接続

# 取付けおよび接続

### カメラの監視方向の調整



### 監視方向の調整

カメラが天井に固定されている場合にのみカメラの方向を調整できます。 この場合、カメラユニットを左右に回すことをパンニング、上下角度を調整することをチルト、軸を中心にレン ズを回転することを回転と言います。

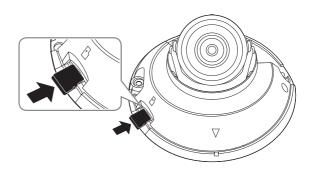
- パンニングの有効範囲は合計350度です。
- 回転の有効範囲は合計355度です。
- チルトの有効範囲は合計69度です。
- 角度によっては画像がカメラケースによって覆われることがあります。
- 調整方法
- 1. カメラを取り付けた後、監視方向に応じてパンニングの角度を調整します。
- 2. 画像が反転しないように水平角を設定します。
- 3. カメラが監視する被写体の方向を向くようにチルトの角度を調整します。

# マイクロSDメモリカードの挿入/取出し

- マイクロSDメモリカードを挿入する前に、カメラの電源ケーブルを抜いてください。
  - 上下反対のままマイクロSDメモリカードを無理に挿入しないでください。
     無理に差し込むと、マイクロSDメモリカードが破損する恐れがあります。
  - 雨あるいは高湿度の状態でMicroSDカードを挿入したり取り出したりすることは推奨されません。

### マイクロSDメモリカードの挿入

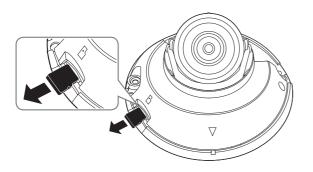
- 1. カメラのドームカバーを取り外します。
- 2. 図のように、MicroSDカードを矢印方向へ挿入します。



### マイクロ SDメモリカードの取出し

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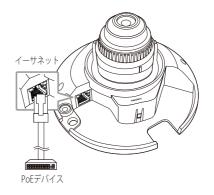
図に示されているように、メモリカードの露出部分を慎重に押して、スロットからメモリカードを取り出します。



- マイクロ SDメモリカードを強く押しすぎると、手を放したときに、カードがスロットから勢いよく飛び出す可能性 があります。
- お使いのマイクロSDメモリーカードを取り外す前に、カメラのスイッチを切るか <ストレージ>へ移動し、デバイスのス イッチを切り、[**適用**]ボタンを押します。
- カメラのスイッチを切るか、データの入っているマイクロ SDメモリーカードを製品から抜くと、データが失われる か、または損傷を受ける場合があります。

## 電源とネットワーク

カメラをPoE機器を接続します。



- PoE(Power over Ethernet)が使用できるルーターのPoEコネクタに接続します。
  - IEEE802.3afプロトコルに準拠するPoE(Power over Ethernet)を使用します。

### ネットワークケーブルの仕様

アイテム	コンテンツ	備考
コネクタ	RJ45	
イーサネット	10/100BASE-T	10/100 Mbps
ケーブル	カテゴリ 5e	
最大距離	100M	DC抵抗≤0.125 Ω/m
PoE サポート	IEEE 802.3af	



■ Category 5eの標準規格以外のケーブルを使用する場合、伝送距離(100m)は保障できません。

# ネットワーク接続と設定

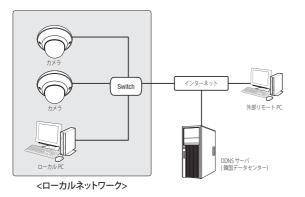
使用中のネットワーク環境に合わせてネットワークを設定することができます。

# カメラを直接ローカルネットワークに接続する

### LAN のローカル PC からカメラに接続する

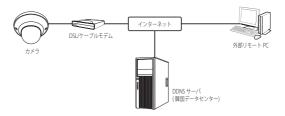
1. ローカル PC でインターネットブラウザを起動します。

2. ブラウザのアドレスバーにカメラの IP アドレスを入力します。



- LANネットワーク範囲外の外部インターネットのリモート PCは、ポート転送がきちんと設定されていない場合や ファイアウォールが有効の場合には、設置済みカメラとインターネット接続ができない場合があります。 この場合、ネットワーク管理者にお問い合わせください。
  - IPインストーラーでは、IPアドレス、サブネットマスク、ゲートウェイ、HTTPポート、VNPポート、IP方式を設定するために、デフォルトパスワード、"4321"を御利用いただけます。ネットワークインターフェース変更後、セキュリティを向上させるため、ウェブビューアーにアクセスしてパスワードを変更してください。
  - 工場出荷時の設定で、IPアドレスがDHCPサーバーから自動的に割り当てられます。
     使用可能なDHCPサーバーがない場合、IPアドレスは192.168.1.100に設定されます。
     IPアドレスを変更するにはIPインストーラを使用してください。
     IPインストーラの使用方法の詳細は、"静的IPの設定"を参照してください。(13ページ)

# カメラを直接DHCPベースのDSL/ケーブルモデムに接続する



- 1. ユーザのPCをネットワークカメラに直接接続します。
- IPインストーラを実行してカメラのIPアドレスを変更し、デスクトップ上でWebブラウザを使用して インターネットと接続できるようにします。
- 3. インターネットブラウザを使用してWeb Viewerと接続します。
- 4. [設定]ページに移動します。
- 5. [ネットワーク] [DDNS]に移動し、DDNSの設定を行います。
- **6.** [Basic] [IP & ポート]へ移動し、IP方式を [DHCP] に設定します。
- 7. PCから取り外したカメラを直接モデムに接続します。

8. カメラを再起動します。

- DDNSの設定方法についての情報は、ウェブビューアのオンラインヘルプを参照してください。
  - IPフォーマットの設定方法についての情報は、ウェブビューアのオンラインヘルプを参照してください。

## IPインストーラに使用するボタン

Device Name QND-6011	Alfas N/A	Mode Static	MAC Address 00:16:6C:F8:3C:F7	IP Address 192, 168, 1, 100	Protocol IPv4	URL http://192.168.1,100/index.htm

項目	説明
<b>1</b> Device Name	接続しているカメラのモデル名です。 列をクリックしてモデル名順にリストをソートします。 ただし、検索中にクリックすると検索は停止します。
<b>2</b> Alias	この機能は現在導入されていません。
3 Mode	現在のネットワーク接続状態によって、< <b>Static</b> >もし< <b>Dynamic</b> >と表示します。
<b>4</b> MAC(Ethernet) Address	接続されているカメラのイーサネットアドレスです。 列をクリックしてイーサネットのアドレス順にリストをソートします。 ただし、検索中にクリックすると検索は停止します。
5 IP Address	IPアドレスです。 列をクリックしてIPアドレス順にリストをソートします。 ただし、検索中にクリックすると検索は停止します。
6 Protocol	カメラのネットワーク設定です。 工場初期値は"IPv4"です。 IPv6設定のカメラは、"IPv6"と表示されます。
7 URL	外部のインターネットからのアクセスに使用するDDNS URLアドレス。 ただし、DDNS登録が失敗した場合、このアドレスはカメラの <ip address="">に置き換わりま す。</ip>
8 IPv4	IPv4設定のカメラをスキャンします。

項目	説明
9 IPv6	IPv6設定のカメラをスキャンします。 IPv6対応の環境でのみ有効化されます。
<b>10</b> Search	ネットワークに接続されているカメラをスキャンします。 ただし、IPv4、IPv6どちら4確認できない場合、このボタンはグレー表示されます。
<b>11</b> Auto Set	IPインストーラによって自動的にネットワークが設定されます。
12 Manual Set	ネットワーク設定を手動で行う必要があります。
13 Exit	IP Installerプログラムを終了します。

 IPインストーラーは最新バージョンを使用してください。最新バージョンはHanwha TechwinのWebサイトからダウ ンロードすることができます。

サポートするOSが Windows 8.1である場合は、 IP Wisenetの代わりにWisenetデバイスマネージャーを使用することを推奨します。

Wisenetデバイスマネージャープログラムは、メニューの<**テクニカルガイド**>-<**オンラインツール**>から、 Hanwha Techwinのウェブサイト (http://www.hanwha-security.com)へアクセスしてダウンロードできます。

# 静的IPの設定

### 手動ネットワーク設定

<IP Installer\_v2.XX.exe>を実行し、カメラの検索リストを表示します。 最初の起動時には、[Auto Set]と[Manual Set]は両方グレー表示となります。

■ IPv6設定のカメラが見つかった場合、カメラがこの機能をサポートしていないため、ボタンがグレー表示されます。

- 検索リスト内のカメラを選択します。 カメラのラベルに印字されているカメラのMACアドレスを 確認します。
   [Auto Set]と[Manual Set]の両方のボタンが有効となります。
- [Manual Set]をクリックします。
   Manual Settingダイアログが表示されます。
   カメラの<IP Address>、<Subnet Mask>、<Gateway>、<HTTP Port>及び <VNP Port>が予め設定された値で表示 されます。

3. <Address>ペインに必要な情報が表示されます。

- MAC (Ethernet) Address: カメラのラベルに印字されている カメラのMACアドレスが自動的に表示されるため、ユーザ 一設定は不要です。
- IP関連パラメータは、DHCPにチェックが入っていない場合にの み設定することができます。



nual Setting		
Address 03:08:18:33:AAX35 IP Address 03:08:18:33:AAX35 IP Address 182 . 168 . 1 . 100 Subnet Mask 255 . 255 . 0 Gateway 192 . 168 . 1 . 1 Password	Port HTTP Port VNP Port	80
OK	Cancel	]

# ネットワーク接続と設定

### ブロードバンドルーターを使用しない場合

<IP Address>、<Subnet Mask>、<Gateway>の設定については、システム管理者にお問い合わせください。

4. <Port>ペインに必要な情報が表示

されます。

- HTTP Port: インターネットブラウザを使用してカメラに アクセスする際に使用します。初期設定は80です。
- VNP Port: 映像信号の送信の制御に使用され、初期値は 4520です。
- パスワードを入力してください。 カメラへのアクセスに使用していた"admin"アカウントのパス ワードを入力します。
- セキュリティ上の目的で、数字、アルファベット、大文字小文字および特殊文字を使用することをお勧めします。
  - パスワードの変更方法についての情報は、ウェブビューアのオンラインヘルプを参照してください。
- 6. [OK]をクリックします。 手動でのネットワーク設定が完了しました。

### ブロードバンドルーター使用の場合

- IP Address: ブロードバンドルーターによって指定されたIP 範囲でアドレスを入力します。
   例) 192.168.1.2~254、192.168.0.2~254、
- 192.168.XXX.2~254
- Subnet Mask: ブロードバンドルーターの<Subnet Mask> が、カメラの<Subnet Mask>となります。
- Gateway: ブロードバンドルーターの<Local IP Address> が、カメラの<Gateway>となります。
- 設定は、接続しているブロードバンドルーターのモデルによって異なる場合があります。
   詳細は、該当するルーターのユーザーマニュアルを参照してください。
  - ブロードバンドルーターのポートフォワーディングの詳細については、"ートフォワード (ポートマッピング)の設定"を参照してください。(15ページ)

				v	/ireless-G Bre
Setup	Sctup Wire)	enn Secu		Access strictions	Applications & Carning
	Basic Setup	1	DONS	1.1	AC Address Clone
Internet Setup					
sternet Connection Type	Automatic C	onfiguration -	DHCP 🗸		
Optional Settings (required by some ISPs)	Router Name : Host Name :	Router_1			
	Domain Name : MTU :	Manual	v		
	Size :	1400			
Network Setup				_	
Router IP	Local IP Address	255.255	8.1.1		

### ブロードバンドルーターに複数のカメラが接続されている場合

IPに関する設定と、ポートに関する設定は別々に設定します。

例)

	カテゴリ		カメラ #1	カメラ #2	
	IP設定	IP Address Subnet Mask Gateway	192.168.1.100 255.255.255.0 192.168.1.1	192.168.1.101 255.255.255.0 192.168.1.1	
-	ポート設定	HTTP Port VNP Port	8080 4520	8081 4521	

(MITP Port>が80以外に設定されている場合、カメラにアクセスするには、インターネットブラウザのアドレスバーで
 -でくPort>番号を設定する必要があります。
 例 http://IPアドレス: HTTPポート

http://192.168.1.100:8080

### 自動ネットワーク設定

<IP Installer\_v2.XX.exe>を実行し、カメラの検索リストを表示します。 最初の起動時には、[Auto Set]と[Manual Set]は両方グレー表示となります。

- IPv6設定のカメラが見つかった場合、カメラがこの機能をサポートしていないため、ボタンがグレー表示されます。
- 検索リスト内のカメラを選択します。カメラのラベルに印字 されているカメラのMACアドレスを確認します。 [Auto Set]と[Manual Set]の両方のボタンが有効となります。
- [Auto Set]をクリックします。 Auto Settingダイアログが表示されます。
   <IP Address>、<Subnet Mask>、<Gateway>が自動的に 設定されます。
- 3. パスワードを入力してください。 カメラへのアクセスに使用していた"admin"アカウントの パスワードを入力します。
  - セキュリティ上の目的で、数字、アルファベット、大文字小 文字および特殊文字を使用することをお勧めします。
    - パスワードの変更方法についての情報は、ウェブビューアの オンラインヘルプを参照してください。
- 4. [OK]をクリックします。 自動ネットワーク設定が完了しました。

Device Mareo		Made	MAC AMMAG	P 669045	Potocol	118.
CND+6111	896 R/A	Static	0016-90 \$9190 \$7	182,168,1,100	P.4	http://TRLTERT.BR.T. Kill/Andex.Mtm

Auto Setting	Auto Setting				
Network Information	I				
IP Address	192 . 168 . 1 . 254				
Subnet Mask	255 , 255 , 255 , 0				
Gateway	192 . 168 . 1 . 1				
☐ IP Setting Password	Port Mapping				
OK	Cancel				

### 動的IP設定

### 動的IP環境設定

- 動的IP環境の例
- カメラに接続しているブロードバンドルーターが、DHCPサーバーでIPアドレスを割り当てられている場合
- DHCPプロトコルを使用して直接カメラをモデムに接続する場合
- IPがLAN経由で内部DHCPサーバーに割り当てられている場合

### 動的IPの確認

- ユーザーのローカルコンピュータでIPインストーラを実行 します。
   <Dynamic IP>アドレスが割り当てられているカメラがリスト に表示されます。
- 2. 検索結果からカメラを選択します。
- [Manual Set]ボタンをクリックし、カメラの<Dynamic IP> アドレスを確認します。
   <DHCP>のチェックを外しておくと、IPを<Static>に変更で きます。





## ートフォワード(ポートマッピング)の設定

カメラを接続したままブロードバンドルーターをインストールした場合は、ブロードバンドルーター上でポート範囲 フォワードを設定し、ルーター内のカメラにリモートPCからアクセスできるようにする必要があります。

### 手動ポートフォワード

- ブロードバンドルーターの設定メニューから<Applications & Gaming> - <Port Range Forward>を選択します。 サードパーティのブロードバンドルーター用にポートフォ ワードを設定するには、ブロードバンドルーターのユーザ ーマニュアルを参照してください。
- ブロードバンドルーターに接続されている各カメラ用の、 <TCP>と<UDP Port>を選択します。 IPルーターに設定する8ポートの数字は、カメラWeb Viewerの<設定> - <Basic> - <IP&ポート>に指定されるポ ート番号に合わせて設定しなければなりません。

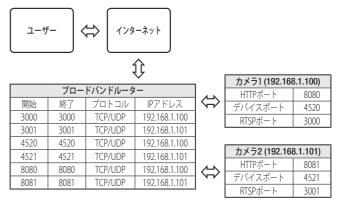
Applications	Wireless-G Broadband Router with						
& Gaming	Setup	Wirele	•••	Secur		ccess A	pplications L Gaming
	Port Ranga F	onward	1	Port Trip	perina 1	DVZ I	065
Port Range Forward							
				Por	t Range		
	Application	Star		End	Protocol	IP Address	Inable
		0	to [	0	Both 🛩	192.168.1.0	
	RTSP1	3000	10	3000	Both M	192.168.1. 10	
	RTSP2	3001	10	3001	Both 💌	192.168.1. 1.03	. 2
	VNP1	4520	to [	4820	Both 🛩	192168.1.10	
	VNP2	4521	to [	4521	Both 🛩	192.168.1. 103	
	WEB1	0050	10	0050	Both M	192.168.1. 10	
	WEB2	8081	10	8081	Both 💌	192.168.1. 1.0	
		0	] to	0	Both 🛩	192.168.1.0	
		0	to [	0	Both M	192.168.1. a	
		0	10	0	Both M	192.168.1.0	
					Save Sett	ings Cano	el Changer

- **3.** 完了後、[Save Settings]をクリックします。 設定が保存されます。
- 上記の説明の例はCISCOのブロードバンドルーターに基づいています。
  - 設定は、接続しているブロードバンドルーターのモデルによって異なる場合があります。
     詳細は、該当するルーターのユーザーマニュアルを参照してください。

### 複数のネットワークカメラに関するポートフォワード範囲設定

- ブロードバンドルーターデバイスの設定Webページで、ポートフォワーディングのルールを設定する ことができます。
- ユーザーは、カメラ設定画面を使って各ポートを変更できます。

カメラ1とカメラ2がルーターに接続されている場合:



 ● ルータがUPnP (ユニバーサルブラグアンドプレイ)機能をサポートしている場合、ポートフォワーディングを追加 ルータの設定なしで行うことができます。 ネットワークカメラを接続した後、

 × (Wisenet DDNS)の

ネットワークカメノを接続した後、<br/>
くWisellet DDNS>のペクイック後続>を<br/>
設定<br/>
マネットワーク<br/>
プロNS メニュー<br/>
にあるくOn>にセットします。

# ネットワーク接続と設定

# 共有ローカルPCからカメラへの接続

Ø

- IPインストーラを実行します。 接続されているカメラをスキャンし、そのリストを表示し ます。
- アクセスするカメラをダブルクリックします。 インターネットブラウザが起動し、カメラに接続されます。



# リモートPCからインターネット経由でのカメラへの接続

ブロードバンドルーターのネットワーククラスターに属さないリモートコンピュータ上でIPインストーラを使用する ことはできないため、ユーザーはカメラのDDNS URLを使用してブロードバンドルーターのネットワーク内のカメラ にアクセスすることができます。

- ブロードバンドルーターのネットワーク内のカメラへアクセスする前に、ブロードバンドルーターに ポートフォワードを設定しておく必要があります。
- リモートPCから、インターネットブラウザを起動しカメラのDDNS URLアドレスを入力するか、アドレス バーでブロードバンドルーターのIPアドレスを入力します。
   例) http://ddns.hanwha-security.com/ID
- DDNSの登録方法についての情報は、ネットワーク設定ガイドを参照してください。



## カメラへの接続

### 通常の方法

- 1. インターネットブラウザを起動します。
- アドレスバーにカメラのIPアドレスを入力します。 例)・IPアドレス(IPv4):192.168.1.100 → http://192.168.1.100 - ログインダイアログが表示されます。
  - IPアドレス(IPv6): 2001:230:abcd: ffff:0000:0000:ffff:1111
  - → http://[2001:230:abcd:ffff:0000:0000:ffff:1111] ログインダ
  - イアログが表示されます。



- HTTPポートが80以外の場合 1. インターネットブラウザを起動します。
- アドレスバーにカメラのIPアドレスとHTTPのポート番号を入力します。
   (例) IPアドレス:192.168.1.100:HTTPのポート番号(8080)
   http://102.168.1.100:9000
   ログレングイスロログジェニナわます
  - → http://192.168.1.100:8080 ログインダイアログが表示されます。

### URLを使用する場合

- 1. インターネットブラウザを起動します。
- アドレスバーにカメラのDDNS URLを入力します。 例) URLアドレス:http://ddns.hanwha-security.com/ID - ログインダイアログが表示されます。

■ ネットワーク接続はLANのみの環境では無効になります。

### UPnPを介した接続

- 1. UPnPプロトコルをサポートするために、クライアント或いはオペレーティングシステムを実行します。
- 2. 検索するカメラ名をクリックします。

Windowsオペレーティングシステムでは、ネットワークメニューから検索したカメラ名をクリックします。

- ログインウィンドウが表示されます。

### Bonjourを介した接続

- 1. Bonjourプロトコルをサポートするためにクライアント或いはオペレーティングシステムを実行します。
- 検索するカメラ名をクリックします。 Macのオペレーティングシステムでは、SafariのBonjourタブから検索したカメラ名をクリックします。
   ログインウィンドウが表示されます。

### DDNSアドレスを確認するには

カメラが直接DHCPケーブルモデム、DSLモデムに接続すると、ISP (インターネットサービスプロバイダ)サーバーに接続するたびにネットワークのIPアドレスが変更されます。

その場合、DDNSによるIPアドレスの変更は通知されません。

動的なIPベースのデバイスをDDNSサーバーに登録すると、そのデバイスにアクセスするときに、変更されたIP を簡単に確認することができます。

使用するデバイスを<DDNS>サーバーに登録するには、http://ddns.hanwha-security.comにアクセスして最 初にデバイスを登録し、Web Viewerの<**ネットワーク**> - <DDNS>を<Wisenet DDNS>に設定し、DDNS登録に 使用した<製品ID>を指定します。

# web viewer

# パスワード設定

本製品を初めて使用する場合、ログインパスワードを登録する必要があります。

"**パスワード変更**"ウィンドウが表示されましたら、新しいパスワードを 入力します。

- 新しいパスワードが8~9桁の場合、以下のうち3種類以上を使用 する必要があります:大文字/小文字、数字、特殊文字。パスワ ードが10~15桁の場合、2種類以上を使用する必要があります。
  - 認められている特別文字:~`!@#\$%^\*()\_-+=|{]].?/
- 安全性を高めるため、同じ文字を繰り返したり、キーボード上の連続した文字を入力したりするのはお勧めしません。
- パスワードをなくした場合、[RESET]を押して製品を初期化します。そのため、メモ帳を利用したり、記憶したりして、パスワードをなくさないようにしてください。

# ログイン

カメラにアクセスするたびに、ログインウィンドウが表示されます。 ユーザーIDとパスワードを入力してカメラにアクセスします。

- <User name>入力ボックスに"admin"と入力します。 管理者ID"admin"は、確定されており変更できません。
- 2. <Password>入力欄に入力します。
- 3. [OK]をクリックします。 正常にログインすると、Live Viewerの画面が表示されます。
- カメラのWebビューアーにアクセスする場合は、画像データが 暗号化されているか確認し、セキュリティに特にご注意ください。

dows Security he server 192.	168.1.100 at iPolis requires a username and password.	×
	User name Password	
	Remember my credentials      OK      Cancel	

Administrator password change

If the password is 8 to 9 letters long, then it should be a combination of at least

three types upper/lower case alphabets, numbers and special characters. . If the password is 10 to 15 letters long, then it should be a combination of at least two types upper/lower case alphabets, numbers and special characters.

User name should be different from password. The following special characteristic of the special characteristic special characters are available for use.  $-3(00\%^{+0})^{-1}(00\%^{+0})^{-$ 

New password

Confirm new passwor

- 入力完了時に、"Remember my credentials"オプションをチェックしておくと、次回からはログイン情報の入力を求められることなく自動的にログインします。
  - 画面サイズが100%である場合、映像画質が最高の状態になります。 倍率を小さくすると、境界線上の画像がカットされます。

# カメラ・ウェブビューアーの設定

- 1. [設定 ( 💠 )]アイコンをクリックします。
- 2. 設定画面が現れます。
- 3. カメラの基本情報、ビデオ、オーディオ、ネットワーク、イベント、分析、ネットワーク全体のシス テムの設定を構成することができます。
- 4. < ヘルプ (⑦)> をクリックして、それぞれの機能の詳細説明を表示します。

1.	エキキ	
1.	工你	

75 D		説明			
	項目	QND-6011	QND-6021		
	撮像素子	1/2.8" 2MP CMOS			
映像	有効画素数	1920(H) x 1080(V)			
	最低照度	カラー : 0.1 Lux (F2.0, 1/30秒)	カラー : 0.1 Lux (F1.6, 1/30秒)		
	焦点距離(ズーム倍率)	2.8mm固定フォーカスレンズ	4mm固定フォーカスレンズ		
レンズ	最大口径比	F2.0	F1.6		
	画角	H: 113.74° / V: 61.5° / D: 134.45°	H: 87.6° / V: 46.4° / D: 104.5°		
	焦点制御	固定フォーカス			
パンニング/ チルト/回転	パン/チルト/回転範囲	0°~350°/0°~69°/0°~355°			
	カメラタイトル	最大85文字表示			
	昼/夜	オート (電気関係)			
	逆光補正	BLC, WDR, SSDR			
	ワイドダイナミックレンジ	120dB			
	デジタルノイズリダクション	SSNR			
	モーション検知	4つ、多角形対応			
	プライバシーマスク	6つ、四角対応			
	利得調整	サポート			
操作関係	ホワイトバランス	ATW/AWC/手動/屋内/屋外			
	LDC	サポート			
	電子シャッター速度	最小値/最大値/ちらつき防止 (1/5~1/12,000秒)			
	映像角度	フリップ,ミラー,玄関 (90° / 270°)			
	インテリジェントビデオ解析	焦点ぼけ検知、モーション検知、タンパリング			
	ビジネスインテリジェンス	人数カウント			
	アラームトリガー	インテリジェント分析、ネットワーク接続解除			
		• FTP、電子メールによるファイルのアッ	パロード		
	アラームイベント	• 電子メール、による通知			
		• アラームトリガー発生時、SD/SDHC/SDXCメモリやNASに録画			

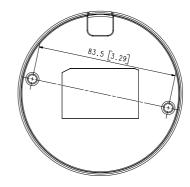
項目		説明		
		QND-6011	QND-6021	
	イーサネット	RJ-45 (10/100BASE-T)	·	
	ビデオ圧縮フォーマット	H.265/H.264 : メイン/ハイ、MJPEG		
	解像度	1920 x 1080, 1280 x 960, 1280 x 720, 80 720 x 480, 640 x 480, 640 x 360	0 x 600, 800 x 448, 720 x 576,	
	最大フレームレート	H.265/H.264:最大 30fps/25fps (60Hz/50 MJPEG:最大 15fps/12fps (60Hz/50Hz)	0Hz)	
	スマートコーデック	WiseStream <b>II</b>		
	ビデオ品質調整	H.264/H.265 : ターゲットビットレートレイ MJPEG : 画質レベル制御	ベル制御	
	ビットレート制御方式	H.264/H.265 : CBR または VBR Motion JPEG : VBR		
	ストリーミング	同時伝送能力:最大3種のストリーム同時伝送 伝送タイプ:ユニキャスト/マルチキャスト 最大同時接続者:6名(ユニキャストモード)		
ネットワーク	プロトコル	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTT SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP		
	セキュリティ	HTTPS (SSL) ログイン認証 ダイジェストログイン認証 IPアドレスフィルタリング ユーザーアクセスログ 802.1X認証方式 (EAP-TLS, EAP-LEAP)		
	エッジストレージ	Micro SD/SDHC/SDXC 1スロット 128 GB	}	
	アプリケーション・ プログラミング・ インターフェース	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform		
	Webページの言語	英語、韓国語、フランス語、ドイツ語、スペイン語、イタリア語、中国語、ロニ 本語、スウェーデン語、ボルトガル語、チェコ語、ポーランド語、トルコ語: 語、ハンガリー語、ギリシャ語		
		対応OS: Windows 7, 8.1, 10, Mac OS X 1 推奨するブラウザ: Google Chrome	10.12, 10.13, 10.14	
	Web Viewer	5	IS Edge, Mozilla Firefox (Window 64bitで がのみサポート)	

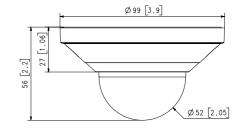
• 付録

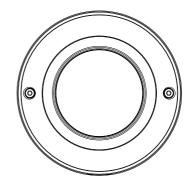
項目		説明			
	供日	QND-6011	QND-6021		
	動作温度/湿度	-10°C ~ +55°C (14°F ~ +131°F) / RH90%	以下		
環境関係	保存温度/湿度	-30°C ~ +60°C (-22°F ~ +140°F) / RH909	6以下		
	規格認証	IP42, IK08			
電気関係	入力電圧	PoE(IEEE802.3af, Class2)			
电刈闭床	消費電力	PoE: 最大 4.8 W, 標準 2.8 W			
	色/材質	ホワイト / プラスチック			
メカニカル	RALコード	RAL9003			
	製品サイズ / 重量	Ø99 x 56 mm(Ø3.9 x 2.2"), 145 g			

製品ビュー

単位 : mm[インチ]







# トラブルシューティング

問題	解決策
Safariを使用してHTTPS経由でプラグ インフリーのWeb Viewerにアクセス すると、映像は表示されません。	<ul> <li>https初回接続時に表示されるウェブサイトの認証ポップアップで&lt;証明書の表示&gt;をクリックした後、<webビューアの設定pic接続する際、常に信頼する>の項目のチェックボックスを選択してください。</webビューアの設定pic接続する際、常に信頼する></li> <li>以下のメッセージウィンドウで「次へ(Next)」を選択した後にWeb Viewerでの表示に失敗する場合、commandキー+Qを押してSafariブラウザを終了し、再度アクセスして上述の手順に従います。</li> </ul>
ウェブブラウザからカメラにアクセス できない。	<ul> <li>カメラのネットワーク設定が適切か確認します。</li> <li>ネットワークケーブルがすべてきちんと接続されているか確認します。</li> <li>DHCPを使用して接続した場合、カメラが問題なく動的 IPアドレスを取得できたか確認します。</li> <li>カメラがブロードバンドルーターに接続している場合、ポート転送がきちんと設定されているか確認します。</li> </ul>
閲覧中にビューアが遮断された。	<ul> <li>カメラまたはネットワーク設定に変更が生じた場合、接続済みビューアは遮断されます。</li> <li>ネットワーク接続をすべて確認します。</li> </ul>
新規でWebビューアにアクセスした り、クライアントにストリーミングを 接続させたが、映像が出力されません。	<ul> <li>使用可能なプロファイルの最大数は3つです。</li> <li>4つ以上のプロファイルを使用すると、接続が切断されることがあります。</li> <li>例) MJPEG. H.264、H.265接続後、別のプロファイルに接続時、接続切断</li> </ul>
ネットワークに接続しているカメラが IP インストーラプログラムを検知し ない。	• 使用中の PC のファイアウォールを無効にし、カメラを再検索してください。
画像がオーバーラップする。	<ul> <li>複数のカメラが個々のアドレスではなく、単一のマルチキャストアドレスに設定されているか確認します。複数のカメラが単一アドレスを使用すると、画像がオーバーラップする原因になります。</li> </ul>
画像が表示されない。	<ul> <li>送信方法がマルチキャストに設定されている場合、カメラが接続しているLAN にマルチキャストに対応しているルータがあるか確認します。</li> </ul>

問題	解決策		
<アナリティクス>の <モーション検知> は<イベント> に設定されていますが、分析イベントが 発生したときであっても、通知用のEメ ールは到着しません。	<ul> <li>・ 設定を次の順序で確認します。</li> <li>A. &lt;日付&amp;時間&gt;設定をチェックします。</li> <li>B. &lt;モーション感知&gt;が&lt;使用&gt;に設定されていることを確認します。</li> <li>C. &lt;イベント設定&gt;メニューの<e-mail>オプションが選択されて使用可能になっているか どうか確認してください。</e-mail></li> </ul>		
Micro SDメモリカードに録画できません。	<ul> <li>メモリカードに問題がないか確認してください。</li> </ul>		
Micro SDメモリカードを挿入しても、 カメラが正しく動作しません。	<ul> <li>メモリカードが正しい方向で挿入されているかを確認してください。他のデバイスで初期 化されたメモリカードの場合は、このカメラ装置で正常に動作しない可能性があります。</li> <li>メモリカードを&lt;設定&gt;→ &lt;イベント&gt;→ &lt;ストレージ&gt;メニューで再度初期化してくだ さい。</li> </ul>		
NASに記録できません。	• NASに登録した情報が正しいことを確認します。		
NAS設定が失敗したと報告が出ています。	<ul> <li>NASのIPアドレスが有効であること。</li> <li>NASのIDパスワードが有効であること。</li> <li>NASのIDを使う基本フォルダに指定したフォルダにアクセスできること。</li> <li>NAS SMB/CIFSの項目をチェックしていないこと。</li> <li>NAS IPアドレスとカメラIPアドレスが同じフォーマットであることを確認します。 例)NASとカメラのサブネットマスク値は255.255.255.0です。</li> <li>IPアドレスが192.168.20.32である場合、NAS IPアドレスは192.168.20.1~192.168.20.255の範囲にある必要があります。</li> <li>保存または使用する基本フォルダを初期化せずに、別のユーザーとして利用しようとしていたかを確認します。</li> <li>推奨されているNAS装置を使用したかどうか確認します。</li> </ul>		

# • 付録

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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	
mtd-1.5.2	GPL 2.0	ftp://ftp.infradead.org/pub/mtd-utils
mii-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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Version 1.1

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

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

#### Article 1. Scope of License Agreement

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

#### 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.

"T-Engine Hardware" means the hardware which is manufactured in accordance with the T-Engine Hardware specifications or the µT-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 Hardwaredependent 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.

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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.

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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.

to develop and manufacture the Embedded Product containing the Binary Code, and, whether with or without payment, provide the End User with the same and make the Binary Code available to the End User on the Embedded Product.

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

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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.

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 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.

 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:

 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.

 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.

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.

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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.

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Julian Seward, jseward@bzip.org

bzip2/libbzip2 version 1.0.5 of 10 December 2007

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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 (deflate format) and rfc1952.txt (gzip format).



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