WISENET

ネットワークコントローラ
ユーザーマニュアル

SPC-7000

C E

ネットワークコントローラ
ユーザーマニュアル

概要

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本の足が付きます。 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。

警告

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。

注意

⚡	**注意** 感電の危険がありますので開けないで下さい	⚠
注意 : 感電の恐れがありますので裏カバーは開けないで下さい。 **如何なる場合にも本品の分解や改造を行わないで下さい。** **資格のあるサービス・スタッフにお問い合わせ下さい。**		

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。

概要

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。

目次

概要

主な特徴

SPC-7000ネットワークコントローラはネットワーク/アナログカメラ、DVR、およびネットワークを使用するSSMプログラムを制御します。
SPC-7000ネットワークコントローラのインタフェースには、使いやすい画面メニュー、タッチスクリーン、およびジョイスティックが採用されています。

- 長距離遠隔制御

- 統合システム制御

- 単一のネットワークコントローラでカメラ（受信ユニット）、DVR、およびSSMプログラムを制御できます。

- SSMを通じてネットワークカメラ及びNVRのどちらも制御することができます。

- 複数のコントローラを使用するための接続も可能

- システムは異なる場所から制御でき、最大16台のユニットを同時に接続して使用することができます。

- ユーザーは必要に応じてジョイスティックモジュールとジョグシャトルモジュールの配置を左右に切り替えることができます。

- 使いやすいインタフェース
  システム制御の操作ステータスが画面に表示されます。タッチスクリーンを使用すると、メニューを簡単に選択することができます。ジョイスティックを使用すると、操作がわかりやすく簡単になります。

  ❖ **制御可能な製品及びプログラムリスト**
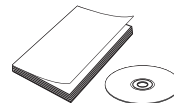
    - カメラ

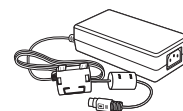   - SSM

    - DVR

キット内容

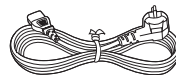製品パッケージを開け、製品を床または平らな場所に置いてください。
製品パッケージに、次の部品がすべて同梱されていることを確認してください。

| メインユニット | ユーザーマニュアル又はユーザーマニュアルCD | 電源アダプタ1個 |

| 電源ケーブル | USBケーブル | タッチペン |
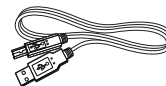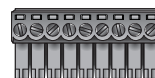
端末台

 ■ ジョグシャトルとジョイスティックは本体に接続してご使用ください。

各部の名称と機能

前面

名前			機能
①	ジョイスティック	上/下/左/右	PTZモードでは、Pan、Tiltモーションを制御できます。 Screenモードでは、上/下/左/右のチルト選択を変更できます。 Mouseモードでは、マウスカーソルを動かすことができます。
		回転	PTZモードでは、WIDE方向に変更するとスクリーンはズームインし、TELE方向に変更するとズームアウトします。
②	PTZコントロール	[FOCUS N/F] + ←	Focus Near/Farモーションを実行します。 - [FOCUS N/F] + ← : Focus Near
		[FOCUS N/F] + →	- [FOCUS N/F] + → : Focus Far ■ [FOCUS N/F]キーは、ON / OFFの切り替えキーとして機能します。
		[IRIS C/O] + →	IRIS Open/Close動作を実行します。 - [IRIS C/O] + → : IRIS Open
		[IRIS C/O] + ←	- [IRIS C/O] + ← : IRIS Close ■ アナログカメラ、SSM、およびDVRコントロールモードでのみ操作できます。 ■ [IRIS C/O]キーは、ON / OFFの切替えキーとして機能します。

名前			機能
②	PTZコントロール	[PRESET]	[PRESET] +数字+ [PRESET]ボタンをクリックすると、各ボタン番号に合うプリセットが有効になります。
		[GROUP]	[GROUP] +数字+ [GROUP]ボタンをクリックすると、各ボタン番号に合うグループ/スキャンが有効になります。
		[TOUR]	[SHIFT] + [GROUP/TOUR] + [SHIFT] + [GROUP/TOUR] ボタンをクリックしてツアーを開始します。
		[TRACE]	[TRACE] +数字+[TRACE]ボタンをクリックすると、各ボタン番号に合うパターン/トレースが有効になります。
		[ZOOM] + →	ズームインモーションを実行します。
		[ZOOM] + ←	ズームアウトモーションを実行します。 ■ [ZOOM]キーは、ON / OFFの切替えキーとして機能します。
③	Mouseコントロール	[L(T. LOCK)]/[R(TRACK)]	Mouseモードでは、マウスの左/右ボタンを使用します。
④	Screenコントロール	[MON.(CON.)]	Screen モードで番号+ [MON.(CON.)] ボタンをクリックしてマルチモニター選択を変更することができます(モニター番号に応じて前/次)。
		[LAYOUT(SEQ.)]	番号+[LAYOUT(SEQ.)]ボタンをクリックすると、それぞれのボタン番号に対応するレイアウトが有効になります。
		[CAM]	番号+[CAM]ボタンをクリックすると、それぞれのボタン番号に対応するカメラが有効になります。
		[ENTER]	1回クリックすると、ライブビュアーのシングルスクリーンが表示されます。 もう1回クリックすると、オリジナルスクリーンに戻ります。
			ライブビュアーで番号+[ENTER]ボタンをクリックすると、入力数に応じてスクリーンが分割されます。
		番号 + [TILE(VM)]	タイル番号に合わせて移動を行います。

		名前	機能
5	モード変更	[PTZ(MENU)]	PTZモードを変更します。 PTZモード中、[PTZ(MENU)]ボタンをクリックすると、スクリーンモードが変更されます。
		[SHIFT] + [MENU(Mouse)]	Mouseモードを変更します。 Mouseモード中に[SHIFT] + [MENU(Mouse)]ボタンをクリックすると、Screenモードが切り替わります。
		[SHIFT] + [Mon.(Con.)]	Consoleモードを変更します。
		[SHIFT] + [TILE(VM)]	VMDコントロールを実行します。
6	再生スクリーンコントロール	[SEARCH]	ライブ/サーチで現在のタイルの映像を出力します。
		■	映像が停止します。
		▶❙	映像を再生および一時停止します。
		●	映像の手動録画を開始/終了します。
		Shuttle wheel	ホイールが時計回りのときは順方向にファストプレイし、ホイールが反時計回りのときは逆方向にファストプレイします。
		Jog wheel	フレームサーチを実行します。
7		0 ~ 9	番号を入力するボタン。
		[ESC(SETUP)]	前のページに戻ります。

背面
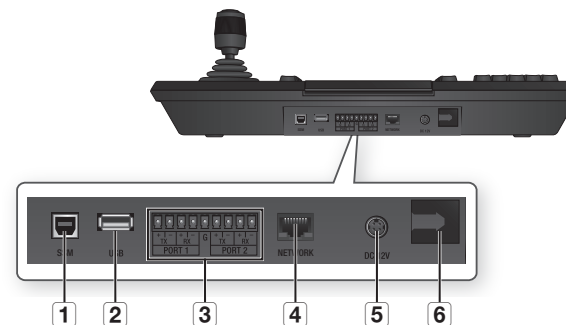
	項目	説明	
1	SSM	PCに接続してSSMを制御する端子です。	
2	USB	システムコントローラ設定のバックアップやファームウェアのアップグレードに使用します。	
3	RS-485	PORT 1	RS-485通信によってカメラやDVRなどのコントローラに接続します。
		PORT 2	他のSPC-7000システムコントローラに接続します。
4	NETWORK	ネットワーク接続端子です。	
5	DC 12V	DC 12V入力ポート (— —⟨⟨— +)	
6	ケーブルフック	電源ケーブルが緩まないようにします。 📝 ■ コントローラを設置したり、使用したりするときには、必ずこのケーブルフックを使用してください。	

設置

注意事項

製品を設置する前に、次の注意事項をよく読んで指示に従ってください。

- この製品は室内での使用のみを想定しています。
- 水や湿気を製品に近づけないでください。
- 製品に過度に力を加えないでください。
- 電源ケーブルを強引に抜かないでください。
- 製品を自分で分解しないでください。
- 定格の入力/出力範囲内で使用してください。
- 提供されている電源ケーブルのみを使用してください。
- 可能であればアース線の付いた電源プラグを使用してください。
- システムコントローラは平らな台の上に設置してください。
- メインユニットと配線のレイアウトは、システムを適切に操作する上でとても重要です。
- 各装置を近づけ過ぎたり、換気が適切に行われない場所に設置すると、システムが適切に動作しない場合があります。システムに接近しにくいと、修理が難しくなる、または修理できなくなる可能性もあります。
- システム障害を防ぎ、システムの停止を低減するため、換気用のスペースを十分にとり、カバーをしっかりと閉めてください。
- システムコントローラを勝手に分解しないでください。システムコントローラの内部には高電圧が流れています。
- 動作温度 : 0℃ ~ 40℃
- 保存温度 : -20℃ ~ 60℃
- 動作湿度 : 20%~85% RH
- 消費電力 : DC 12V、最大6.4W (─ ─◉─ ＋)
  - 付属の専用電源アダプターをご使用ください。

設置する前に

- 設置する前に、製品の電源をオフにする必要があります。
- 強い衝撃や振動を与えると、システム障害が発生する恐れがあります。
- 強い電磁場や電気的干渉が発生している場所、またはラジオやテレビなどの無線機器に製品を近づけないでください。
- 製品の設置時および設置後は常に設置場所をきれいにし、ほこりがないようにしてください。
- 製品を密閉されていない平らな場所に設置して、適度な温度を保持してください。製品は壁から15cm以上離して設置してください。
- 換気口をふさいだり、換気口に伝導体を置かないでください。
- 製品を直射日光に当てないでください。付属品やツールは他人の手が届かない場所に置き、物理的損傷を防ぐようにしてください。
- 異常な煙や異臭が発生した場合は、火災または感電を引き起こす恐れがあります。このような場合は、すぐに製品の電源をオフにし、技術サポートについてお問い合わせください。
- 床の湿気、接地されていない電源延長コード、摩耗した電源ケーブル、不完全なアースなどの状況を発見したら、適切なアクションをとってください。

> ❗
> - 製品は乾いた布で拭いてください。製品の汚れがひどい場合は、中性洗剤を含ませた布でふき取ってください。
>   アルコール、ベンゼンまたはシンナーなどの揮発性の薬品を使用しないでください。製品の表面が損傷する場合があります。
> - 高温での使用は、LCDモニターの使用寿命を短くするためご遠慮ください。

設置

ジョグシャトル/ジョイスティック組み立て

ジョグシャトルとジョイスティック組み立て時、カチッと音がするまで押して組み立ててください。
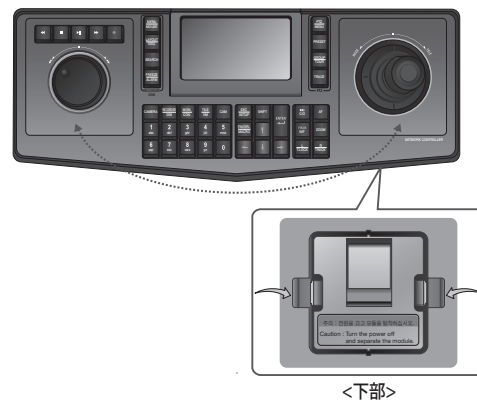

LCD画面の角度を調節する

見やすいようにスクリーンを前に引き寄せることが
できます。

ジョイスティックとジョグシャトルの位置の切替え

ジョイスティックモジュールとジョグシャトルモジュールの位置を必要に応じて切り替えることができます。

> ■ 左右に切り替えるには、システムコントローラの電源をオフにして、手動でモジュールを切り替えます。または、コントローラの設定メニューの<**モジュール変更**>を押して、手動でモジュールを切り替えます。(18ページ)

<下部>

1. コントローラの本体底部にあるフックを両手で押すと、モジュールが本体から分離されます。

2. ジョイスティックとジョグシャトルの両方のモジュールをシステムコントローラから取り外し、位置を入れ替えます。
位置を入れ替えたら、カチッと音がするまで押し込みます。

外部デバイスへの接続

SPC-7000ネットワークコントローラは、カメラ、DVR、およびその他の外部デバイスと接続することで使用できます。

RS-485/422デバイスへの接続

コントローラを使用してRS-485/422通信をサポートするPTZカメラおよびDVRを制御できます。

1. 背面にあるPORT 1をPTZカメラまたはDVRのRS-485ポートに接続します。
2. 選択する外部デバイスに応じて、RS-485（半二重）またはRS-422（全二重）接続のいずれかを選択します。

> ■ 半二重システムの場合は、TX +/–端子を使用します。
>
> ■ RS-485/422通信の場合は、極性（+/-）に十分注意してください。
>
> ■ RS-485の通信ノイズを除去するには、カメラ/DVRデバイスの接地端子をSPC-7000の接地端子に接続してください。
>
> ■ 接地する場合、製品の電源を必ず切ってください。
>
> ■ 製品パッケージに含まれているターミナルブロックを使用してください。
>
> ■ RS-485/422デバイスがSPC-7000と互換性があるかどうか確認してください。

- メインコントローラ
- サブ1コントローラ
- サブ2コントローラ
- サブ16コントローラ
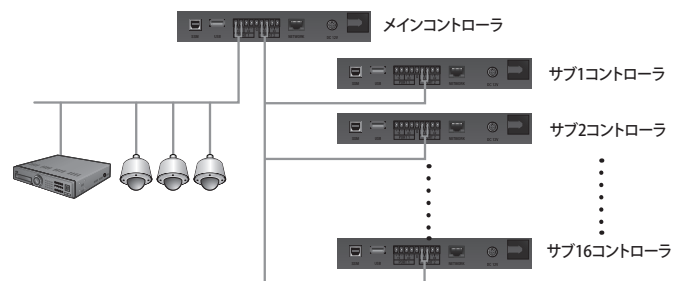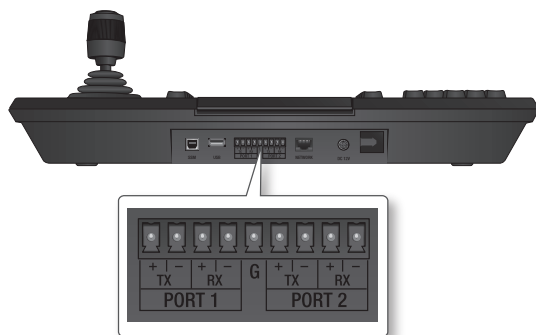
PTZカメラの接続

PTZカメラの背面にあるRS-485ポートをSPC-7000のPORT 1に接続することによって、このPTZカメラを制御することができます。

> ■ 極性はカメラによって異なる場合があります。
> 詳細は、PTZカメラのユーザーマニュアルを参照してください。

半二重システムの場合 (RS-485)

- PTZカメラのRS-485ポートのRX (+)をSPC-7000のPORT 1のTX (+)に接続します。
- PTZカメラのRS-485ポートのRX (–)をSPC-7000のPORT 1のTX (–)に接続します。

全二重システムの場合 (RS-422)

- PTZカメラのRS-485ポートのRX (+)をSPC-7000のPORT 1のTX (+)に接続します。
- PTZカメラのRS-485ポートのRX (–)をSPC-7000のPORT 1のTX (–)に接続します。
- PTZカメラのRS-485ポートのTX (+)をSPC-7000のPORT 1のRX (+)に接続します。
- PTZカメラのRS-485ポートのTX (–)をSPC-7000のPORT 1のRX (–)に接続します。
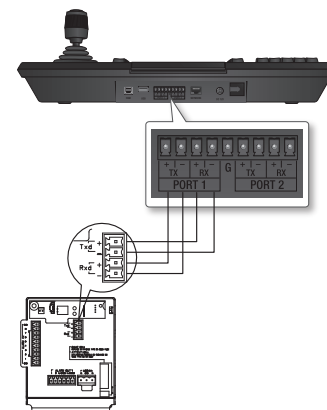
外部デバイスへの接続

SRD-16XX/8XXタイプDVRに接続

DVRの背面にあるRS-485ポートを使用して、DVRとSPC-7000を接続します。

半二重システムの場合 (RS-485)

- DVRのRS-485ポートのTX (+)をSPC-7000の
  PORT 1のTX (+)に接続します。

- DVRのRS-485ポートのTX (−)をSPC-7000の
  PORT 1のTX (−)に接続します。

全二重システムの場合 (RS-422)

- DVRのRS-485ポートのTX (+)をSPC-7000のPORT
  1のRX (+)に接続します。

- DVRのRS-485ポートのTX (−)をSPC-7000のPORT
  1のRX (−)に接続します。

- DVRのRS-485ポートのRX (+)をSPC-7000のPORT
  1のTX (+)に接続します。

- DVRのRS-485ポートのRX (−)をSPC-7000のPORT
  1のTX (−)に接続します。
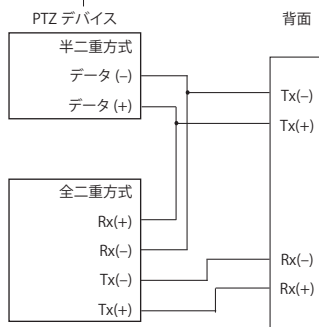
SRD-4XXタイプDVRに接続

SRD-4XXの背面にあるRS-485ソケットをSPC-7000に接続します。

❖ 半二重システムの場合 (RS-485)

- SRD-4XXソケットのTX (+)を、SPC-7000のポート1ソケッ
  トTX (+)に接続します。

- SRD-4XXソケットのTX (-)を、SPC-7000のポート1ソケッ
  トTX (-)に接続します。
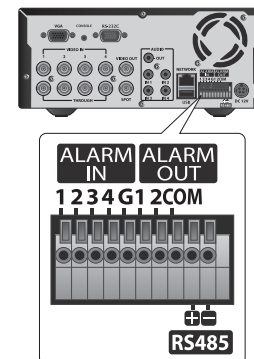
他のシステムコントローラとの接続

■ 最大16までのコントローラを同時に接続することができます。

■ コントローラの通信設定については、"**メニュー設定**"の"**コントローラIDの設定**"を参照してください。(▶ 17ページ)

半二重システムの場合 (RS-485)

- SPC-7000のPORT 2のTX (+)を他のSPC-7000のPORT 2のTX (+)に接続します。

- SPC-7000のPORT 2のTX (−)を他のSPC-7000のPORT 2のTX (−)に接続します。

メインコントローラ
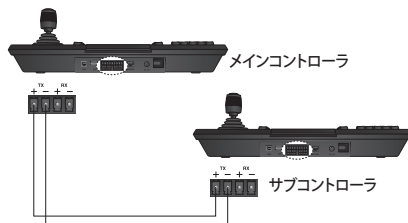
サブコントローラ

全二重システムの場合 (RS-422)

- メインコントーラSPC-7000のPORT 2のTX (+)をサブコントローラSPC-7000のPORT 2のRX (+)に接続します。

- メインコントーラSPC-7000のPORT 2のTX (−)をサブコントローラSPC-7000のPort 2のRX (−)に接続します。

- メインコントーラSPC-7000のPORT 2のRX (+)をサブコントローラSPC-7000のPORT 2のTX (+)に接続します。

メインコントローラ

サブコントローラ

- メインコントーラSPC-7000のPORT 2のRX (−)をサブコントローラSPC-7000のPORT 2のTX (−)に接続します。
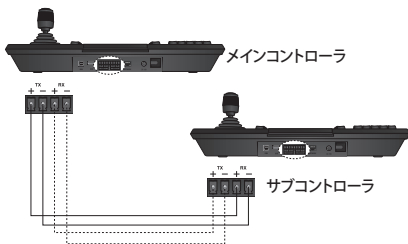
✎ ■ 他のシステムコントローラに接続する場合にはPORT 2を使用する必要があります。

設定

インストール

1. コンピュータの電源が入った状態で、コントローラのSSM端子をコンピュータのUSBポートに接続します。

2. 新しいデバイスが検出されたという画面が表示されます。

3. 自動的にコンピュータがデバイスを認識します。
   - 必要に応じてインストール画面の指示に従って、デバイスをインストールしてください。

4. デバイスが認識されたら、Windowsのコントロールパネルのゲームコントローラリストにインストールされたコントローラが表示されます。
   [**Start**] > [**Devices and Printers**] > [**Game Controllers**]
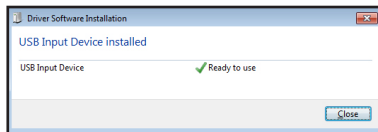
コントローラを補正するには
- コントローラを正しく使用するためには、軸補正が必要になります。

1. [**Start**]> [**Devices and Printers**] > [**Game Controllers**] に移動し、インストールされたコントローラアイコンをマウスの右ボタンでクリックして、[**Properties**]を選択します。
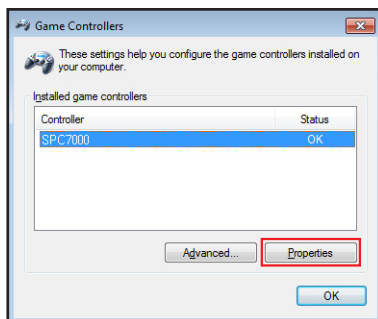
2. 設定画面で[**Calibrate...**]ボタンをクリックし、'**Device Correction Wizard**'を実行します。

3. 画面の指示に従って、軸補正を行ってください。
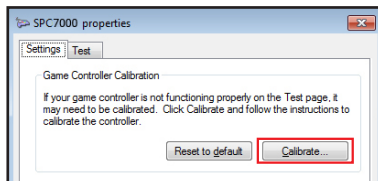
はじめに

1. すべてのシステムコンポーネントのデバイスをオンにします。

2. コントローラの背面に電源アダプタを接続し電源を入れます。するとログイン画面が表示されます。

3. 数字キーまたはスクリーンタッチ画面のキーボードを使用して、パスワードを入力し、<**ログイン**>ボタンをクリックしてください。
   - パスワードの初期値は"**4321**"です。

4. 最初のログイン時にパスワード設定画面が表示されます。
   使用するパスワードを設定した後、<**OK**>ボタンを押してください。

   - New password: パスワード設定ルールに従って新規パスワードを入力します。

   - Password Confirm: 設定したパスワードを再入力します。
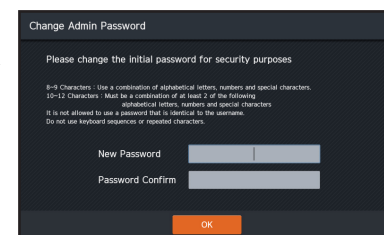
メニュー設定

システム設定画面が表示されたら、必要な設定項目を選択してください。

デバイス

デバイスを自動的に登録するには
ローカルネットワークに接続されたネットワークカメラを自動的に検出して登録することができます。

1. <**自動登録**>をチェックし、<**OK**>ボタンを選択してください。
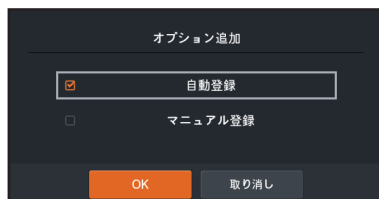
2. 検出されたカメラリストから登録したいカメラを選択し、<**テスト**>ボタンを押してください。
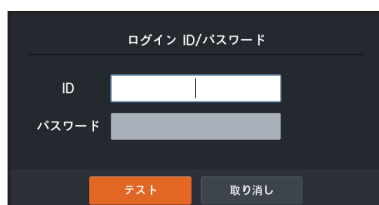
3. <**ID**>と<**パスワード**>を入力後、<**テスト**>ボタンを押し、カメラとの接続を実行してください。

4. <**OK**>ボタンを押すと、選択したカメラが登録されます。

- モデル：カメラのモデル名を表示します。
- IPアドレス：ネットワークカメラのIPアドレスを表示します。
- ステータス：成功やエラーコードガイド情報を表示します。

デバイスを手動で登録するには
- ネットワークデバイスの追加

1. <**マニュアル登録**>のチェックボックスを選択し、<**OK**>キーを押してください。
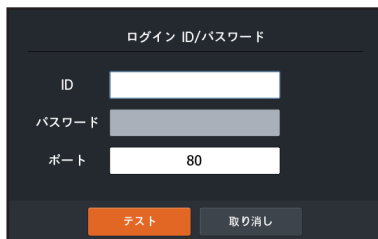
2. IPアドレス情報を入力してください。

設定

3. <**ID /パスワード**>ボタンを押してID、パスワード、ポート番号を入力してください。

4. <**テスト**>ボタンを押して、カメラとの接続を実行してください。

5. テスト結果を確認してください。

6. <**OK**>ボタンを押して登録を完了してください。

ログイン ID/パスワード

ID	
パスワード	
ポート	80

テスト　　取り消し

- アナログデバイスの追加

1. <**マニュアル登録**>チェックボックスを選択し、<**OK**>ボタンを押します。

2. デバイスタイプは<**アナログ**>を選択します。

3. それぞれのアイテムを選択し、ID、タイプ、プロトコル、および通信速度を入力します。
- <**アナログカメラ**>をタイプとして選択すると、プロトコルを選択できます。

4. <**OK**>ボタンを押して登録を完了してください。

設定 > デバイス > マニュアル登録　　ID : admin　ログアウト

ネットワーク　アナログ　　　　　　　　ID/パスワード

ID	4	タイプ	DVR
プロトコル	SRD	ボー レート	2400
説明		結果	-

OK　　取り消し

デバイス情報修正

登録されたデバイスの情報を修正することができます。

1. 情報を変更するデバイスを選択してください。

2. 画面の下部に表示されるデバイス情報欄から内容を修正してください。
- 選択したデバイスのタイプに応じて、変更される情報が異なる形で表示されます。

3. 修正が完了したら、<**OK**>ボタンを押してください。

設定 > デバイス > 変更　　ID : admin　ログアウト

ネットワーク　アナログ　　　　　　　　ID/パスワード

ID	1	タイプ	ネットワークカメラ
プロトコル	SUNAPI	IPアドレス	192.168.4.26
モデル	PNP-9200RH	結果	-

OK　　取り消し

デバイス削除
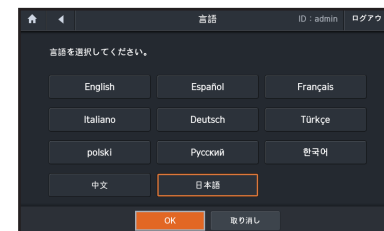
1. 削除するデバイスを選択し、<**削除**>ボタンを押してください。

2. 初期化確認のポップアップウィンドウが表示されます。
<**初期化**>ボタンを押すと、選択したデバイスが削除されます。

3. ポップアップウィンドウの<**すべて削除**> ボタンと、<**すべて初期化**>ボタンを押すと、登録されているすべてのデバイスが削除されます。

制御

言語

ユーザーインタフェースで使用する言語を設定することができます。

1. <**言語**>を押します。

2. 言語選択画面の表示後、方向ボタンまたはジョイスティックを使用して言語を選択します。
- 即座に選択した言語に変更されます。

3. 言語選択画面を終了するには、<**取り消し**>を押します。

言語　　ID : admin　ログアウト

言語を選択してください。

English	Español	Français
Italiano	Deutsch	Türkçe
polski	Русский	한국어
中文	日本語	

OK　　取り消し

ユーザー＆パスワード

管理者のパスワードの変更及びデバイスID付与を行うことができます。

ユーザーを追加するには

1. メニューから<**ユーザー&パスワード**>を選択
してください。

2. <**追加**>ボタンをクリックしてください。

3. 該当ユーザーに割り当てるデバイスを選択し
てください。

4. パスワードを使用するかどうかを選択してく
ださい。

5. パスワードを使用するには、<**ON**>を選択し、使用するパスワードを設定してください。

6. 設定を完了すると、<**OK**>ボタンをクリックしてください。

> ■ パスワードの設定時、パスワードポリシーを満たしていない場合は、条件を満たしたパスワードを再入
力する必要があります。

ユーザー情報を修正するには

ユーザー情報ページでパスワードを変更することができます。

1. 情報を修正するユーザーを選択し、<**変更**>ボ
タンを押してください。

2. 再度、変更する詳細を設定します。
   ■ 管理者のみパスワードを修正することができます。

3. パスワード設定後、<**OK**> ボタンを押します。

ユーザーを削除するには

登録されたユーザーを選択して削除することができます。

1. 削除するユーザを選択して<**削除**> ボタンを押すと、削除を確認するポップアップウィンドウ
が表示されます。

2. <**OK**> ボタンを押すと、選択したユーザが削除されます。

3. ポップアップウィンドウの<**すべて削除**> ボタンと<**OK**> ボタンを押すと、登録されているす
べてのデバイスが削除されます。
   ■ 「**admin**」は管理者であるため、削除することはできません。

ジョイスティックボタン操作

使用するアイテムをジョイスティックボタンで選
択し、<**OK**>ボタンを押します。
ジョイスティックを選択した方法に応じて、機能
が有効になります。
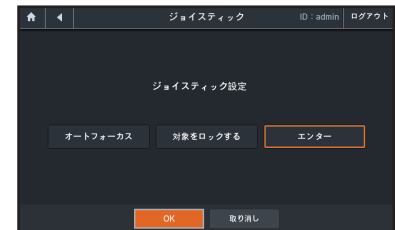
コントローラIDの設定

コントローラ同士を接続する際、一方をメインまたはサブコントローラとして設定し、さらに使
用するコントローラのIDおよびプロトコルを選択することができます。

1. <**コントローラID**>メニューを選択します。

2. 使用するコントローラIDを入力します。

3. RS-485またはRS-422のいずれかを選択し、コン
トローラの通信方法を設定します。

4. メインまたはサブコントローラを選択し、詳細
な設定を行います。
   ■ 複数のコントローラに接続した状態で使用する場
合は、サブリストを設定します。

5. 設定が完了したら、<**OK**>ボタンをクリックします。
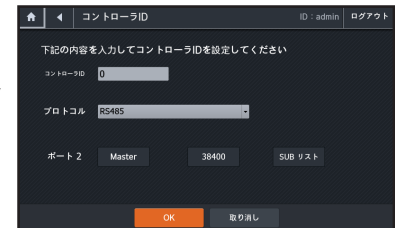
設定

モジュール変更

ジョグシャトルとジョイスティクの位置を左から右、またはその逆に切り替えることができます。

1. <**モジュール変更**>メニューを選択してください。
2. <**終了**>ボタンを押すと、電源がオフになっていることを確認するとともに、ジョグシャトル位置とジョイスティックを入れ替えることができます。
3. 画面を終了するには、<**取り消し**>を押します。

ネットワーク

ネットワーク接続形態と接続環境を設定します。

- IP種類：ネットワーク接続形態を選択します。
- IPアドレス：サブネット、ゲートウェイ、DNS
  <**静的**>の場合：IPアドレス、サブネット、ゲートウェイ、DNSを直接入力することができます。
  <**DHCP**>の場合：IPアドレス、サブネット、ゲートウェイの値が自動的に設定されます。

  ✏ ■ DNSモードを手動で設定する場合、DNS IP情報を手動で入力することができます。

システム環境

USBメモリーのファームウェアファイルを使用して、現在のファームウェアを更新することができます。

コントローラファームウェアを更新するには

最新のファームウェアファイルをダウロードして、コントローラを更新することができます。

1. 新規ファームウェアが保存されたUSBメモリデバイスをネットワークコントローラに接続してください。
2. メニュー設定画面から<**システム**>を押します。
3. <**ファームウェア更新**>を押します。
4. アップデートの確認画面で、<**OK**>ボタンを押してください。
5. 更新後にシステムが再起動するまで待ちます。

  ✏ ■ 更新中はUSBメモリーや電源ケーブルを外さないでください。外した場合、ファームウェアの更新に失敗するか、システム障害の原因となる場合があります。
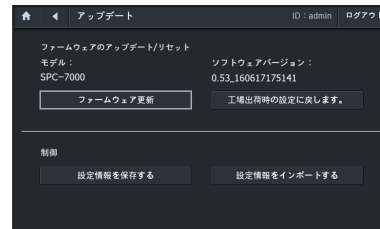
初期化

現在の設定を工場出荷時の初期設定に復元することができます。

1. <**工場出荷時の設定に戻します。**>を押します。
2. <**リセット**>を押します。
   現在の設定が初期設定に復元されます。
3. メニューを終了するには、<**取り消し**>を押します。
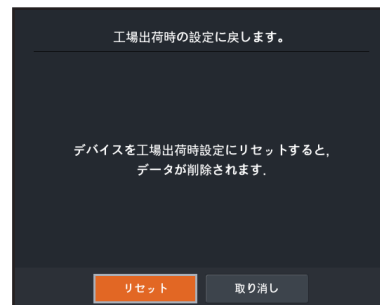
コントローラ設定をバックアップするには

コントローラを変更またはカメラを交換する場合、コントローラ設定をファイルに保存し、その設定を新しいカメラにロードすることができます。

1. メニュー設定画面から<**システム**>を押します。

2. <**設定情報を保存する**>を押します。

3. <**OK**>を押します。
バックアップ処理が開始されます。

📝 ■ バックアップ中はUSBメモリーや電源ケーブルを外さないでください。外した場合、コントローラ設定のバックアップに失敗する恐れがあります。

```
バックアップ
─────────────

設定情報を保存する?

OK    取り消し
```

コントローラ設定を復元するには

コントローラを誤って設定またはリセットした場合、現在の設定を別のコントローラにアップロードすることができます。

1. メニュー設定画面から<**システム**>を押します。

2. <**設定情報をインポートする**>を押します。

3. <**OK**>を押します。
復元処理が開始されます。

📝 ■ 復元中はUSBメモリーや電源ケーブルを外さないでください。外した場合、コントローラ設定の復元に失敗する恐れがあります。

```
戻す
─────────────

設定情報をインポートする?

OK    取り消し
```

制御

カメラ制御

カメラ、保存デバイス、設定メニューを設定することができます。

> 📖 ▪ 登録されたネットワークカメラのSUNAPIバージョンが低い場合、特定の機能が動作しない場合があります。

カメラ制御モード実行

メイン画面の<**カメラ**>を選択してください。

カメラ選択

方向キーを使って登録されたカメラリストから希望するカメラに移動後、[**ENTER**]キーを押してください。
方向キーを使用して<**OK**>ボタンで移動後、[**ENTER**]キーを押してください。

▪ 数字+ [CAM]キーをクリックしても、カメラを有効にすることができます。

PAN/TILTコントロール

PTZモードでは、コントローラのジョイスティックを上下左右に動かして、カメラのパンとチルトを調整することができます。
ジョイスティックの中心から離れるほど、動作速度は速くなります。

ズーム

PTZモードでは、コントローラを使用して、カメラのズームイン/アウト動作を調整することができます。

フォーカス

コントローラを使用してフォーカス近/遠の動作を調整することができます。

絞り

コントローラを使用して、カメラ映像の明るさを調整することができます。

▪ ネットワークカメラは、サポートされていません。

カメラ制御

コントローラの[**AF**]キーを押して、カメラのオートフォーカスを有効にすることができます。

> 📖 ▪ カメラ制御の詳細については、"**各部の名称と機能**"を参照してください。(7~8ページ)

プリセット

一つの指定された単一地点を設定し、指定された位置にカメラを移動させることができます。

▪ 合計255個のプリセットを指定することができます。

▪ [Preset] +数字+ [Preset]ボタンをクリックしても、各ボタンの番号に合うプリセットを有効にすることができます。

プリセットを設定するには

1. プリセットを設定するカメラを選択します。
2. ジョイスティックを使用して、カメラを目的の場所に移動します。
3. プリセットの名前を設定してください。
4. <**OK**>ボタンを押して保存してください。

プリセットを実行するには

1. カメラを選択します。
2. [**PRESET**]ボタンを押してください。
3. 数字キーで実行する数字をクリックして、[**PRESET**]ボタンを押してください。
4. プリセットが実行されます。

グループ

複数のプリセットを順に呼び出す前に、これをグループ化することができます。

- 最大6つのグループを指定することができます。
- グループあたりに含まれるプリセットの数は最大128個です。

グループを設定するには

1. <**グループ**>メニューを選択してください。
2. グループリストの中から、個々のリストを選択後、<**設定**>ボタンを選択すると設定ページに移動します。
3. <**追加**>ボタンを押してください。
4. プリセットリストからグループに追加するプリセットを選択してください。
5. 速度と間隔を指定します。
6. <**OK**>ボタンを押して保存してください。

グループ機能を実行するには

1. <**グループ**>メニューを選択してください。
2. グループリストの中から、ひとつ選択してください。
3. グループ番号を選択後、スタートをクリックしてください。
4. グループ機能が実行されます。

ツアー

グループを順に実行する前に、少なくとも1つのグループツアーを実行することができます。

ツアーを設定するには

1. <**ツアー**>メニューを選択してください。
2. <**追加**>ボタンを押して、グループ選択ページに移動してください。
   - 最大6つのグループを追加することができます。
3. グループリストの中から、ひとつ選択してください。
4. 滞留時間を入力してください。
5. <**OK**>ボタンを押して保存してください。

ツアー機能を実行するには

1. <**ツアー**>メニューを選択してください。
2. グループ番号を選択後、スタートをクリックしてください。
3. ツアー機能が実行されます。

初期化
<**すべてリセット**>ボタンを選択すると、全体ツアーの設定が初期化されます。

制御

スウィング

2つのプリセットポイント間でカメラを移動し、そのコースを監視することができます。

スイング設定

1. <**スウィング**>メニューを選択してください。

2. パン、パン/チルト、チルトの中から、設定するスイングの種類の[PRESET]ボタンを選択してください。

3. 開始プリセットと終了プリセットを設定します。

4. 速度と切り替え時間を設定してください。

5. <**OK**>ボタンを押して保存してください。
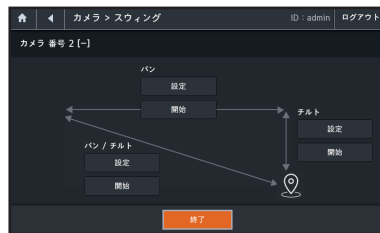
スイングを実行するには

1. <**スウィング**>メニューを選択してください。

2. パン、パン/チルト、チルトの中から、実行するスイングの<**開始**>ボタンを押してください。

3. スイング機能が実行されます。

トレース

ジョイスティックまたはカメラボタンを使用して、一定時間カメラの動作を記録し、その動作を繰り返すようにコントローラに指示することができます。

トレースを設定するには

1. <**トレース**>メニューを選択してください。

2. トレースリストから個々の項目を選択した後、<**設定**>ボタンをクリックしてください。

3. ジョイスティックやカメラの制御ボタンを使用して、カメラの動きを制御し設定を保存してください。

4. <**停止**>ボタンを押すと、設定が完了します。

トレースを実行するには

1. <**トレース**>メニューを選択してください。

2. 実行するトレース番号を選択してください。

3. <**開始**>ボタンを押してください。

4. トレース機能が実行されます。

オートトラッキング

この機能をサポートするカメラの自動追跡機能をオン/オフにするかどうかを選択できます。

アラーム出力

強制アラーム出力をON / OFFすることができます。

■ ユーザー権限がない場合、カメラと同期できないことがあります。

PTZ制御

ジョイスティックでPTZを制御したい場合、この機能をONに、それ以外の場合はOFFに設定します。

カメラのアドオン機能の制御

<**AUX**>ボタンを押すと、アドオン機能に対応している場合は、カメラを制御することができます。

カメラの画面キャプチャ

<**スクリーンショット**>ボタンを押すと、USBメモリスティックにカメラのキャプチャ画像が保存されます。

カメラの詳細情報

<**情報**>ボタンを押すと、カメラの詳細情報が表示されます。

ストレージデバイス制御

各機器により機能が異なりますので、当該機器の取扱説明書をご参照ください。

SSM

SSMを選択し、SSMに登録された保存デバイスを制御することができます。

■ SSMを選択すると、基本的にSSMモードで動作します。

モード選択

SSMモード
<**SSM**>を選択してください。
SSM及びSSMに登録されたデバイスを制御することができます。

■ GUI制御と関係なく、SSMを制御します。

■ 詳しいSSMプログラムの使用方法については、SSMのマニュアルをご参照ください。

ジョイスティック	
上/下/左/右	PTZモードでは、Pan、Tiltモーションを制御できます。 Screenモードでは、上/下/左/右のチルト選択を変更できます。 Mouseモードでは、マウスカーソルを動かすことができます。
回転	PTZモードでは、WIDE方向に変更するとスクリーンはズームインし、TELE方向に変更するとズームアウトします。

制御

<table>
<tr><th colspan="2">PTZコントロール</th></tr>
<tr><td>[FOCUS N/F] + [←]</td><td rowspan="2">Focus Near/Farモーションを実行します。
- [FOCUS N/F] + [←] : Focus Near
- [FOCUS N/F] + [→] : Focus Far</td></tr>
<tr><td>[FOCUS N/F] + [→]</td></tr>
<tr><td>[IRIS C/O] + [→]</td><td rowspan="2">IRIS Open/Close動作を実行します。
- [IRIS C/O] + [→] : IRIS Open
- [IRIS C/O] + [←] : IRIS Close</td></tr>
<tr><td>[IRIS C/O] + [←]</td></tr>
<tr><td>[PRESET]</td><td>番号+[PRESET]ボタンをクリックすると、それぞれのボタン番号に対応するプリセットが有効になります。</td></tr>
<tr><td>[GROUP]</td><td>番号+[GROUP]ボタンをクリックすると、それぞれのボタン番号に対応するグループ/スキャンが有効になります。</td></tr>
<tr><td>[TRACE]</td><td>番号+[TRACE]ボタンをクリックすると、それぞれのボタン番号に対応するパターン/トレースが有効になります。</td></tr>
<tr><td>[ZOOM] + [→]</td><td>ズームインモーションを実行します。</td></tr>
<tr><td>[ZOOM] + [←]</td><td>ズームアウトモーションを実行します。</td></tr>
<tr><th colspan="2">Mouseコントロール</th></tr>
<tr><td>[L(T. LOCK)]/[R(TRACK)]</td><td>Mouseモードでは、マウスの左/右ボタンを使用します。</td></tr>
</table>

<table>
<tr><th colspan="2">Screenコントロール</th></tr>
<tr><td>[MON.(CON.)]</td><td>Screen モードで番号+ [MON.(CON.)] ボタンをクリックしてマルチモニター選択を変更することができます(モニター番号に応じて前/次)。</td></tr>
<tr><td>[LAYOUT(SEQ.)]</td><td>番号+[LAYOUT(SEQ.)]ボタンをクリックすると、それぞれのボタン番号に対応するレイアウトが有効になります。</td></tr>
<tr><td>[CAM]</td><td>番号+[CAM]ボタンをクリックすると、それぞれのボタン番号に対応するカメラが有効になります。</td></tr>
<tr><td rowspan="2">[ENTER]</td><td>1回クリックすると、ライブビューアーのシングルスクリーンが表示されます。もう1回クリックすると、オリジナルスクリーンに戻ります。</td></tr>
<tr><td>ライブビューアーで番号+[ENTER]ボタンをクリックすると、入力数に応じてスクリーンが分割されます。</td></tr>
<tr><td>LCD SnapShotスクリーン</td><td>現在のタイルの映像をキャプチャします。</td></tr>
<tr><td>LCD UI Alarm Offボタン</td><td>イベントを初期化します。</td></tr>
<tr><td>番号 + [TILE(VM)]</td><td>タイル番号に合わせて移動を行います。</td></tr>
<tr><th colspan="2">モード変更</th></tr>
<tr><td>[PTZ(MENU)]</td><td>PTZモードを変更します。
PTZモード中、[PTZ(MENU)]ボタンをクリックすると、スクリーンモードが変更されます。</td></tr>
<tr><td>[SHIFT] + [MENU(Mouse)]</td><td>Mouseモードを変更します。
Mouseモード中に[SHIFT] + [MENU(Mouse)]ボタンをクリックすると、Screenモードが切り替わります。</td></tr>
<tr><td>[SHIFT] + [Mon.(Con.)]</td><td>Consoleモードを変更します。</td></tr>
<tr><td>[SHIFT] + [TILE(VM)]</td><td>VMDコントロールを実行します。</td></tr>
</table>

再生スクリーンコントロール	
[SEARCH]	ライブ/サーチで現在のタイルの映像を出力します。
■	映像が停止します。
▶❚	映像を再生および一時停止します。
●	映像の手動録画を開始/終了します。
Shuttle wheel	ホイールが時計回りのときは順方向にファストプレイし、ホイールが反時計回りのときは逆方向にファストプレイします。
Jog wheel	フレームサーチを実行します。

0 ~ 9	番号を入力するボタン。
[ESC(SETUP)]	入力した番号を初期化します。 ■ SSMモードでのみ初期化機能が動作します。

GUI制御モード

1. [**SHIFT**]、[**RECORDER/SSM**]キーを順に押してください。

2. <**コンソール**>、<**VM**>を選択してください。コンソールまたはVMモードのいずれかを選択すると、構成可能なサブ機能が有効になります。

- デバイスID: SSMを制御する場合無効になります。

- モニターID: 数字+ [MON.CON.]キーを入力してください。

- タイルID: 数字+ [TILE/VM]キーを入力してください。

3. <**画面/PTZ**>、<**マウス**>モードのいずれか使用する機器のモードを選択してください。

レイアウト変更

1. <**レイアウト変更**>ボタンを押してください。
- SSMを制御する場合、画面モードは無効になります。

2. 変更するレイアウト番号を入力してください。

3. <**適用**>ボタンを選択すると、設定したレイアウトに変更されます。

制御
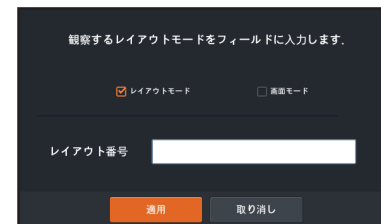
制御

録画

レコーディングを開始したり、停止したりします。

検索

再生映像を表示します。

スナップショット

キャプチャ画像を保存します。
- SSMがインストールされたPCに画像が保存されます。

アラームオフ

イベントアラームをオフにします。

DVR

DVRに接続して制御することができます。

1. <**DVR**>を選択します。
   構成可能なサブ機能が有効になります。
   - SRDプロトコルでは、接続するDVRに応じて、設定できるメニューのみがスクリーンに表示されます。

   - デバイスID：DVR IDを押します。
   - モニターID：DVRを制御するときは無効
   - タイルID：数字キー + [TILE/VM] キーを押します。

2. 使用するデバイスの<**画面**> または <**PTZ**>モードのいずれかを選択します。
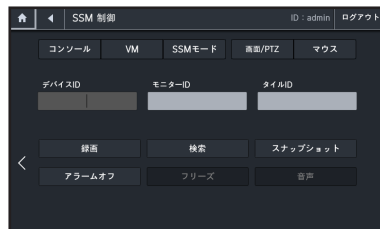
レイアウト変更

1. <**シーンを変更する**>ボタンを押します。
2. 変更するレイアウト番号を入力します。
3. <**適用**>ボタンを選択すると、設定内容に合わせてレイアウトが変更されます。

録画

録画開始または停止。

検索

再生ビデオを表示します。

アラームオフ

イベントアラームをオフにします。

一時停止

再生ビデオを一時停止します。

サウンド

再生ビデオの音量を調整します。

付録

仕様

項目	説明
通信方式	SSM RJ-45(Ethernet) RS-485 / 422
制御ユニット数	最大255
互換性	ネットワーク/アナログカメラ、SSM、DVR
プロトコル (ネットワークカメラ)	SUNAPI
プロトコル (アナログカメラ)	Samsung-T、Samsung-E、PELCO-D、PELCO-P、Panasonic、Honeywell、ELMO、Vicon、GE、AD、Bosch
プロトコル (DVR)	SRD
多言語サポート	英語、スペイン語、フランス語、イタリア語、ドイツ語、ポーランド語、トルコ語、ロシア語、韓国語、中国語、日本語
LCDディスプレイ	5" TFT LCD ＋ タッチLCD
USBポート	バックアップ/リストア、S/Wアップデート
ジョイスティック	PTZコントロール（3軸ツイストズーム）
ジョグシャトル	SSM、DVR再生コントロール
電源	DC 12V、最大6.4W
動作温度	0℃ ~ 40℃
動作湿度	20%~85%
寸法	459.1(W) x 59.1(H) x 177.9(D) mm
重量	1.5 kg（アダプタを除く）

Q & A

問題	処置
コントローラの通信ができません。	• RS-485通信回線が正常に接続されていることを確認します。 • SPC-7000とPC間のUSBケーブル接続を確認してください。 • ネットワークコントローラのIPアドレスが正しく設定されているかを確認してください。
USBメモリーが正しく認識されません。	• USBメモリーが適切に動作しているかどうかを確認してください。

GPL/LGPL SOFTWARE LICENSE

The software included in this product contains copyrighted software that is licensed under the GPL/LGPL. You may obtain the complete Corresponding Source code from us for a period of three years after our last shipment of this product by sending email to help.cctv@hanwha.com

If you want to obtain the complete Corresponding Source code in the physical medium such as CD-ROM, the cost of physically performing source distribution might be charged.

- GPL Software : Linux Kernel 3.0.8, uboot, busybox 1.16.1, udhcp 0.9.8
- LGPL Software : QT 4.7.2
- OpenSSL License : OpenSSL 0.9.8
- Boost Software License : boost 1.57.0
- UNDER THE ZLIB : tinymxl 2.6.2
- Curl License : curl 7.21.0

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991
Copyright (C)1989, 1991 Free Software Foundation, Inc.
51 Franklin Street,Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software-- to make sure the software is free for all its users.

This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs ; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have.

You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps :

(1)copyright the software, and (2)offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

Version 2, June 1991 Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin S

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License.
The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law : that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".
Activities other than copying, distribution and modification are not covered by this License ; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty ; and give any other recipients of the Program a copy of this License along with the Program. You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions :

    a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

    c) If the modified program normally reads commands interactively when run,you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception:if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you ; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program. In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program)on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2)in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following :

    a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange ; or,

    b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machinereadable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange ; or,

    c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form)with the major components (compiler, kernel, and so on)of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works.
These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions.

You may not impose any further restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise)that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all.
For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances. It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system ; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.
This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries,so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation,write to the Free Software Foundation ; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "ASIS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAMPROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty ; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

one line to give the program's name and an idea of what it does.

Copyright (C)yyyy name of author

This program is free software ; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation ; either version 2 of the License, or (at your option)any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY ; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program ; if not, write to the Free Software Foundation, Inc.,51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail. If the program is interactive, make it output a short notice like this when it starts in an interactive mode :

Gnomovision version 69,

Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO

WARRANTY ; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions ; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c' ; they could even be mouse-clicks or menu items-- whatever suits your program.

You should also get your employer (if you work as a programmer)or your school, if any, to sign a "copyright disclaimer" for the program,if necessary. Here is a sample ; alter the names:

Yoyodyne, Inc.,hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

signature of Ty Coon, 1 April 1989 Ty Coon, President of Vice This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft

license for software and other kinds of works. The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users.
We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors.
You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation

of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license

a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or

b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/ or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER

EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301

USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages-typically libraries-of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/ Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/ or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library. b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change. c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License. d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful. (For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.) These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library".
The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that

(1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients'
exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found. one line to give the library's name and an idea of what it does.

Copyright (C) year name of author

This library is free software; you can redistribute it and/ or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990 Ty Coon, President of Vice.

Head Office
6, Pangyo-ro 319 beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 463-400 Rep. of KOREA
Tel : +82.70.7147.8753 Fax : +82.31.8018.3740
www.hanwha-security.com

Hanwha Techwin America
500 Frank W. Burr Blvd. Suite 43 Teaneck, NJ 07666
Toll Free +1.877.213.1222 Direct +1.201.325.6920
Fax +1.201.373.0124
www.hanwha-security.com

Hanwha Techwin Europe
Heriot House, Heriot Road, Chertsey, Surrey, KT16 9DT, United Kingdom
Tel +44.1932.57.8100 Fax +44.1932.57.8101
www.hanwha-security.eu

Hanwha
Techwin