

画像処理用コントローラー
FV2330-Cシリーズ

FV2330-C

取扱説明書

☆第 5 版☆

(株)ファースト

ご注意

- (1) 本書の内容の一部または全部を転載することは固くお断りします。
- (2) 本書の内容については将来予告なしに変更することがあります。
- (3) 本書の内容については万全を期して作成いたしましたですが、万一ご不審な点や誤り、記載もれなどお気づきの点がありましたらご連絡ください。
- (4) 運用した結果の影響については、(2) (3) 項にかかわらず責任を負いかねますのでご了承ください。
- (5) 本製品がお客様により不適當に使用されたり、本書の内容に従わずに取り扱われたりしたこと等に起因して生じた損害等については責任を負いかねますのでご了承ください。

Before using the FV2330, please read this page carefully.



Warning

Power Source

Make sure that the source voltage matches the power supply voltage of the system before turning on the power.

Power Cable and Plug

Use the power cable (when use in Japan) supplied by FAST, to prevent electrical shock and fire. Connect the main plug to the AC outlet with a protective earth terminal. Do not use a cable extension without the protective earth cables. If such a cable extension is used, the protective operation will be disabled.

Protective Earth

Be sure to ground the protective earth terminal before turning on power to the system to prevent electrical shock. The power cable for the system is a 3P power cable with a grounding conductor. Connect it to a 3P outlet with a protective earth terminal.

Necessity of Protective Earth

Do not cut-off the protective earth conductor inside or outside the system or disconnect the protective earth wiring, to avoid hazards.

Be sure to observe the following to prevent damage to the machine, electrical shock or fire.

- Be sure to disconnect the power cable and connection cables before connecting or disconnecting the earth conductor.
- Observe the following when handling the power cable.
 - (1) Do not use a damaged power cable.
 - (2) Do not modify the power cable or the plug.
 - (3) Do not place a heavy object on the power cable.
 - (4) Do not bend, twist or pull the cable by force.
 - (5) Do not place the cable near a heating apparatus.
 - (6) Do not connect the cable to an outlet extension to which other heat producing devices are connected.
- When the TV camera connected to the system is to be mounted on a robot arm, be careful with the earth connection so that there is no potential difference of the GND level.
- When the coaxial cable used for video transmission is to be relayed using a relay connector, the GND side will be exposed at the relay. This GND side has the same potential as that of the SG of the machine. Be careful not to let it touch a high voltage source.



Caution

- Do not use the system when the filter is clogged. Doing so will cause heat to build up inside the machine, resulting in damage to the machine or fire.
- If there is an abnormal sound, smell, heat or any other sign of danger, turn off the power immediately and disconnect the power plug from the outlet. Otherwise, electrical shock or fire may result. If a problem is determined, please contact our sales office or agent.
- There must be a space of at least 100mm for the FV2330.
Do not block the inlet. If the air inlet is blocked, the internal temperature will rise excessively, resulting in thermal runaway damage, or fire. Also, do not put metallic, flammable or any other foreign material through the inlet.

English manuals are available for download from this page.
<https://www.fast-corp.co.jp/eng/>

本機器を安全にご使用いただくために

本機器を正しく安全に使用していただくため、本機器の操作にあたっては下記の安全注意事項を必ずお守りください。この取扱説明書で指定していない方法で使用すると、本機器の保護機能が損なわれることがあります。なお、これらの注意に反したご使用により生じた損害については、(株)ファーストは責任と保証を負いかねます。

本機器には、次の様なシンボルマークを使用しています。



装置を安全にお使いいただくために“取扱注意”



機能接地端子（保護接地端子として使用しないでください）



交流



ON（電源）



OFF（電源）

輸出管理規制について

本製品を輸出される場合は、外国為替および外国貿易管理法の規制をご確認の上、必要な手続きをお取りください。なお、ご不明な点は、弊社担当営業にお問い合わせください。

この説明書で使われるマークについて



警告

取り扱いを誤った場合に、使用者が死亡または重傷を負う危険があるときに、その危険を避けるための注意事項が記載されています。



注意

取り扱いを誤った場合に、使用者が軽傷を負うか、または物的損害のみが発生する危険があるときに、それを避けるための注意事項が記載されています。



装置が故障しないようにするための注意、正しく動作させるための注意等を記載しました。

Note

機器を取り扱う上で重要な情報が記載されています。

はじめに

このたびは弊社の画像処理用コントローラー『FV2330-C』シリーズをお買い上げいただき、誠にありがとうございます。

『FV2330-C』シリーズは、PC 技術を画像処理用ベースマシンとしてカスタマイズしたハードウェアプラットフォームをもつ汎用コントローラーです。画像処理にはもちろん、制御用 PC などとして多目的利用ができる装置です。

以下の製品をご用意しております。

FV2330-C32 : Windows 7 Ultimate for Embedded 32bit を搭載した装置

FV2330-C64 : Windows 7 Ultimate for Embedded 64bit を搭載した装置

FV2330-C32e : Windows Embedded Standard 7 32bit を搭載した装置

FV2330-C10e64 : Windows 10 IoT Enterprise 64bit を搭載した装置

本説明書には、上記製品の基本ユニットの説明が書かれています。製品固有の機能等につきましては、該当するページにその旨記述されています。特に記述のない箇所については FV2330-C 共通の記述です。

なお、画像入力等の仕様は、基本ユニットに搭載する各種製品ボードによって機能が異なります。詳細は各ボードの取扱説明書をご覧ください。

製品名(型番)は下記で表現し、装置銘板及び銘板補助ラベルが装置前面に貼られます。

FV2330-Env

- Env(ironment) : ソフトウェア動作環境
 - FV2330-C32 をご購入の場合、表記は、“C32”となります。
 - FV2330-C64 をご購入の場合、表記は、“C64”となります。
 - FV2330-C32e をご購入の場合、表記は、“C32e”となります。
 - FV2330-C10e64 をご購入の場合、表記は、“C10e64”となります。

——商標について——

「Microsoft」「Windows」「Windows 7 Ultimate for Embedded」「Windows Embedded Standard 7」

「Windows 10 IoT Enterprise」は Microsoft Corporation の登録商標です。

「IBM」、「PS/2」は International Business Machines の登録商標です。

その他、各会社名、各製品名は各社の商標または登録商標です。

ご使用になる前にご確認ください

(1) 本装置に付随するソフトウェア商品の使用許諾について

【 FV2330-C32, FV2330-C64 】

1. 「Microsoft Software License Terms」をお読みください。

-重要-



FV2330-C32 または FV2330-C64 システム SSD には、Microsoft Corporation の基本ソフト (OS) Windows 7 Ultimate for Embedded が組込まれています。本説明書の最後に「Microsoft Software License Terms」原文が添付されています。装置を使用する前に契約内容をよく読み、同意される場合のみ本製品をお使いになることができます。装置を使用した場合、契約内容に承諾されたものといたします。

なお、FV2330-C32 または FV2330-C64 の再販や装置に組み込んでの販売により使用ユーザが変わる場合、この「Microsoft Software License Terms」を必ず添付し、契約内容の同意時にのみ本製品の販売及び使用が可能である事を明記してください。

【 FV2330-C32e 】

2. 「Microsoft Software License Terms」をお読みください。

-重要-



FV2330-C32e システム SSD には、Microsoft Corporation の基本ソフト (OS) Windows Embedded Standard 7 が組込まれています。本説明書の最後に「Microsoft Software License Terms」原文が添付されています。装置を使用する前に契約内容をよく読み、同意される場合のみ本製品をお使いになることができます。装置を使用した場合、契約内容に承諾されたものといたします。

なお、FV2330-C32e の再販や装置に組み込んでの販売により使用ユーザが変わる場合、この「Microsoft Software License Terms」を必ず添付し、契約内容の同意時にのみ本製品の販売及び使用が可能である事を明記してください。

【 FV2330-C10e64 】

3. 「Microsoft Software License Terms」をお読みください。

-重要-



FV2330-C10e64 システム SSD には、Microsoft Corporation の基本ソフト (OS) Windows 10 IoT Enterprise が組込まれています。本説明書の最後に「Microsoft Software License Terms」原文が添付されています。装置を使用する前に契約内容をよく読み、同意される場合のみ本製品をお使いになることができます。装置を使用した場合、契約内容に承諾されたものといたします。

なお、FV2330-C10e64 の再販や装置に組み込んでの販売により使用ユーザが変わる場合、この「Microsoft Software License Terms」を必ず添付し、契約内容の同意時にのみ本製品の販売及び使用が可能である事を明記してください。

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1. 商品の確認

商品がお手元に届きましたら、下記のとおり揃っているかどうかご確認願います。
万一足りない場合や破損していた場合は、ただちに弊社営業までお申し出ください。

1.1 FV2330-C

FV2330-C 本体 (1 台)



3P 電源ケーブル (1 本・約 3m・125V・7A)



取付金具 (2 枚、3mm ネジ×4 ヶ)



1.2 オプション品および別売品、購入品等のご案内

標準別売品

CPU (選択必須)

CPU は以下の 2 種類から選択可能です。
Core i5-2400 3.1GHz / Core i7-2600 3.4GHz

メモリ (選択必須)

メインメモリは以下の 3 種類から選択可能です。
DDR3-1333 4GB / 8GB / 16GB

システム SSD (必須)

システム SSD は起動ディスクで、製品ごとに以下の Windows7 がインストールされています。
また、製品ごとにディスクの残容量が異なりますのでご注意ください。
なお、以下の残容量は 60GB の SSD 使用時のものです。出荷時期により SSD の容量が変わる場合があります。

- ①FV2330-C32 : Windows 7 Ultimate for Embedded 32bit
C ドライブのみです。
ディスク残容量 : 約 41GB
- ②FV2330-C64 : Windows 7 Ultimate for Embedded 64bit
C ドライブのみです。
ディスク残容量 : メモリ搭載量 4GB の場合、約 35GB
ディスク残容量 : メモリ搭載量 8GB の場合、約 28GB
ディスク残容量 : メモリ搭載量 16GB の場合、約 14GB
- ③FV2330-C32e : Windows Embedded Standard 7 32bit
C ドライブ(システム領域、約 18GB)と D ドライブ(ユーザ領域)に分かれています。
ディスク残容量 : 約 42GB
- ④FV2330-C10e64 : Windows 10 IoT Enterprise 64bit
C ドライブ(システム領域、約 24GB)と D ドライブ(ユーザ領域、約 30GB)に分かれています。
ディスク残容量 : 約 39GB



不測の事態によりシステム SSD が破損しても、予備の SSD があれば迅速に復旧することができます。バックアップ目的でシステム SSD を販売しております。弊社営業にお問い合わせ下さい。

増設 2.5 インチリムーバブルユニット・・・（オプション）

データ SSD またはデータ HDD を搭載するためのユニットです。
ご購入時に本ユニットを増設することでデータ SSD またはデータ HDD が使用できます。
本ユニットは FV2330-C 本体購入時のみ選択可能です。ご購入後に増設することはできません。

データ SSD, データ HDD・・・（オプション）

データ用として SSD60GB、HDD1TB を用意しております。E: ドライブとしてお客様のアプリケーションやデータを格納することができます。用途に合わせて、容量を選定して頂けるよう別売品にしています。



不測の事態によりデータ SSD またはデータ HDD が破損しても、予備があれば迅速に復旧することができます。バックアップ目的でデータ SSD およびデータ HDD を販売しております。弊社営業にお問い合わせ下さい

準標準別売品

お客様が選定して購入する事が可能です。
選定の手間を省くため弊社でも商品として準備しております。

トラックボール

PS/2 又は、USB よりお選びいただけます。
ケーブル長：約 1,500mm(予告なく仕様が変更される場合があります)



キーボード

日本語キーボード

シリアルケーブル

シリアルケーブルは豊富に市販されておりますが、弊社でも従来通りシリアルケーブルの販売をしております。
(本説明書の 6.1 シリアルケーブル(オプション))

2. 仕 様

2.1 一般仕様

	仕 様
外形寸法(注1)	(横幅)145mm×(奥行き)311.5mm×(高さ)275mm
ゴム足(高さ)	6mm
重量	約 5.0kg(取付金具は含まず)
電源	AC100～240V
電源周波数	50/60Hz
消費電力	480VA 以下
動作周囲温度	5～35℃
動作周囲湿度	30～85%RH(結露の無いこと)
保存周囲温度	-20～60℃
保存周囲湿度	95%RH 以下
適合規格(注2)	安全:EN 60950-1 EMC:EN 55011 Group1 ClassA, EN 61000-6-2 FCC Part 15 Subpart B

(注1) 取付け部分やコネクタ等の突起部は含んでおりません。

(注2) 本装置単体でこれらの規格に適合できるよう設計されています。ただし、お客様が製作される装置、機械、設備については、セットした状態での適合性の確認が必要です。ご注意ください。
また、本装置への配線はシールドケーブルを使用し、30mを超えない配線としてください。

交換用フィルタはブリヂストン ポリウレタンフォーム製「エバーライト SF」材質：HR-13 105mm×95mm
をご使用下さい。

- この装置は、カレンダー情報を保持するためにリチウム1次電池を使用しています。電池の寿命は約5年です。お客様による電池の交換は出来ません。電池の交換は有償にて承りますので弊社営業にご用命下さい。
- FV2330-Cに取り付けられているユニットは、使用により劣化、摩耗しますので、一定周期で交換する必要があります。詳しくは『7. 有寿命部品』を参照してください。これらのユニットは有償にて交換致します。詳しくは、弊社営業へお問い合わせ下さい。なお、出張でのメンテナンスサービスは行っておりません。あらかじめご了承下さい。

2.2 機能仕様

CPU	Core i5-2400 3.1GHz / Core i7-2600 3.4GHz
メモリ	DDR3-1333 4GB / 8GB / 16GB
チップセット	Intel Q67 PCH
PCI スロット	2 スロット
PCI Express×4 スロット	1 スロット (B)
PCI Express×16 スロット	1 スロット (A)
アナログ VGA	最大 2048x1536 32bit
DVI-I (DVI-D single)	最大 1920x1200 32bit
LAN	オンボード (10BASE-T/100BASE-TX/1000BASE-T) 2 ポート
シリアル	2 ポート
PS/2 マウスコネクタ	1
PS/2 キーボードコネクタ	1
USB (USB2.0)	背面 4 ポート、正面 1 ポート
ファイル装置	システム SSD
	データ SSD・データ HDD (オプション)

[注] 市場動向により、メモリ標準容量および最大容量が変更される場合があります。



本装置が FVC05 (a), FV-GP440 (a) を通してカメラへ供給できる+12V は 4A (48W) までです。

Note FV2330-C に使われている PC 部品について

FV2330-C には、比較的長期安定供給が期待できる工業用パーソナルコンピュータ (以下、工業用 PC と略す) 部品を採用していますが、万が一工業用 PC 部品の入手が困難になった場合、代替の PC 部品に切り換えて製造する可能性があります。

2.3 電源の切り方について

1. 電源の切り方

Windows のシャットダウン機能を使用することで、安全に電源を切る事が出来ます。

1. キーボードの [Ctrl]+[Alt]+[Delete] キーを同時に押します。
2. 表示された画面右下に表示されるシャットダウンを選択してください。シャットダウンが完了すると自動的に電源が OFF になります。

2. 電源の再投入

電源スイッチを一旦 OFF にし、再度 ON にすることで電源の再投入ができます。
電源を再投入にする場合は、30 秒以上の時間をおいてから行ってください。



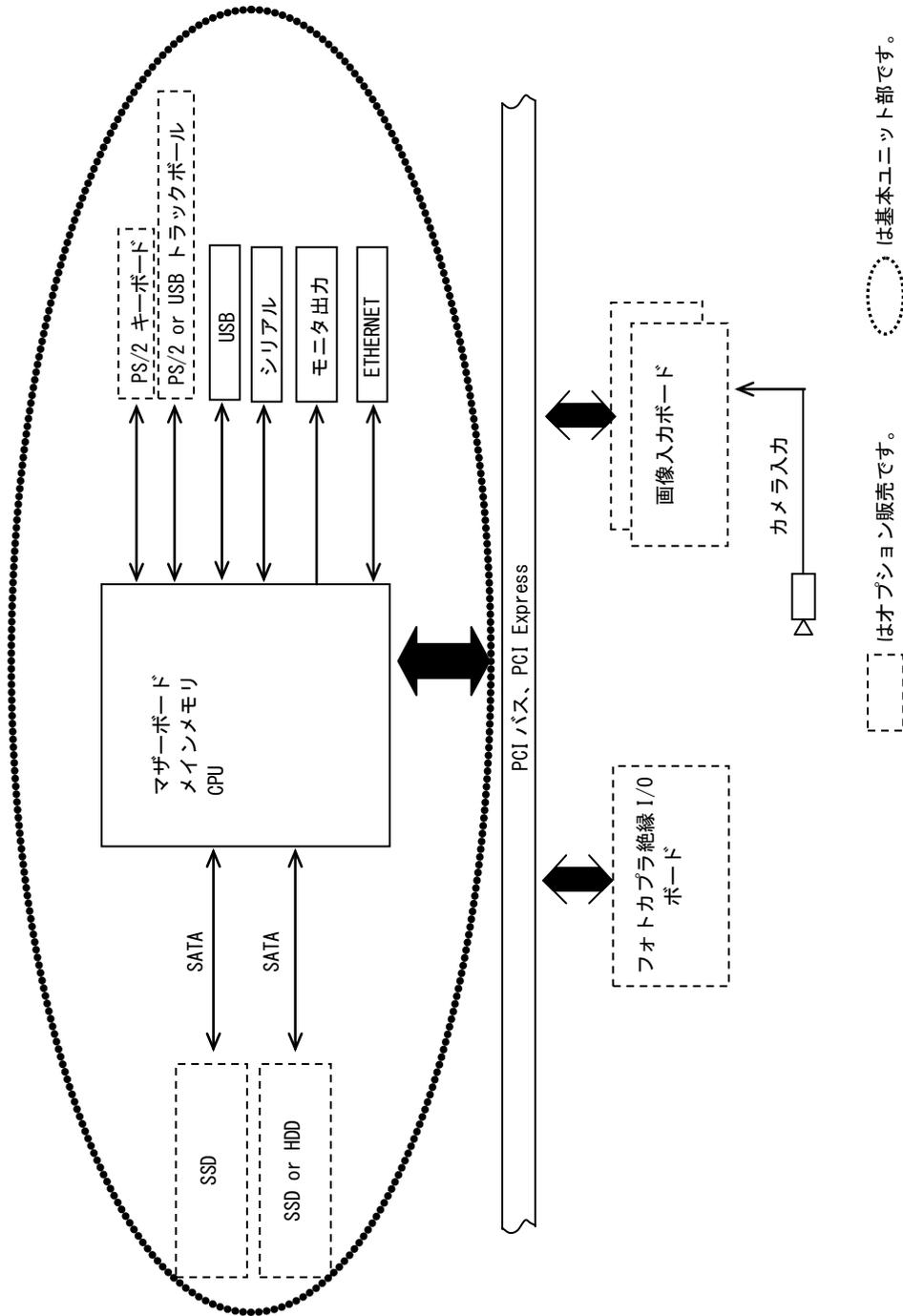
基本的には、シャットダウンプロセスを実行後、電源スイッチを OFF にしてください。
ファイル装置にアクセスしている状態 (装置全面の HDD ランプ点灯中) や、Windows が起動しアプリケーションが実行できる状態になる前に電源を切ったり RESET スイッチを押すとファイル装置の内容に致命的な損傷を与える恐れがあります。

Note ファイルのバックアップ

万が一、ファイル装置の内容が破壊された場合の復旧が出来るよう、お客様が担当されたファイルをバックアップしておくことをお勧めいたします。システム SSD のシステム領域を破壊した場合は、弊社工場での再書込みが必要になります。

2.4 ブロック図

(注) 画像入力ボードに関する仕様は、装置本体に搭載されるボードによって異なります。



3. 設置と点検



注意

この章では装置を設置するにあたり、安全上の非常に重要な内容が書かれています。
また、システムの信頼性を高め、その機能を十分発揮させるために以下の内容を考慮して設置してください。

3.1 安全にご使用いただくために

- 不安定な場所(ぐらついた台の上や傾いた所など)に置かないでください。落ちたり、倒れたりして、装置を破壊または人が怪我をする恐れがあります。本体の自重は必ず本体底板(ゴム足)で保持し水平に設置してください。又、付属の取付金具により床面での固定が可能です(『3.2 取付金具の付け方』を参照してください)。
- 装置の吸気口/排気口は内部の温度上昇を防ぐための通風口です。
通風口をふさぐと火災の原因になりますので、通風口から 100mm 以上の空間を設けて設置してください。



注意

次のような場所は避けて設置してください。

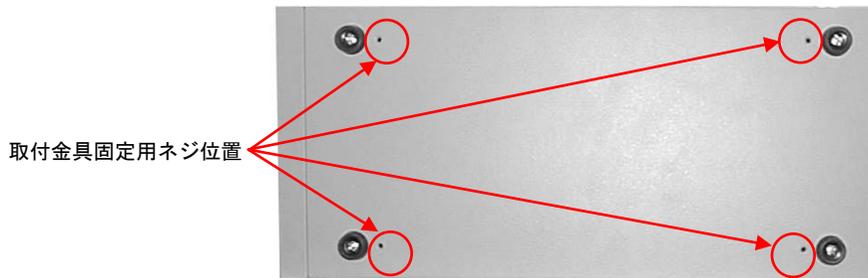
- 周囲温度が 5~35°C の範囲を超える場所
- 温度変化が急激で結露するような場所(結露した場合は乾燥させてから電源を投入してください)
- 相対湿度が 30~85% の範囲を超える場所
- 強力な電界、磁界の発生している場所
- 発熱源に近い場所
- 本体に直接振動や衝撃がかかる場所
- 直射日光の当たる場所
- 塵、埃の多い場所
- 水、油、薬品等の飛沫のある場所

3.2 取付金具の付け方

付属の取付金具を使用することによって縦置き/横置きでの固定が可能です。

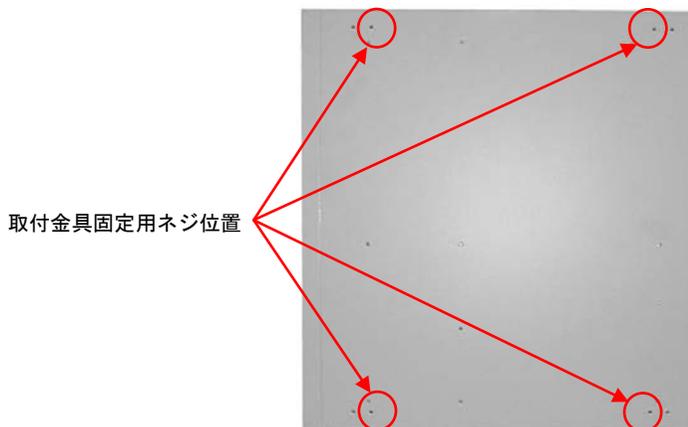
<縦置きにするとき> (出荷設定)

- (1) 本体の電源スイッチを OFF にします。
- (2) 本体に接続されているケーブル類はすべて外します。
- (3) 本体を裏返し、ゴム足のある側を上 にします。
- (4) 取付金具を添付ネジでしっかりと固定します。



<横置きにするとき>

- (1) 本体の電源スイッチを OFF にします。
- (2) 本体に接続されているケーブル類はすべて外します。
- (3) 本体を裏返し、ゴム足中央にあるネジをドライバで取り外してからゴム足を外します。
- (4) 本体正面向かって右側の側面にあるゴム足用の穴にゴム足を取り付け、ネジで固定します。
- (5) ゴム足を取り付けた側面を上 にします。
- (6) 取付金具を添付ネジでしっかりと固定します。



注意

本体を固定しないと、誤って落下して装置を壊す事があります。
取付金具を利用して設置してください。

3.3 電源の配線



警告

電源

機器の電源電圧が供給電源の電圧に合っているか必ず確認したうえで、本体の電源を入れてください。

電源コードとプラグ

入力電圧 125V までは感電や火災防止のため、電源コード(日本国内でのみ使用可能)は、弊社から供給されたものを必ずご使用ください。主プラグは、保護接地端子を備えた電源コンセントにだけ接続してください。保護接地を備えていない延長用コードを使用すると、保護動作が無効になります。

保護接地

感電防止のため、本機器の電源を入れる前には、必ず保護接地をして下さい。本機器に付属の電源コードは接地線のある3極電源コードです。したがって、保護接地端子のある3極電源コンセントを使用してください。

保護接地の必要性

本機器の内部または外部の保護接地線を切断したり、保護接地端子の結線を外さないでください。いずれの場合も本機器が危険な状態になります。

入力電圧波形

本機器の電源装置には PFC(力率改善回路)が搭載されています。UPS 等で矩形波を入力すると故障する恐れがありますのでおやめください。



警告

装置の破壊や感電、火災の事故を防ぐために次のことを必ず守ってください。

- アース線の接続、取り外しは電源ケーブルや接続ケーブルを抜いてから行ってください。
- 電源ケーブルを取り扱う際は次の点を守ってください。
 - (1) 破損した電源ケーブルを使用しない。
 - (2) 電源ケーブル、電源プラグを加工しない。
 - (3) 電源ケーブルの上に重いものを載せない。
 - (4) 無理に曲げたり、ねじったり、引っ張ったりしない。
 - (5) 熱器具の近くに配線しない。
 - (6) たこ足配線をしない。
- 装置に接続された TV カメラをロボット・アーム等に取り付ける際には、GND レベルの電位差がないように接地線の接続に注意してください。
- ビデオ伝送に使用する同軸ケーブルを中継コネクタで中継する場合、中継部で GND 側が露出しますが、この GND 側は装置の SG と同電位です。高電圧に接触させる事のないように注意してください。

3.4 日常点検

熱、湿気、ホコリなどの影響や使用の度合いにより、部品が劣化し、時には安全性を損なって事故につながる場合があります。下記の項目は日常点検で確認してください。



注意

- 吸気力の大きいファンを使用していますので半年に一度は点検をし、防塵フィルタが汚れていたり、目詰まりがある場合は清掃又は交換を行ってください。
- 交換用フィルタはブリヂストン ポリウレタンフォーム製「エバーライト SF」材質：HR-13 105mm×95mmをご使用下さい。

フィルタの清掃方法

- (1) 本体の電源を切ってください。
- (2) 本体前面の吸気口にあるネジ(1ヶ)を外すと金具が外れ、フィルタが取り出せます。
- (3) フィルタのゴミを、掃除機で吸い取るかエアードスター(圧縮空気)などでゴミを吹き飛ばします。
- (4) きれいにしたフィルタを(2)の逆の手順で元に戻してください。

(注)コネクタ類を抜き差しした場合、正しく作業が行われていることをご確認ください。



吸気口金具取付ネジ



注意

- フィルタが目詰まりしたまま使用を継続しないでください。装置内部の温度が異常上昇し装置を破壊したり、火災を引き起こす原因となります。
- 異常な音や臭気がしたり、異常に熱くなる等の危険な兆候を発見したら、すぐに電源を切り、電源プラグをコンセントから抜いてください。そうしないと感電や火災の原因となります。原因がわからない場合は弊社にご相談ください。

3.5 データの保存

SSD は、ハードディスク (HDD) と比べて機構部がなく、非常に信頼性の高いデバイスですが、アクセス中の電源 OFF、故障により大切なプログラム/データ・ファイルを失う恐れがあります。

SSD のデータはパソコン等に必ずバックアップを取るよう to してください。

Note 保守用として SSD や HDD のご購入を推奨します

何らかの原因で SSD のファイルが壊れた場合、バックアップがあればアプリケーションプログラム等は復旧可能ですが、システム領域等に問題があった場合は弊社工場での再書込みや SSD の交換が必要です。

保守用としてシステム SSD やデータ SSD、データ HDD を購入しておけば、復旧時間を短縮することができます。

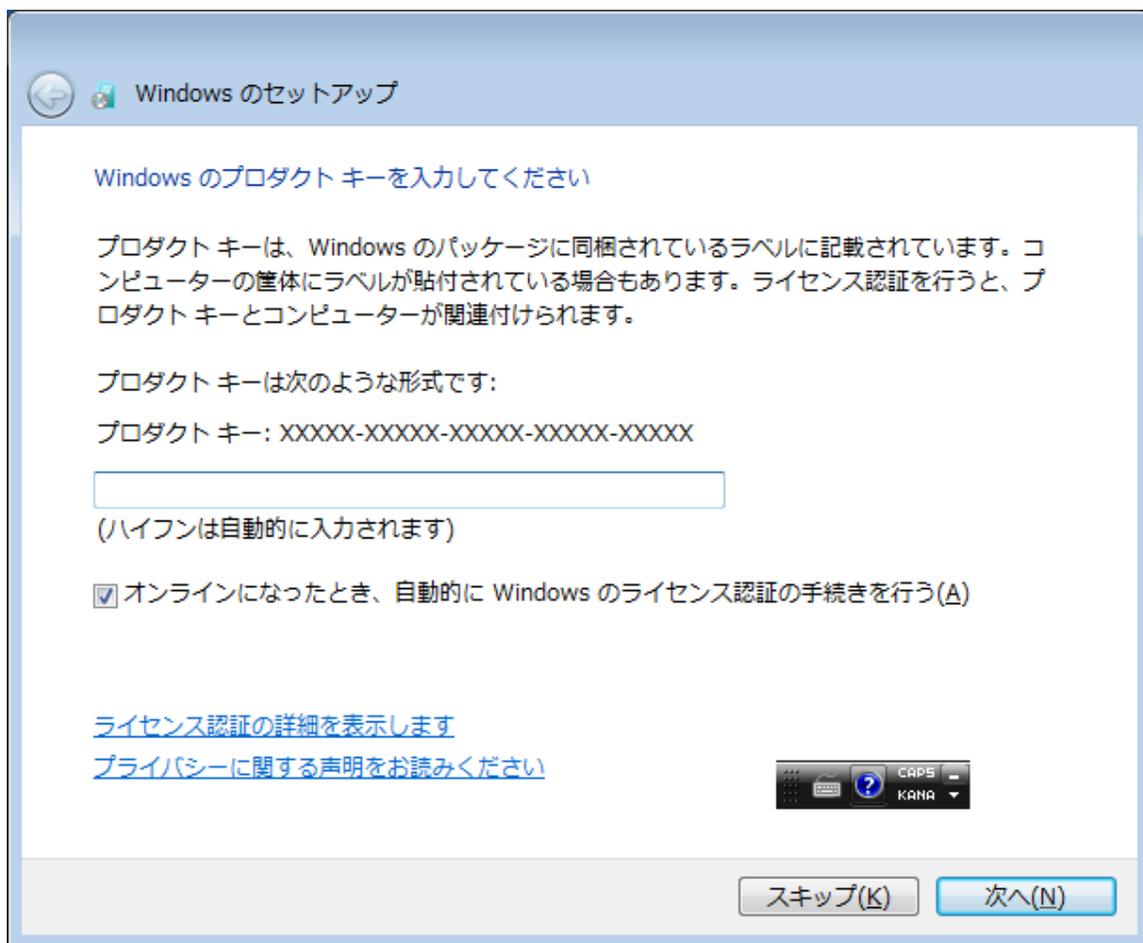
3.6 Windows のライセンス認証の方法

【 FV2330-C32, FV2330-C64 】

万が一、システム用の SSD が破損して装置が起動しなくなった時、予備のシステム SSD で復旧させることができますが、Windows のライセンス認証(アクティベーション)の作業が必要です。
下記の説明を参考にインターネットまたは電話で 30 日以内にライセンス認証を行ってください。

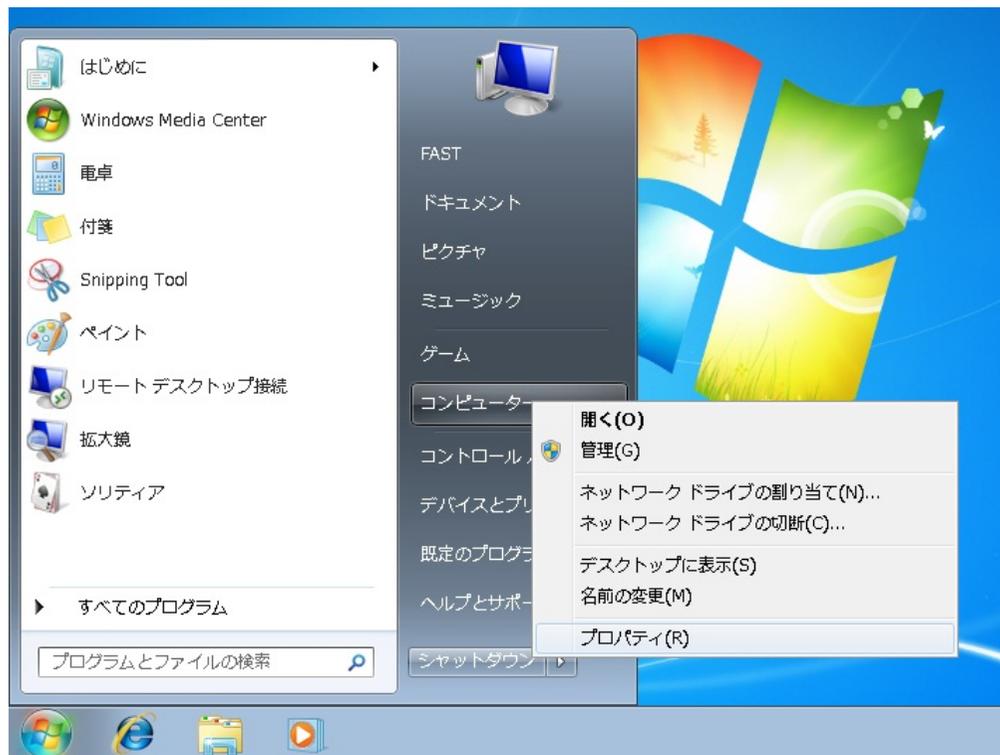
インターネットを使用したライセンス認証

装置を起動しプロダクトキーを入力します。

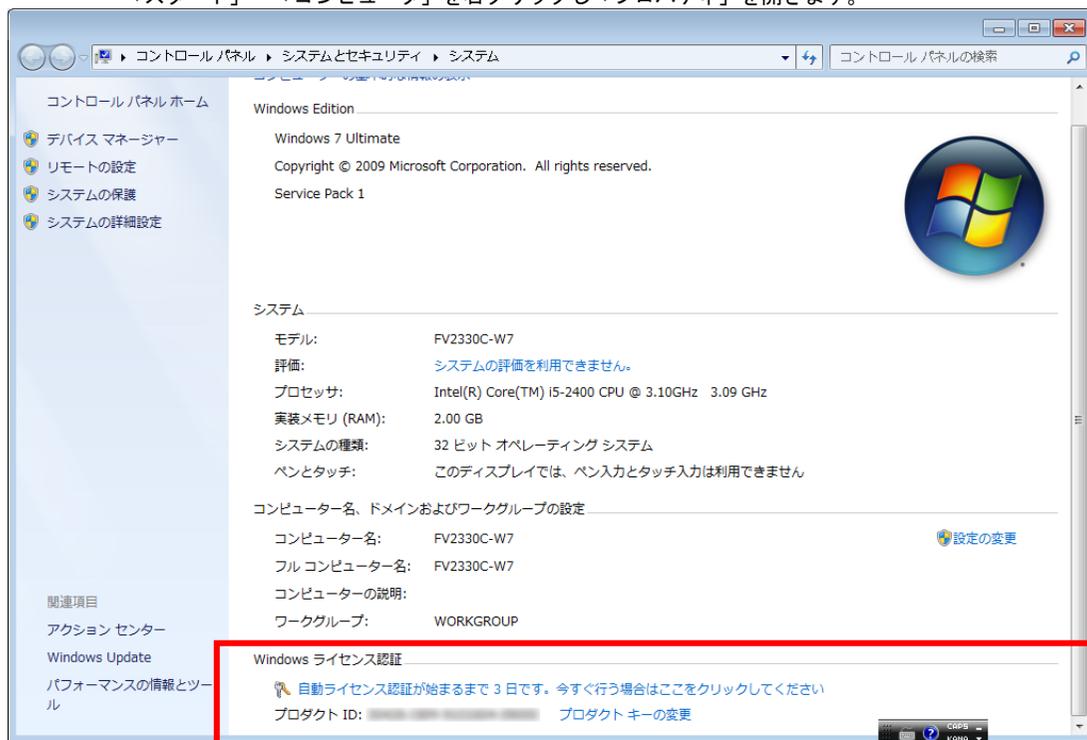


The screenshot shows the 'Windows のセットアップ' (Windows Setup) window. The title bar includes a back arrow and the text 'Windows のセットアップ'. The main content area has a blue header with the text 'Windows のプロダクト キーを入力してください' (Enter your Windows product key). Below this, there is explanatory text: 'プロダクト キーは、Windows のパッケージに同梱されているラベルに記載されています。コンピューターの筐体にラベルが貼付されている場合もあります。ライセンス認証を行うと、プロダクト キーとコンピューターが関連付けられます。' (The product key is printed on a label included in the Windows package. There may also be a label on the computer case. After activation, the product key will be linked to the computer.) This is followed by 'プロダクト キーは次のような形式です:' (The product key is in the following format:) and 'プロダクト キー: XXXXX-XXXXX-XXXXX-XXXXX-XXXXX' (Product key: XXXXX-XXXXX-XXXXX-XXXXX-XXXXX). A text input field is provided for the key, with a note '(ハイフンは自動的に入力されます)' (Hyphens are entered automatically). A checkbox is checked with the label 'オンラインになったとき、自動的に Windows のライセンス認証の手続きを行う(A)' (When online, automatically perform Windows activation (A)). At the bottom left, there are two links: 'ライセンス認証の詳細を表示します' (Show details about activation) and 'プライバシーに関する声明をお読みください' (Read the privacy statement). At the bottom right, there is a keyboard icon showing 'CAPS' and 'KANJI' options. At the very bottom, there are two buttons: 'スキップ(K)' (Skip) and '次へ(N)' (Next).

「次へ」をクリックすると、デスクトップ画面に戻ります。

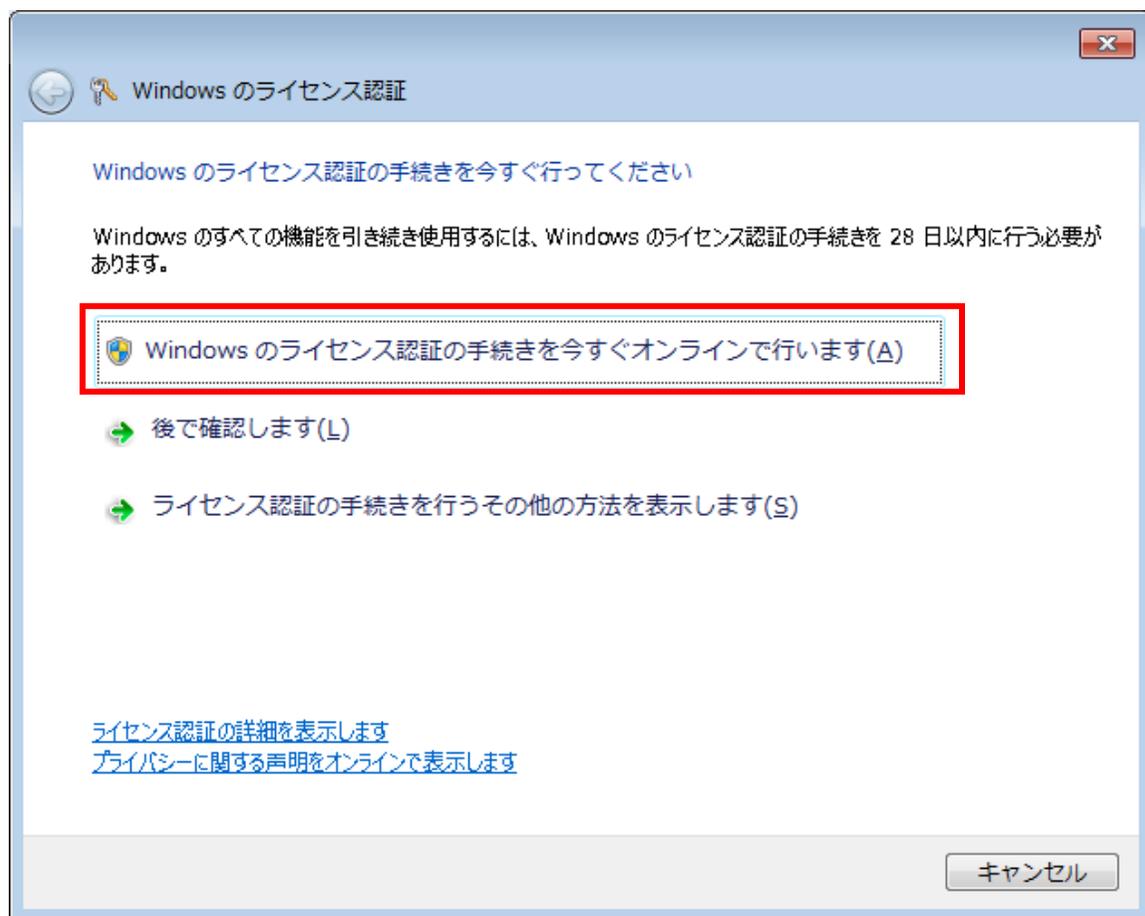


「スタート」－「コンピュータ」を右クリックし「プロパティ」を開きます。



一番下に「Windows ライセンス認証」があります。

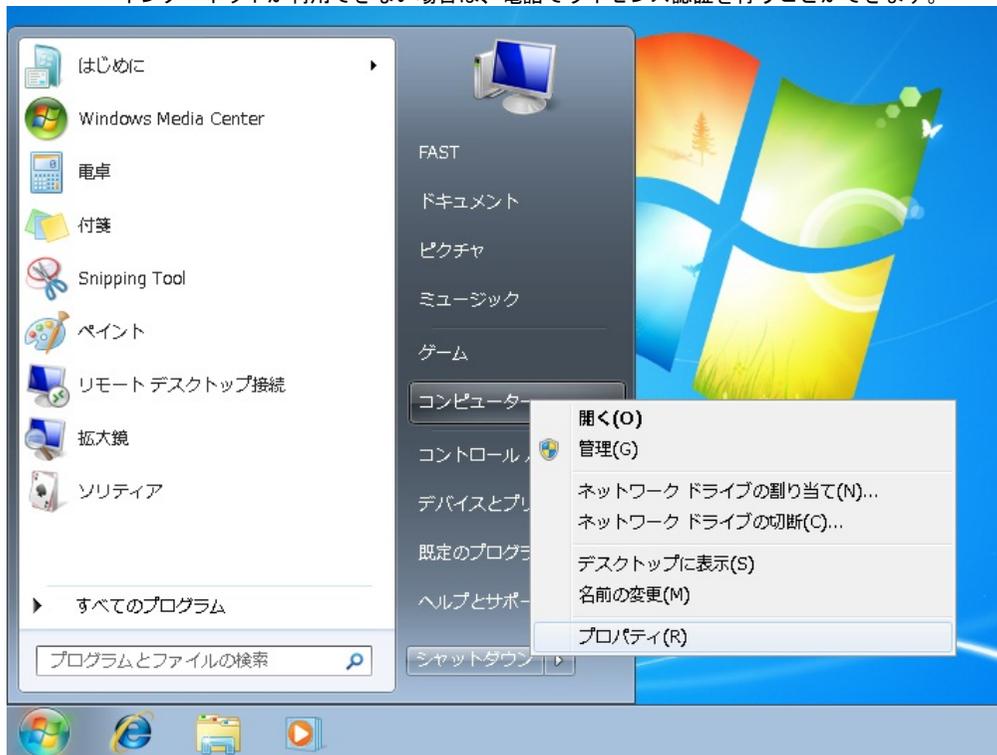
「自動ライセンス認証が始まるまで3日です。今すぐ行う場合はここをクリックしてください」をクリックします。



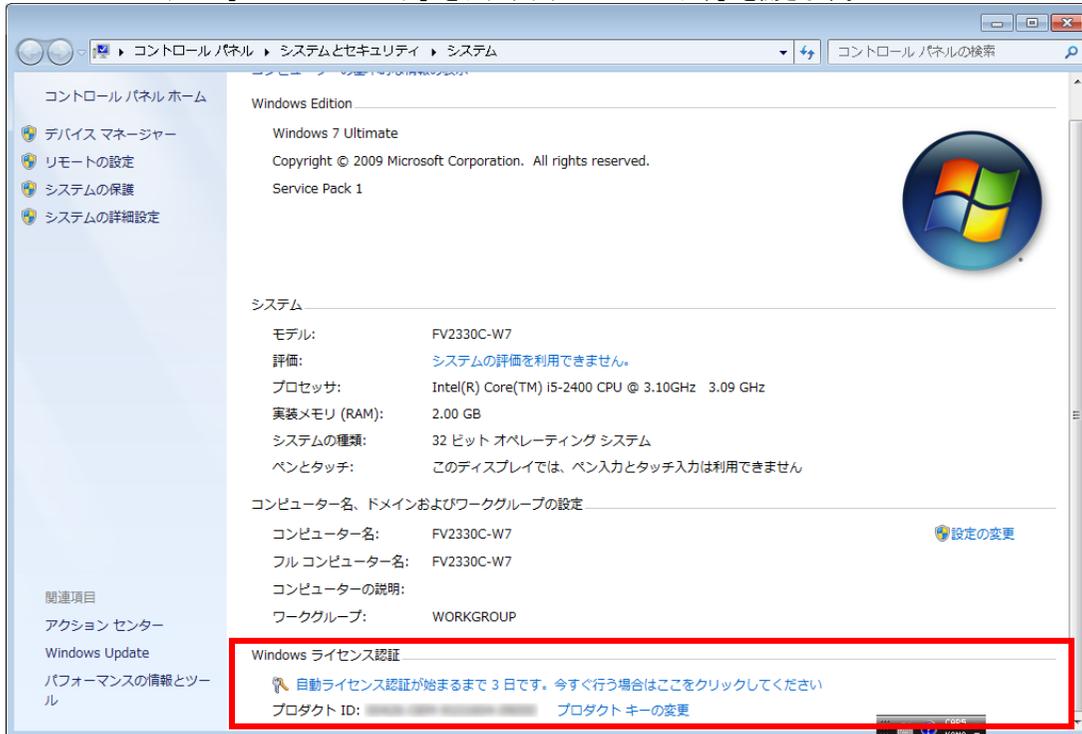
インターネットに接続していることを確認して、「Windows のライセンス認証の手続きを今すぐオンラインで行います」をクリックし、ライセンスの認証を行ってください。

電話を使用したライセンス認証

インターネットが利用できない場合は、電話でライセンス認証を行うことができます。

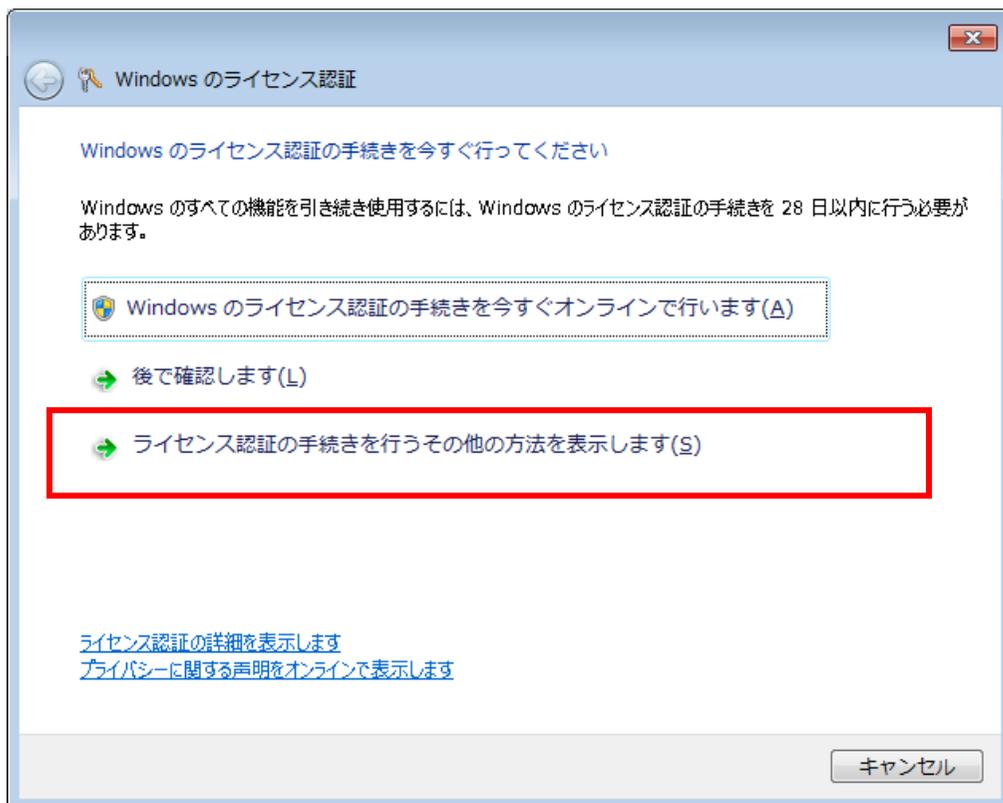


「スタート」－「コンピュータ」を右クリックし「プロパティ」を開きます。

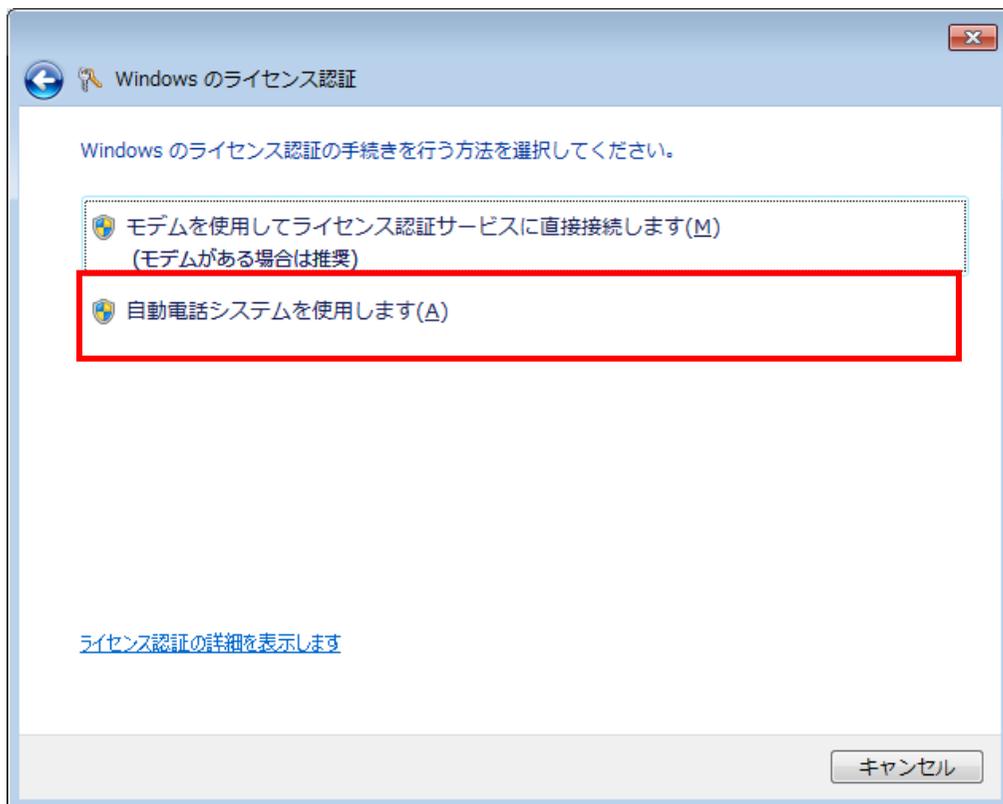


一番下に「Windows ライセンス認証」があります。

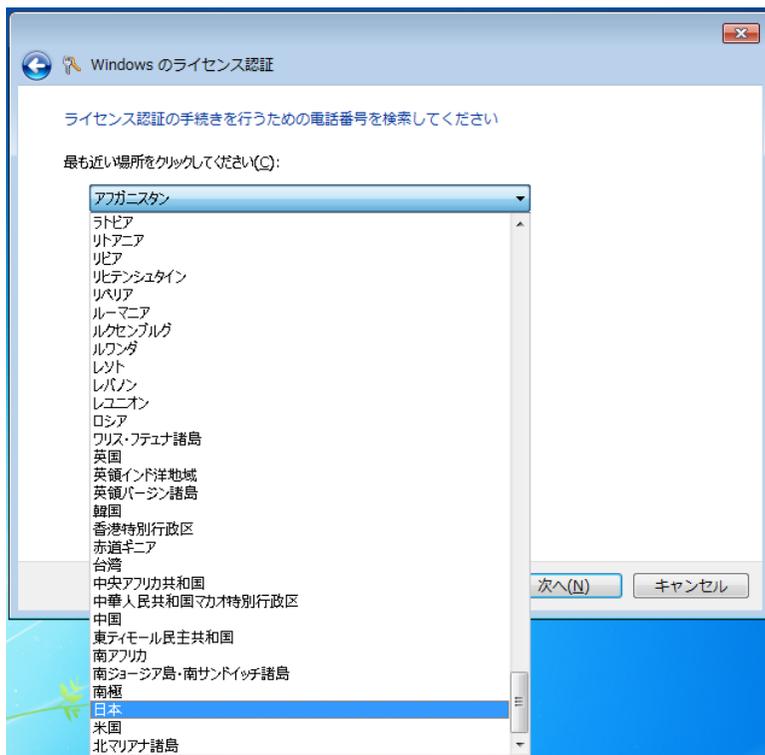
「自動ライセンス認証が始まるまで3日です。今すぐ行う場合はここをクリックしてください」をクリックします。



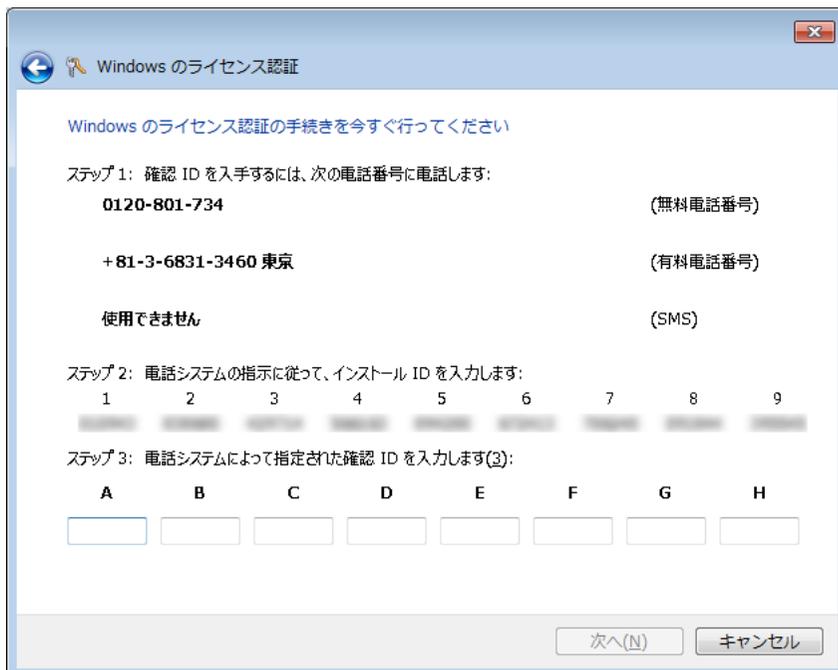
「ライセンス認証の手続きを行うその他の方法を表示します」をクリックします。



「自動電話システムを使用します」をクリックします。



この装置が設置されている国を選択します。日本にある場合は「日本」を選択し「次へ」をクリックします。



表示されている電話番号の 1 つに電話をかけます。
 電話のアナウンスは日本語または英語を選択できます。
 電話の指示に従い、インストール ID を電話機のプッシュボタンで入力します。
 確認 ID を書き留めておき、上記のステップ 3 の欄に確認 ID を入力します。
 「次へ」をクリックして指示に従います。

【 FV2330-C32e 】

Windows のライセンス認証(アクティベーション)は必要ありません。

【 FV2330-C10e64 】

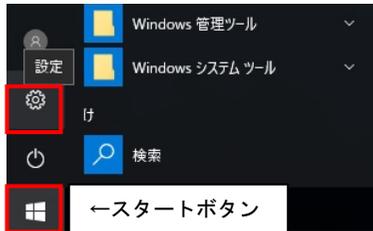
万が一、システム用の SSD が破損して装置が起動しなくなった時、予備のシステム SSD で復旧させることができません。FV2330-C10e64 用の予備のシステム SSD をご使用される際には、Windows のライセンス認証(アクティベーション)をして下さい。

インターネットを使用したライセンス認証の方法

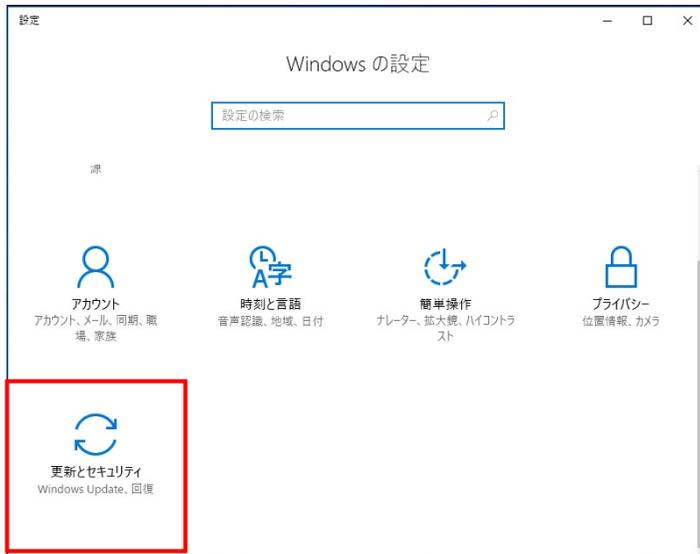
ライセンス認証は装置をインターネットに接続すると自動的に行われます。
装置の Ethernet コネクタに LAN ケーブルを接続してインターネット接続して下さい。

ライセンス認証されていることの確認方法

- ① 「スタート」 ボタンを左クリックして「設定」を選択します。



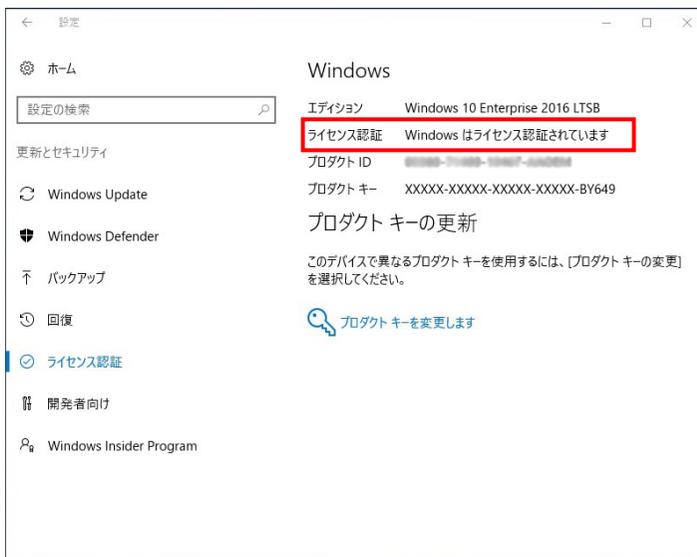
- ② Windows の設定画面の「更新とセキュリティ」をクリックします。



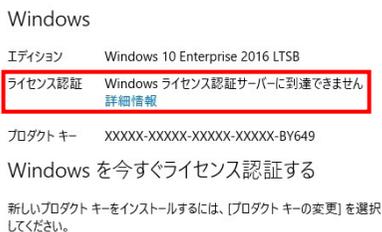
- ③ 更新とセキュリティ画面の「ライセンス認証」をクリックします。



- ④ ライセンス認証画面に「Windows はライセンス認証されています」と表示されていることをご確認ください。



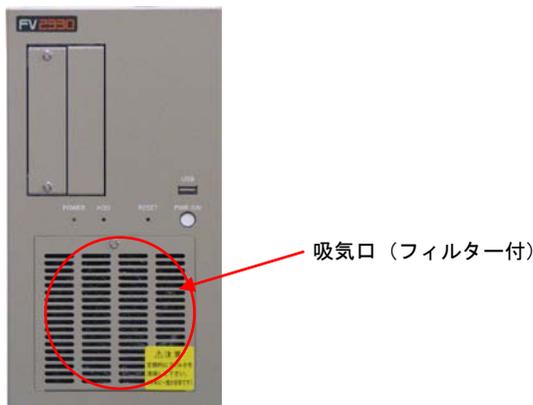
※ インターネットに接続されていない等の理由でライセンス認証されていない場合は、「Windows ライセンス認証サーバーに到達できません」等のメッセージが表示されます。



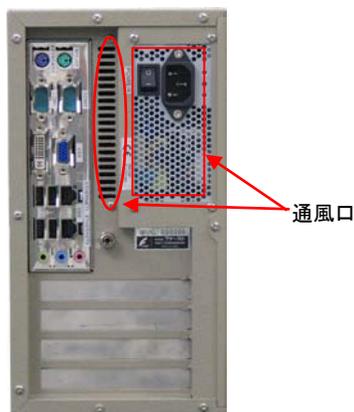
4. 本体各部の名称と取扱い

4.1 本体外観

本体前面



本体背面



4.1.1 吸気口・通風口

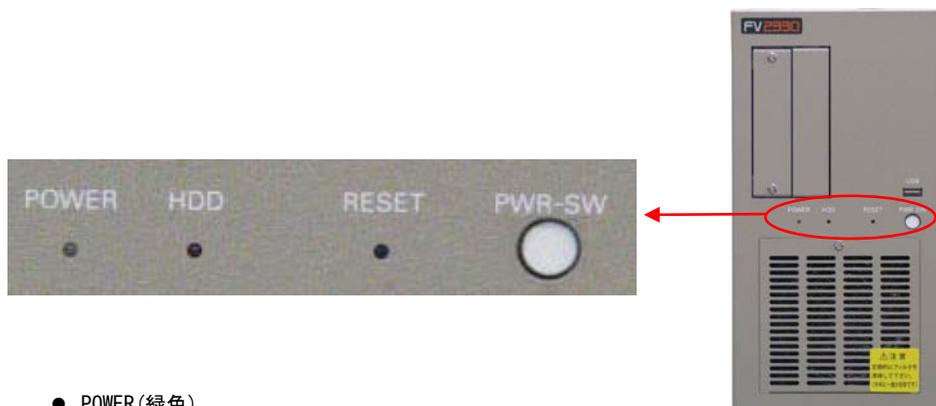
内部の発熱部品を空冷するための通気口です。
特に CPU、画像入力ボードの発熱量は膨大ですから、ファンが止まっていないことを確認してください。
また、防塵フィルタの交換時以外は開けないでください。

注意

吸気口は周囲と 100mm 以上離し、絶対に通風口をふさがないでください。
通風口をふさいでしまうと内部温度が異常上昇し、装置の暴走、破壊、火災の危険があります。
また、通風口から金属類や燃えやすいものなど異物を入れないでください。

4.2 前面各部

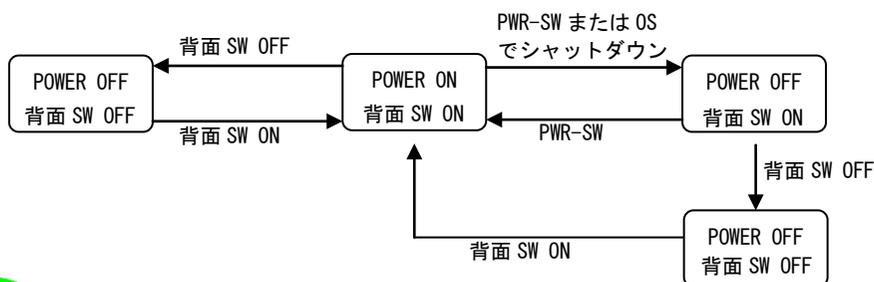
4.2.1 POWER/HDD/RESET/PWR-SW



- POWER (緑色)
電源スイッチを ON にすると点灯し、装置が通電状態であることを示します。
- HDD (赤色)
ファイル装置のアクセス中に点灯します。
- RESET (スイッチ)
装置をリセットします。操作は細い棒などを用いてスイッチを押して下さい。
- PWR-SW (丸ボタンスイッチ)
詳しくは下記の『PWR-SW の機能』を参照下さい。

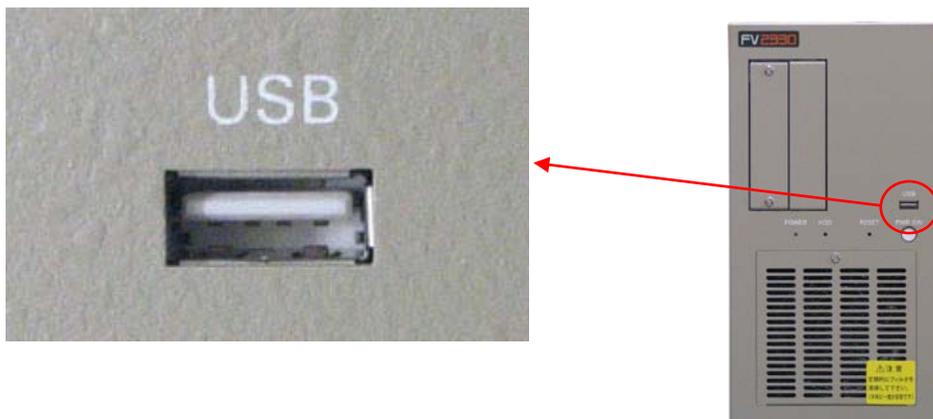
! PWR-SW の機能

PWR-SW は、一般的なコンピュータの電源スイッチに相当します。稼働中に本スイッチを押すとシャットダウンします。シャットダウン後は、本スイッチを押すと本体が起動します。本体背面の電源スイッチを ON にしても起動しない場合やシャットダウン後、本体背面の電源スイッチを ON にしたまま再び起動する場合に使用します。



! システムの起動中や HDD 表示が点灯中は絶対に RESET スイッチや電源スイッチを操作しないでください。ファイル内容を破壊する場合があります。

4.2.2 正面 USB および内蔵 USB コネクタ



正面 USB コネクタ



USB ライセンスキー内蔵用 USB コネクタ

Note

本製品には USB のドライバがインストールされております。しかし、お客様がご利用になる USB 機器の動作を保証するものではありません。
USB 機器をご使用になる際にはその点をご了承ください。

4.2.3 2.5 インチリムーバブルユニット



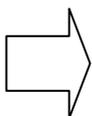
DATA SYSTEM



●SSD の取り外し



蓋を取り外します

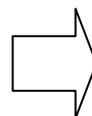


指でつまんで引き抜きます

●SSD の取り付け



縦置きの場合は、SSD のラベルが右に、横置きの場合は下になります。



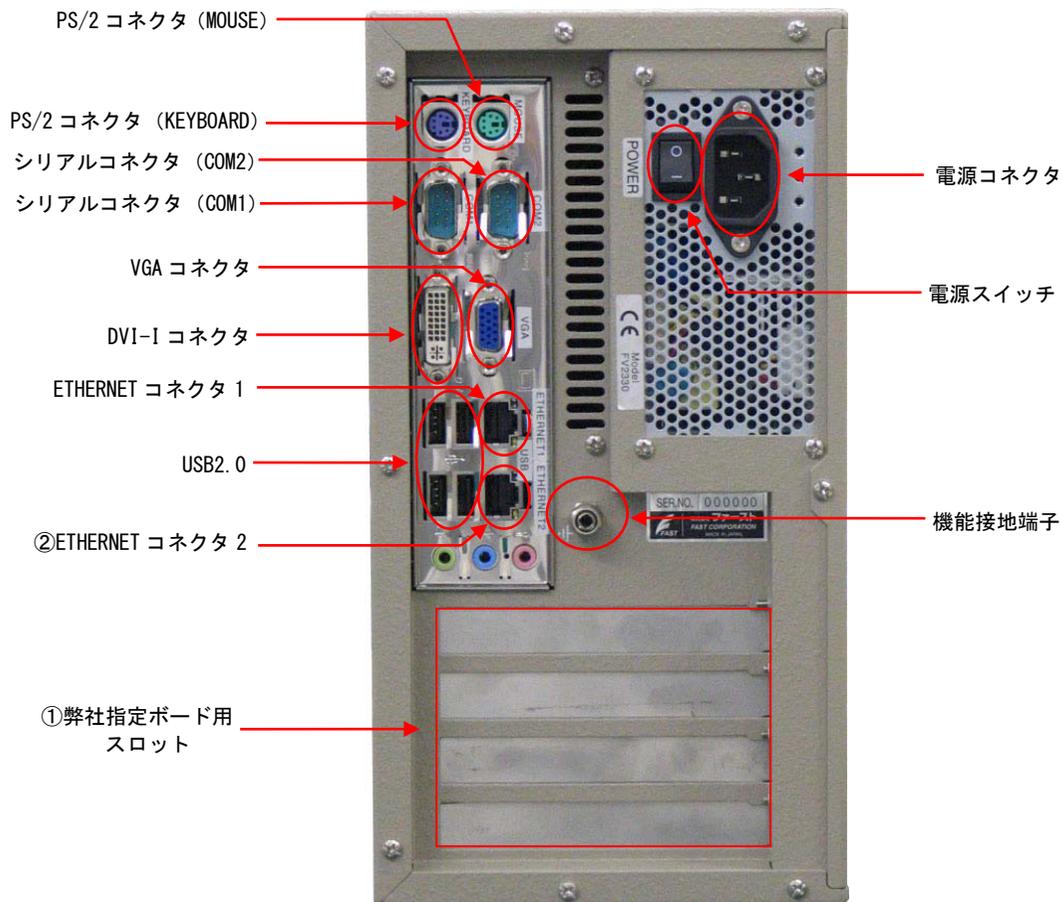
奥に突き当たるまで押し込み、蓋を取り付けます。

- SYSTEM
システム SSD が搭載されています。
- DATA
オプションの「増設 2.5 インチリムーバブルユニット」を搭載している場合に限り、データ SSD、データ HDD が搭載可能です。



2.5 インチリムーバブルユニットから SSD、HDD を取り出す前には、必ず装置の電源をお切りください。電源を切らずに取り出すとファイル等が破壊され正常に動作しなくなる恐れがあります。

4.3 背面各部



Note

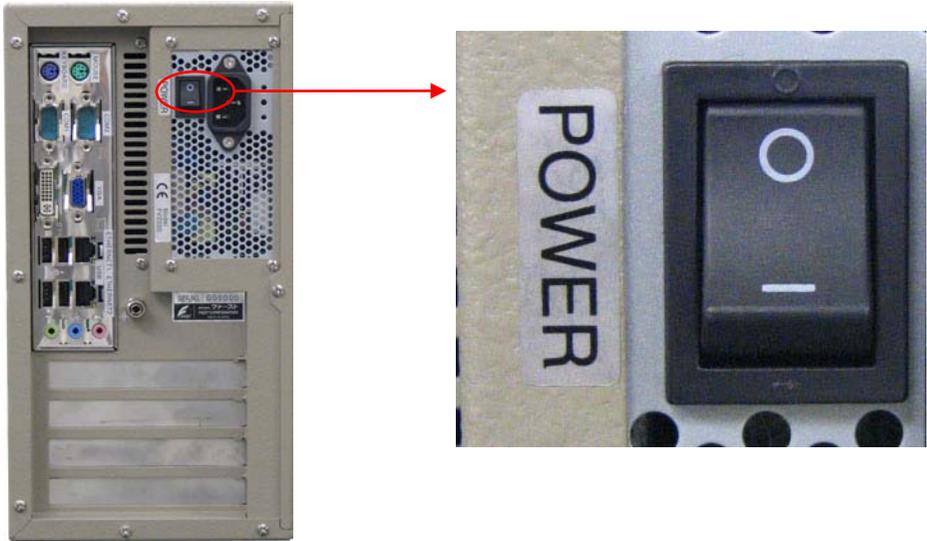
弊社指定ボード用スロットには、画像入力ボード、DIO ボード、コネクタが出てきます。

※ボードの搭載位置に関しては『5.5 ボード搭載ルール』をご覧ください。

※本製品には USB のドライバがインストールされております。しかし、お客様がご利用になる USB 機器の動作を保証するものではありません。

USB 機器をご使用になる際にはその点をご了承ください。

4.3.1 電源スイッチ

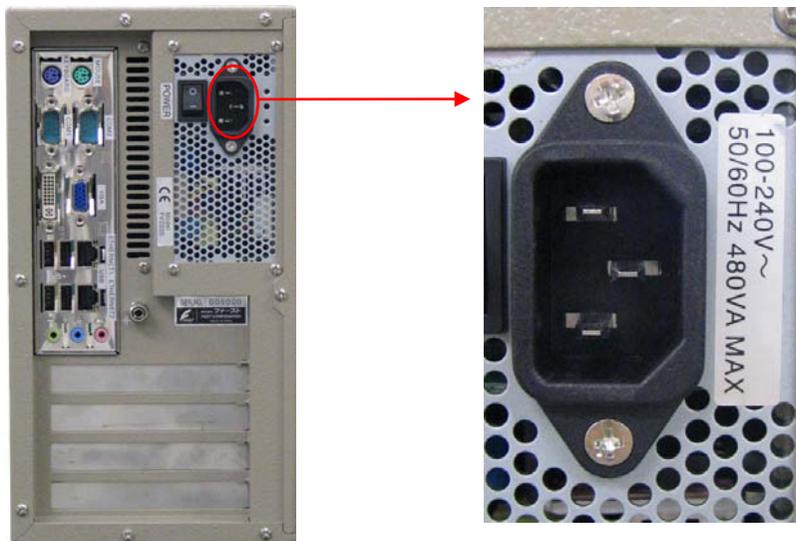


- 一側を押すと ON になります。○側を押すと OFF になります。
各種ケーブル等の接続完了後に電源スイッチを ON にして装置を使用してください。
- 電源スイッチを ON にすることにより、システムが起動します。



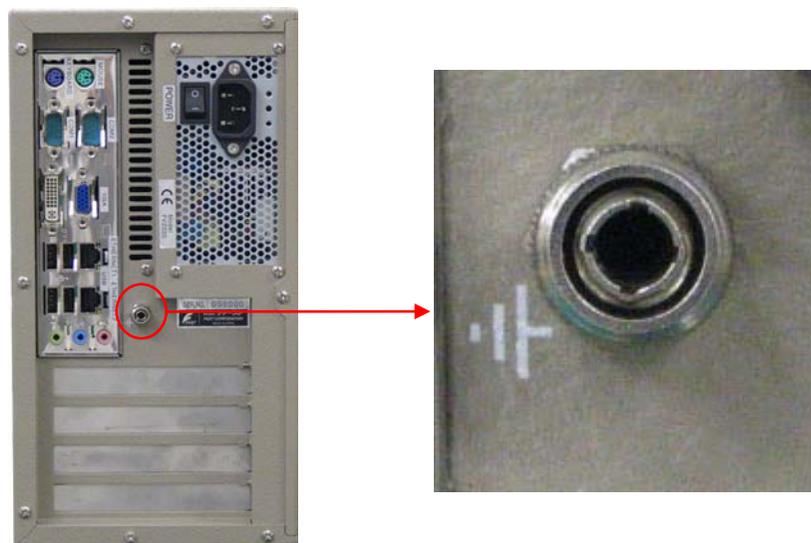
システムの起動中やファイル装置アクセス中(HDD 表示点灯中)は、絶対に電源を切らないでください。
ファイルの内容を破壊する場合があります。

4.3.2 電源コネクタ



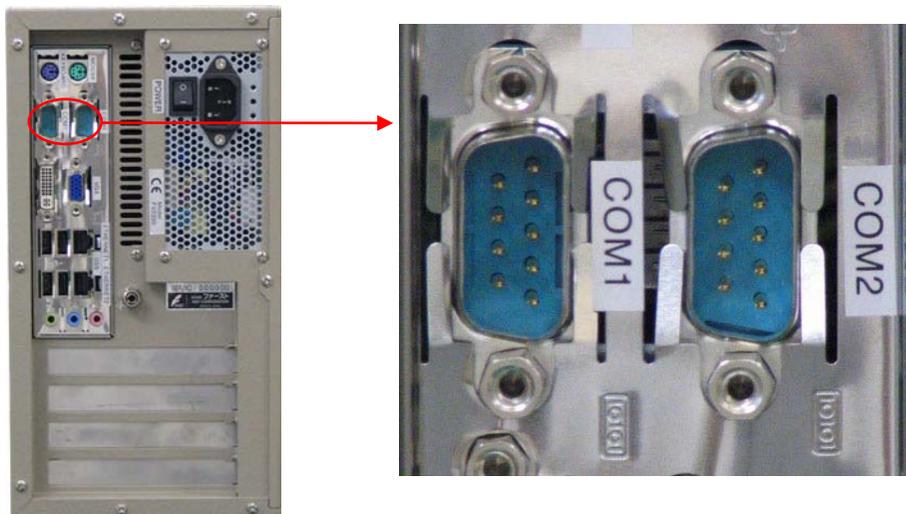
- 入力電圧・周波数・最大消費電力は、100-240V～ 50-60Hz 480VA MAX です。
- 入力電圧 125V までは添付の 3P 電源ケーブルを接続して電源を供給してください。125V を超える電圧でお使いになる場合は、別途電源ケーブルをご用意下さい。
- 電源スイッチの OFF は『2.3 電源の切り方について』を参照ください。
- 電源ケーブルの配線の詳細については『3.3 電源の配線』の章をご覧ください。
- 電源装置には PFC(力率改善回路)が搭載されています。UPS 等で矩形波を入力すると故障する恐れがありますのでおやめください。

4.3.3 機能接地端子



本装置と床面やラック等とのグラウンドレベルを合わせるときに使用します。
 本装置筐体の SG(シグナル・グラウンド)と FG(フレーム・グラウンド)、機能接地端子は接続されています。
 一般にビデオ機器(TV カメラ等)の SG とフレームは接続されています。

4.3.4 シリアルコネクタ (COM1/COM2)



調歩同期式シリアル通信仕様

- ボーレート…………… 1,200～115,200bps
- データ長…………… 6～8 ビット
- ストップビット…………… 1、2 ビット
- パリティ・ビット…………… 無し/奇数/偶数
- フロー制御…………… 無し/Xon-off/RS-CS
- 全二重通信 (割込処理)

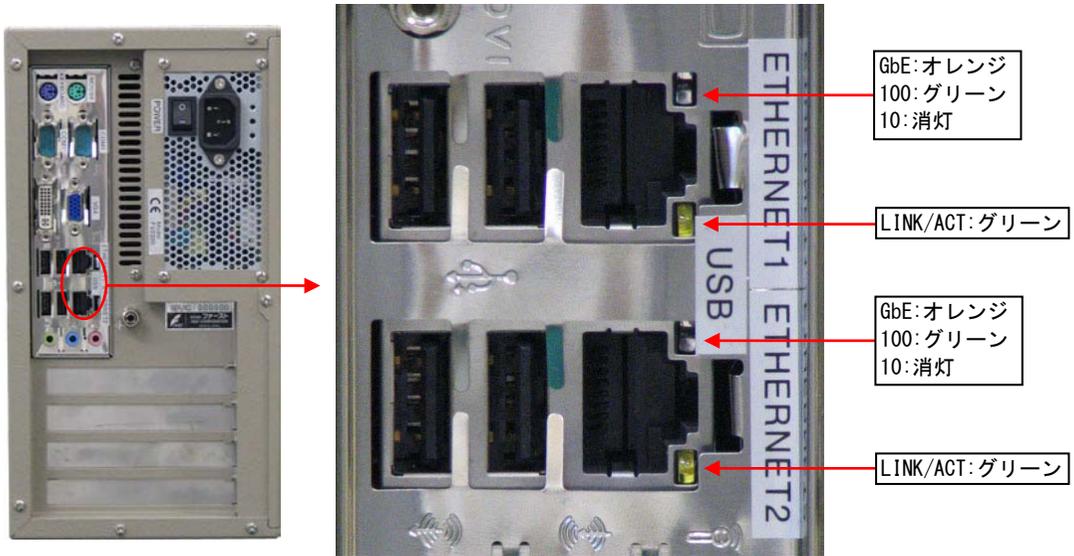
シリアルコネクタ (COM1/COM2) 勘合固定ネジ：インチネジ

ピン番号	信号名	方向	信号説明
1	(予約)		
2	RXD	←	データ受信の信号線
3	TXD	→	データ送信の信号線
4	DTR	→	FV2330-C が活動状態であることを示す。
5	GND		信号 GND
6	DSR	←	相手側が活動状態であることを確認する。
7	RTS	→	送信要求を相手に出す
8	CTS	←	相手が送信可であることを確認する。
9	(予約)		

[注1] 方向の→は出力/←は入力/⇄は双方向を示します。

[注2] 使用コネクタは、9 ピン DSUB オスコネクタ (RDED-9PE-LNA ヒロセ 相当品) です。

4.3.5 ETHERNET コネクタ



ETHERNET コネクタには状態を示す 2 つの LED があります。

Lan Link/Act LED (緑)

: 点灯時は、データリンクが存在する(ハブと適切に接続されている)ことを示します。点滅時は、データが送受信されていることを示します。

LAN Speed LED (オレンジ/グリーン)

: 1000M 時はオレンジ、100M 時はグリーン、10M 時は消灯します。

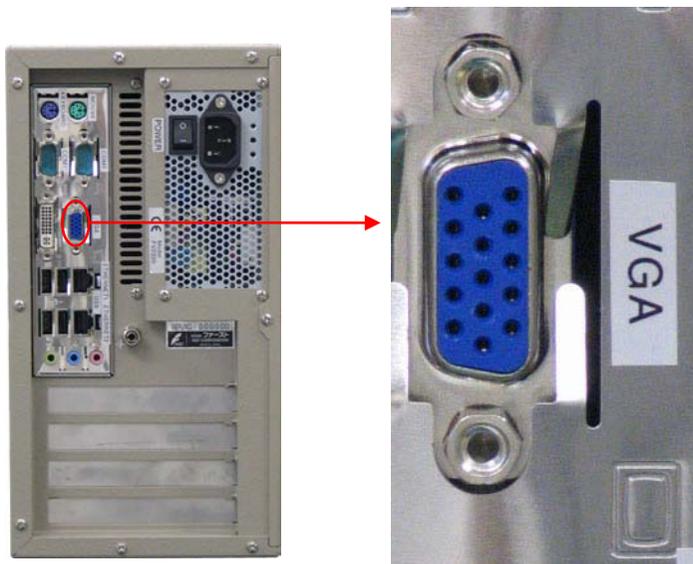
ETHERNET コネクタ

ピン番号	方向	信号説明
1	0	TD+(送信データ+)
2	0	TD-(送信データ-)
3	1	RD+(受信データ+)
4	N/A	予約
5	N/A	予約
6	1	RD-(受信データ-)
7	N/A	予約
8	N/A	予約

[注1] 方向の“1”は入力、“0”は出力、“I/O”は入出力、“N/A”は電源または、予約を示します。

[注2] 使用コネクタはRJ45 コネクタです。

4.3.6 VGA コネクタ



- 「VGA」コネクタには、VGA 規格の CRT モニタを接続します。

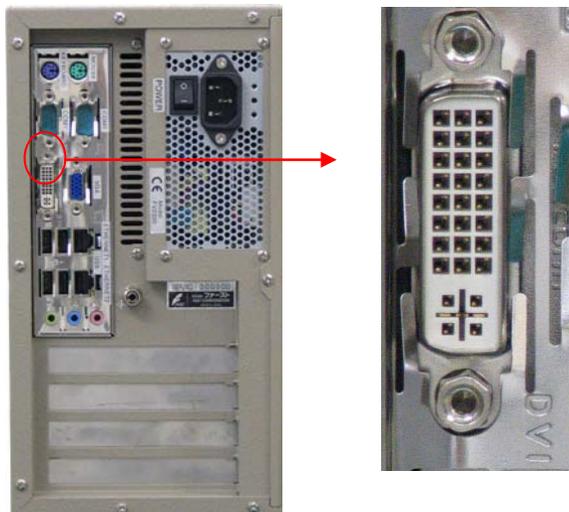
VGA コネクタ

ピン番号	方向	信号説明
1	0	Red Data
2	0	Green Data
3	0	Blue Data
4	N/A	予約
5	N/A	Ground
6	N/A	Ground
7	N/A	Ground
8	N/A	Ground
9	N/A	予約
10	N/A	Ground
11	N/A	予約
12	N/A	予約
13	0	HSYNC
14	0	VSYNC
15	N/A	予約

[注1] 方向の“1”は入力、“0”は出力、“1/0”は入出力、“N/A”は電源または、予約を示します。

[注2] 使用コネクタは高密度 15 ピン DSUB メスコネクタです。

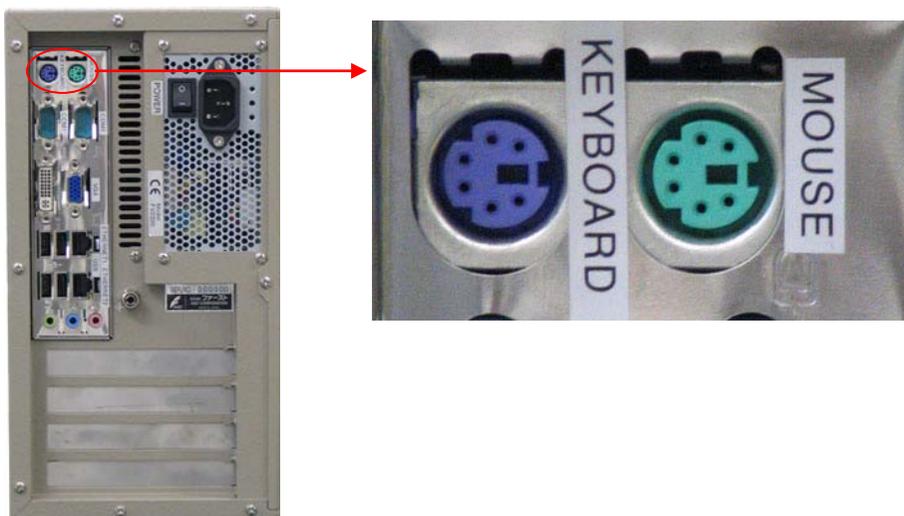
4.3.7 DVI-I コネクタ



DVI-I コネクタ

ピン番号	信号名	信号説明
1	TMDS Data 2-	Digital red -(Link 1)
2	TMDS Data 2+	Digital red +(Link 1)
3	TMDS Data 2/4 shield	
4	N. C	
5	N. C	
6	DDC clock	
7	DDC data	
8	Analog Vertical Sync	
9	TMDS Data 1-	Digital green -(Link 1)
10	TMDS Data 1+	Digital green +(Link 1)
11	TMDS Data 1/3 shield	
12	N. C	
13	N. C	
14	+5V	Power for monitor when in standby
15	Ground	Return for pin 14 and analog sync
16	Hot Plug Detect	
17	TMDS data 0-	Digital blue -(Link 1)and digital sync
18	TMDS data 0+	Digital blue +(Link 1)and digital sync
19	TMDS data 0/5 shield	
20	N. C	
21	N. C	
22	TMDS clock shield	
23	TMDS clock+	Digital clock +(Links 1 and 2)
24	TMDS clock-	Digital clock -(Links 1 and 2)
C1	Analog Red	
C2	Analog Green	
C3	Analog Blue	
C4	Analog Horizontal Sync	
C5	Analog Ground	Return for R , G and B signals

4.3.8 PS/2 コネクタ (MOUSE/KEYBOARD)



電源投入後にポインティングデバイス、キーボードを接続しても動作しません。電源投入前に接続してください。

MOUSE コネクタ

ピン番号	信号名	方向	信号説明
1	DATA	↔	MOUSE 通信データ
2	(予約)		
3	GND		電源/信号 GND
4	+5V		電源 5V
5	CLK	→	MOUSE 同期クロック
6	(予約)		

[注1] 方向の→は出力/←は入力/↔は双方向を示します。

[注2] 使用コネクタは 6 ピンミニ DIN コネクタです。

KEYBOARD コネクタ

ピン番号	信号名	方向	信号説明
1	DATA	↔	KEYBOARD 通信データ
2	(予約)		
3	GND		電源/信号 GND
4	+5V		電源 5V
5	CLK	→	KEYBOARD 同期クロック
6	(予約)		

[注1] 方向の→は出力/←は入力/↔は双方向を示します。

[注2] 使用コネクタは 6 ピンミニ DIN コネクタです。

5. ボードの搭載

各ボードはお客様にて装着や取り外しを行っていただく場合があります。その際には本章に記載してある注意事項を守ってください。また、各ボードの説明書にも搭載に関する注意事項が書かれています。

5.1 注意事項



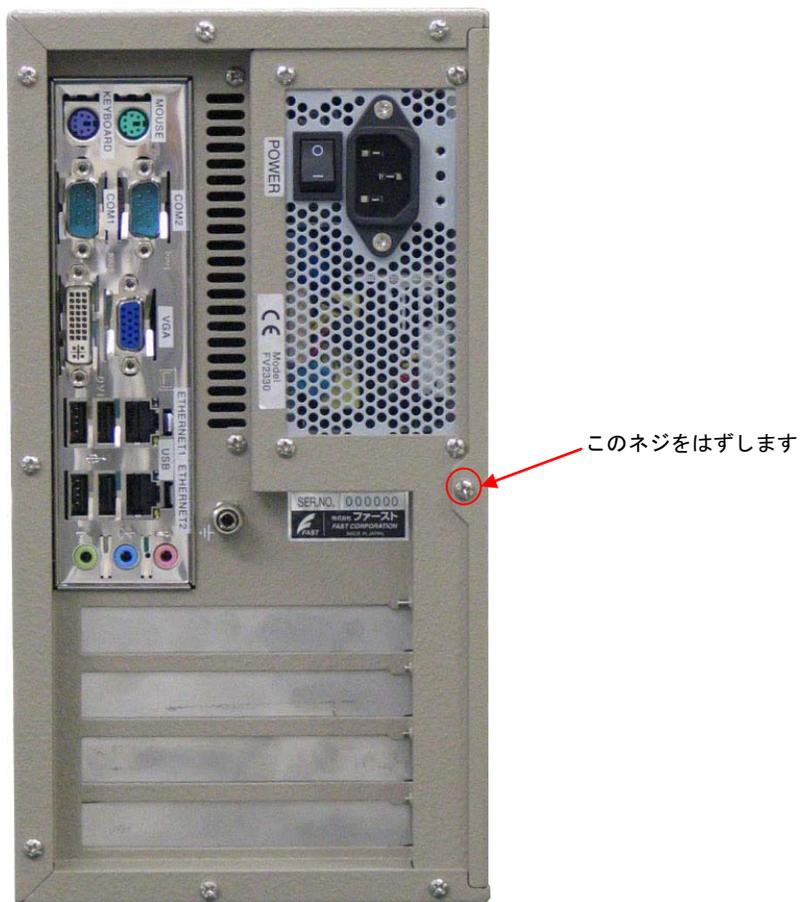
注意

- 装置に触れる前に、必ず身体の静電気を取り除いてください。
装置本体の内部基板は静電気に対して非常に敏感です。衣類や人体にたまった静電気が流れ、部品が破壊されたり、CMOS に保存されている BIOS 設定情報が破壊されるおそれがあります。
直前には、必ずスチールキャビネットなど金属製のもの、および装置本体の機能接地端子に触れて、静電気を取り除いてください。また、エッジコネクタ、部品端子、半田面には絶対に触れないでください。
- ボードを装着したり取り外したりする場合には、必ず『2.3 電源の切り方について』にしたがって本体の電源を切って下さい。
- 必ず電源ケーブルやその他外部ケーブルを全てはずしてから作業を行ってください。
電源を入れたままの作業や、電源ケーブルやその他外部ケーブルが装着されたまま作業を行うと、微弱電流の影響等で、CMOS の内容が壊れたり、ボード及び装置本体の回路を破壊する可能性があります。
- 弊社が指定するボード以外のボードを搭載すると下記の不具合が発生する場合があります。
その際は本装置の保証対象外となります。
 - 1) 装置が動作しない
 - 2) 時々異常現象が起こる
 - 3) 装置を壊す、等々
- ボードの形状によっては隣接するボード間で接触を起こしやすい可能性があります。
その場合ボード及び装置を破壊したり、感電や火災発生の原因となりますので電氣的に絶縁できるものをボードの間に挟んで搭載を行ってください。

5.2 本体カバーの開け方

背面のネジを1カ所外すだけで、カバーをスライドさせて開けることが可能です。

- (1) 本体の電源スイッチを OFF にします。
- (2) 本体に接続されているケーブル類を全て外します。
- (3) 下図に示すネジを外します。
- (4) カバーを背面方向にスライドさせて開きます。



5.3 ボード搭載方法

(1) 装置本体の電源を切り、ケーブル類を全て外して下さい。

『5.1 注意事項』の章に従って作業を行ってください。

(2) ボードの設定項目の確認をしてください。

トラブルを未然に防ぐため、ディップスイッチ等の設定を行った後設定の再確認を必ず行ってください。

(3) 本体のカバーを開けて、ボード装着可能状態にしてください。

『5.2 本体カバーの開け方』の章に従って本体カバーを開けてください。各種ケーブルが邪魔になる場合は、後で元に戻せるように記録を取りながらボードにストレスを与える事なく外してください。

(4) ボードを指定位置に装着してください。

搭載するボードの説明書に従ってボードを正しく装着し、スロットに収まったらブラケットをネジで固定してください。

(5) 装置を元の状態に戻します。

ケーブル類を元に戻してネジ固定します。本体カバーを戻し取付けてください。

5.4 組み込み可能なボード

Note

最新の対応状況は、弊社ホームページ上 (<https://www.fast-corp.co.jp/>)にて、もしくは担当営業にお問い合わせの上ご確認下さい。

【 FV2330-C32, FV2330-C32e 】

FV2330-C32 および FV2330-C32e に組み込み可能なボードは、以下のボードです。

商品名	ボード機能名称	バスコネクタ形状
RICE-001d	EIA 準拠カメラ用画像入力ボード	PCI
FVC05a	高速アナログ画像入力ボード	PCI
FVC07CLBa	カメラリンク対応画像入力ボード	PCIe × 4
FVC07CLMF	カメラリンク対応画像入力ボード	PCIe × 4
FV-GP440a	4CH アナログ画像入力ボード	PCIe × 1
FI001a	フォトカブラ絶縁 I/O ボード	PCI
FV-I1320	32 点フォトカブラ絶縁 I/O ボード	PCIe × 1

【 FV2330-C64, FV2330-C10e64 】

FV2330-C64 および FV2330-C10e64 に組み込み可能なボードは、以下のボードです。

商品名	ボード機能名称	バスコネクタ形状
FVC07CLBa	カメラリンク対応画像入力ボード	PCIe × 4
FVC07CLMF	カメラリンク対応画像入力ボード	PCIe × 4
FV-GP440a	4CH アナログ画像入力ボード	PCIe × 1
FI001a	フォトカブラ絶縁 I/O ボード	PCI
FV-I1320	32 点フォトカブラ絶縁 I/O ボード	PCIe × 1

5.5 ボード搭載ルール

弊社が用意しているボードには本体に搭載するための組み合わせのルールがあります。本章は『5.4 組み込み可能なボード』の章をご覧になりながらお読みください。

また、ボード製品の詳細は、各ボードの取扱説明書を参照してください。

最新の対応状況につきましては、ホームページ(<https://www.fast-corp.co.jp/eng/>)上にて、もしくは営業担当にお問い合わせの上、ご確認ください。

以下の図は FV2330-C 本体を縦置き(標準)した場合のものです。

【 FV2330-C32, FV2330-C32e 】

上

PCI ボード優先順位

- ・ RICE-001d
- ・ FVC05a
- ・ FI001a



PCIe ボード優先順位

- ・ FV-GP440a
- ・ FVC07CLBa
- ・ FVC07CLMF
- ・ FV-II320

※ PCIe ボードはスロット A から優先順位に従って搭載されます。

※ PCI ボードはスロット 1 から優先順位に従って搭載されます。

システムの仕様等により組み合わせには以下の制限があります。ご注意ください。

— ボード搭載制限 —

- ※ 同一画像入力ボードは 2 枚まで搭載できます。
- ※ PCI 用スロット 1 は、RICE-001d、FVC05a の搭載が優先されます。
- ※ FVC07 用のオプションブラケットケーブルを搭載する場合は 1 スロット占有します。
- ※ 他社製ボードの搭載に関しては他社製ボードの取扱説明書に従ってください。
- ※ 他社製ボードとの組み合わせについては動作検証を行っておりませんので、動作しない可能性があります。



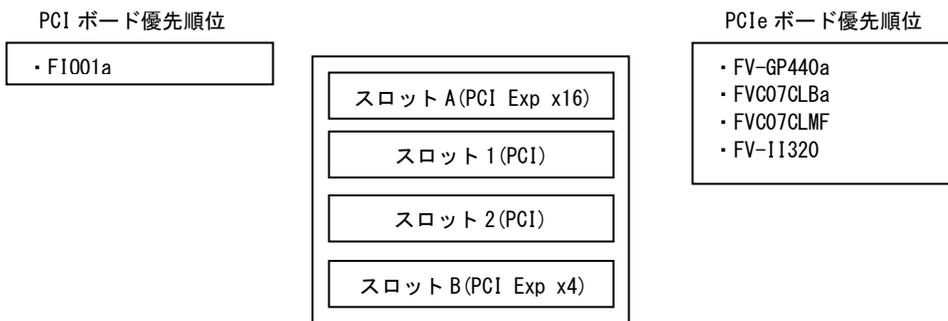
本装置が FVC05a、FV-GP440a を通してカメラへ供給できる+12V は 4A (48W) までです。

Note

上記組み合わせには、将来対応予定のボード製品も含まれています。最新の対応状況につきましては、弊社ホームページ(<https://www.fast-corp.co.jp/eng/>)上にて、もしくは営業担当にお問い合わせの上、ご確認ください。

【 FV2330-C64, FV2330-C10e64 】

上



- ※ PCIe ボードはスロット A から優先順位に従って搭載されます。
- ※ PCI ボードはスロット 1 から優先順位に従って搭載されます。

システムの仕様等により組み合わせには以下の制限があります。ご注意ください。

— ボード搭載制限 —

- ※ 同一画像入力ボードは 2 枚まで搭載できます。
- ※ FVC07 用のオプションブラケットケーブルを搭載する場合は 1 スロット占有します。
- ※ 他社製ボードの搭載に関しては他社製ボードの取扱説明書に従ってください。
- ※ 他社製ボードとの組み合わせについては動作検証を行っておりませんので、動作しない可能性があります。



本装置が FV-GP440a を通してカメラへ供給できる+12V は 4A (48W) までです。

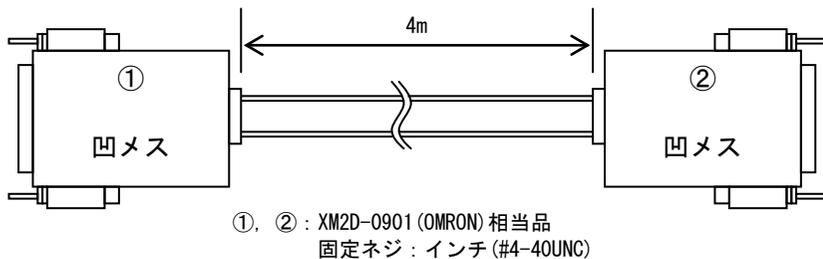
Note

上記組み合わせには、将来対応予定のボード製品も含まれています。最新の対応状況につきましては、弊社ホームページ (<https://www.fast-corp.co.jp/eng/>) 上にて、もしくは営業担当にお問い合わせの上、ご確認下さい。

6. ケーブル配線図

6.1 シリアルケーブル(オプション)

シリアルケーブル(9pin メス-9pin メス)



シリアルケーブル

①FV2330-C		②相手機器		
信号名	ピン番号		ピン番号	信号名
	1		1	
RxD	2	↘	2	RxD
TxD	3	↗	3	TxD
DTR	4	↘	4	DTR
SG	5	↗	5	SG
DSR	6	↘	6	DSR
RTS	7	↗	7	RTS
CTS	8	↘	8	CTS
	9		9	

7. 有寿命部品

FV2330-Cに取り付けられている下記のユニットは、使用により劣化、摩耗しますので、一定周期で交換する必要があります。これらのユニットは有償にて交換致します。

寿命については、周囲温度 35°Cで筐体の前後を周囲から 100mm 以上離して設置した状態であり、フィルタが目詰まりしていない状態の場合を想定しています。

SSD	1日のデータ書き込み量が 22GB /日で約5年、12GB /日で約8年、9GB /日で約10年です。
ハードディスクドライブ (HDD)	1日24時間、1ヶ月30日の通電使用を想定した時の寿命は、 約2年です。
筐体クーリングファン	1日24時間、1ヶ月30日の通電使用を想定した時の寿命は、 約3年です。
CPUクーリングファン	1日24時間、1ヶ月30日の通電使用を想定した時の寿命は、 約3年です。
マザーボード	1日24時間、1ヶ月30日の通電使用を想定した時の寿命は、 約5年です。
リチウム電池	全く通電されない場合は、約5年。1日24時間、1ヶ月30日 の通電使用を想定した時の寿命は、約5年です。
電源ユニット	1日24時間、1ヶ月30日の通電使用を想定した時の寿命は、 約3年です。

注意：アルミ電解コンデンサについて

装置に使用しているアルミ電解コンデンサは、有寿命部品です。設計寿命は、1日24時間使用で約5年です。寿命になると電解液の枯渇や漏れが生じます。特に、電源ユニットでの電解液の漏れは、発煙・感電の原因になることがあります。これらの危険を避けるために、設計寿命を越えて使用する場合は、ユニット単位で交換してください。

8. 保証について

保証の制限

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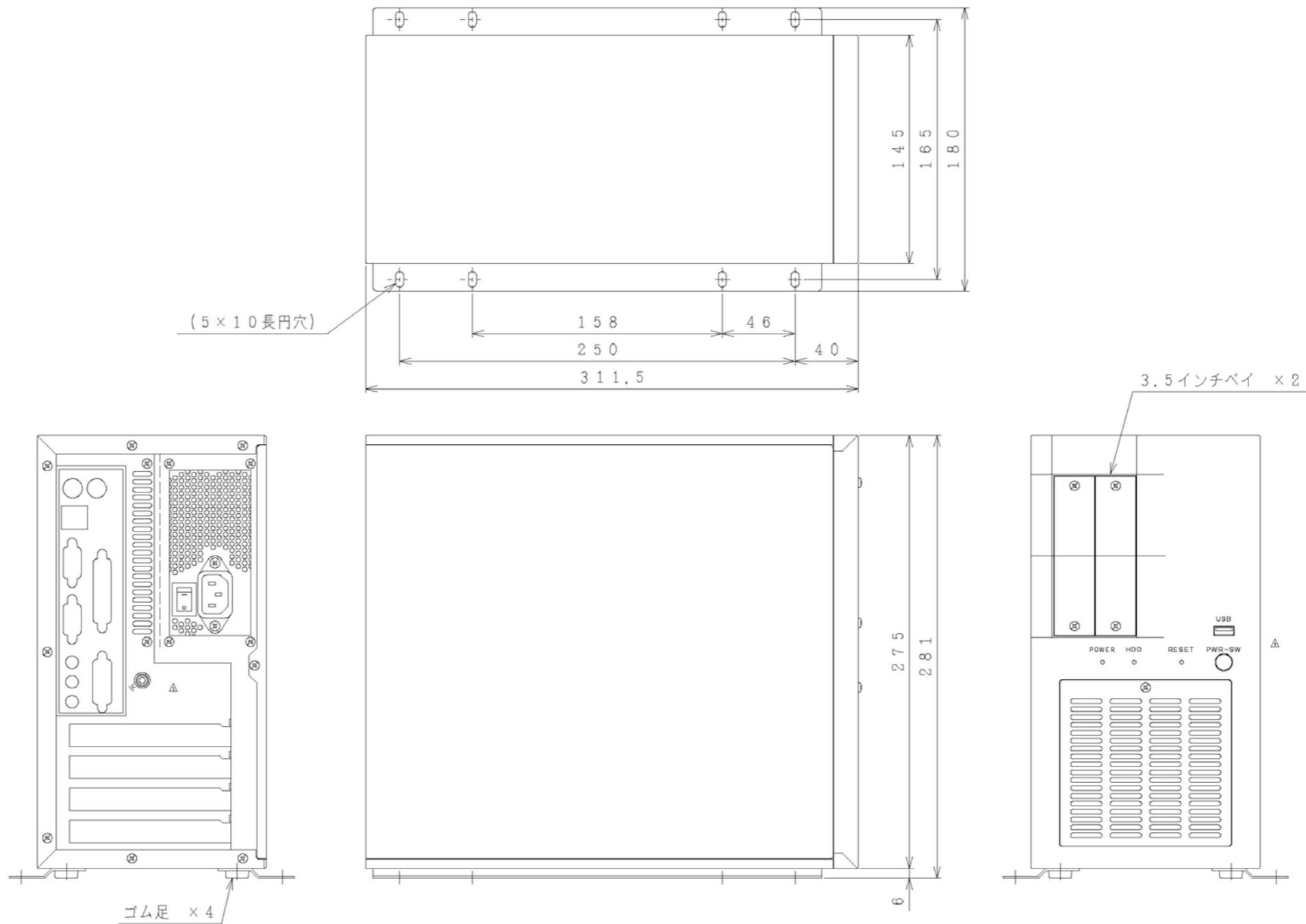
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ユーザ・サポート FAX 046-272-8692 TEL 046-272-8691
E-mail : support@fast-corp.co.jp

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				設計					(図番)	
				承認						
△	改版折り込み	銭袋	2010.11.08	株式会社ファースト						
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WINDOWS EMBEDDED STANDARD 7

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 - provide system utilities, resource management, or anti-virus or similar protection.
 - Software that provides consumer or business tasks or processes may not be run on the device. This includes email, word processing, spreadsheet, database, scheduling and personal finance software. The device may use terminal services protocols to access such software running on a server.

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You may allow up to ten other devices to access the software to use

- File Services,
- Print Services,
- Internet Information Services, and
- Internet Connection Sharing and Telephony Services.

The ten connection limit applies to devices that access the software indirectly through “multiplexing” or other software or hardware that pools connections. You may use unlimited inbound connections at any time via TCP/IP.

- d. **Remote Access Technologies.** You may access and use the software remotely from another device using remote access technologies as follows.

Remote Desktop. The single primary user of the device may access a session from any other device using Remote Desktop or similar technologies. A “session” means the experience of interacting with the software, directly or indirectly, through any combination of input, output and display peripherals. Other users may access a session from any device using these technologies, if the remote device is separately licensed to run the software.

Other Access Technologies. You may use Remote Assistance or similar technologies to share an active session.

Other Remote Uses. You may allow any number of devices to access the software for purposes other than those described in the Device Connections and Remote Access Technologies sections above, such as to synchronize data between devices.

- e. **Font Components.** While the software is running, you may use its fonts to display and print content. You may only

- embed fonts in content as permitted by the embedding restrictions in the fonts; and
- temporarily download them to a printer or other output device to print content.

- f. **Icons, images and sounds.** While the software is running, you may use but not share its icons, images, sounds, and media.

3. **VHD BOOT.** Additional copies of the software created using the software’s Virtual Hard Disk functionality (“VHD Image”) may be pre-installed on the physical hard disk of the device. These VHD Images may only be used for maintaining or updating the software installed on the physical hard disk or drive. If the VHD Image is the only software on your device, it may be used as the primary operating system but all other copies of the VHD Image may only be used for maintenance and updating.

4. **POTENTIALLY UNWANTED SOFTWARE.** The software may include Windows Defender. If Windows Defender is turned on, it will search this device for “spyware,” “adware” and other potentially unwanted software. If it finds potentially unwanted software, the software will ask you if you want to ignore, disable (quarantine) or remove it. Any potentially unwanted software rated “high” or “severe,” will be automatically removed after scanning unless you change the default setting. Removing or disabling potentially unwanted software may result in

- Other software on your device ceasing to work, or
- Your breaching a license to use other software on this device

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6. **INTERNET-BASED SERVICES.** Microsoft provides Internet-based services with the software. Microsoft may change or cancel them at any time.

a. **Consent for Internet-Based Services.** The device may contain one or more of the software features described below. These features connect to Microsoft or service provider computer systems over the Internet. In some cases, you will not receive a separate notice when they connect. For more information about these features, visit go.microsoft.com/fwlink/?linkid=104604.

By using these features, you consent to the transmission of this information. Microsoft does not use the information to identify or contact you.

Computer Information. The following features use Internet protocols, which send to the appropriate systems computer information, such as your Internet protocol address, the type of operating system and browser, the name and version of the software you are using, and the language code of the device where you installed the software. Microsoft uses this information to make the Internet-based services available to you. *FAST Corporation* has elected to turn on the following features on the device.

- Plug and Play and Plug and Play Extensions. You may connect new hardware to

your device. Your device may not have the drivers needed to communicate with that hardware. If so, the update feature of the software can obtain the correct driver from Microsoft and install it on your device.

- Web Content Features. Features in the software can retrieve related content from Microsoft and provide it to you. Examples of these features are clip art, templates, online training, online assistance and Appshelp. You may choose to switch them off or not use them.
- Digital Certificates. The software uses x.509 version 3 digital certificates. These digital certificates confirm the identity of user sending information to each other and allow you to encrypt the information. The software retrieves certificates and updates certificate revocation lists over the Internet.
- Auto Root Update. The Auto Root Update feature updates the list of trusted certificate authorities. You can switch off this feature.
- Windows Media Digital Rights Management. Content owners use Windows Media digital rights management technology (WMDRM) to protect their intellectual property, including copyrights. This software and third party software use WMDRM to play and copy WMDRM-protected content. If the software fails to protect the content, content owners may ask Microsoft to revoke the software's ability to use WMDRM to play or copy protected content. Revocation does not affect other content. When you download licenses for protected content, you agree that Microsoft may include a revocation list with the licenses. Content owners may require you to upgrade WMDRM to access their content. Microsoft software that includes WMDRM will ask for your consent prior to the upgrade. If you decline an upgrade, you will not be able to access content that requires the upgrade. You may switch off WMDRM features that access the Internet. When these features are off, you can still play content for which you have a valid license.
- Windows Media Player. When you use Windows Media Player, it checks with Microsoft for
 - compatible online music services in your region;
 - new versions of the player; and
 - codecs if your device does not have the correct ones for playing content.

You can switch off this feature. For more information, go to: go.microsoft.com/fwlink/?LinkId=51331.

- Malicious Software Removal/Clean On Upgrade. Before installation of the software, the software will check and remove certain malicious software listed at www.support.microsoft.com/?kbid=890830 ("Malware") from your device. When the software checks your device for Malware, a report will be sent to Microsoft about any Malware detected or errors that occurred while the software was checking for Malware. No information that can be used to identify you is included in the report. You may disable the software's Malware reporting functionality by following the instructions found at www.support.microsoft.com/?kbid=890830.

- Network Awareness. This feature determines whether a system is connected to a network by either passive monitoring of network traffic or active DNS or HTTP queries. The query only transfers standard TCP/IP or DNS information for routing purposes. You can switch off the active query feature through a registry setting.
- Windows Time Service. This service synchronizes with www.time.windows.com once a week to provide your device with the correct time. The connection uses standard NTP protocol.
- Search Suggestions Service. In Internet Explorer, when you type a search query in the Instant Search box or type a question mark (?) before your search term in the Address bar, you will see search suggestions as you type (if supported by your search provider). Everything you type in the Instant Search box or in the Address bar when preceded by a question mark (?) is sent to your search provider as you type. Also, when you press Enter or click the Search button, the text in the Instant Search box or Address bar is sent to the search provider. If you use a Microsoft search provider, use of the information sent is subject to the Microsoft Online Privacy Statement. This statement is available at go.microsoft.com/fwlink/?linkid=31493. If you use a third-party search provider, use of the information sent will be subject to the third party's privacy practices. You can turn search suggestions off at any time. To do so, use Manage Add-ons under the Tools button in Internet Explorer. For more information about the search suggestions service, see go.microsoft.com/fwlink/?linkid=128106.
- Consent to Update Infrared Emitter/Receiver. The software may contain technology to ensure the proper functioning of the infrared emitter/receiver device shipped with certain Media Center-based products. You agree that the software may update the firmware of this device.
- Media Center Online Promotions. If you use Media Center features of the software to access Internet-based content or other Internet-based services, such services may obtain the following information from the software to enable you to receive, accept and use certain promotional offers:
 - certain device information, such as your Internet protocol address, the type of operating system and browser you are using, and the name and version of the software you are using,
 - the requested content, and
 - the language code of the device where you installed the software.
 - Your use of the Media Center features to connect to those services serves as your consent to the collection and use of such information.
- Media Playback Updates. The software on the device may include media playback features which receives updates directly from the MSCORP Media Playback Update servers. If activated by your manufacturer, these updates will be downloaded and installed without further notice to you. The manufacturer is responsible for ensuring these updates work on your device.

- **Windows Update Agent.** The software on the device includes Windows Update Agent (“WUA”). This feature enables your device to access Windows Updates either directly from MSCORP Windows Update server or from a server installed with the required server component and from the Microsoft Windows Update server. To enable the proper functioning of the Windows Update service in the software (if you use it) updates or downloads to the Windows Update service will be required from time to time and downloaded and installed without further notice to you. Without limiting any other disclaimer in these license terms or any license terms accompanying a Windows Update, you acknowledge and agree that no warranty is provided by Microsoft Corporation or their affiliates with respect to any Windows Update that you install or attempt to install on your device.
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- c. **Misuse of Internet-based Services.** You may not use these services in any way that could harm them or impair anyone else’s use of them. You may not use the services to try to gain unauthorized access to any service, data, account or network by any means.

7. **PRODUCT SUPPORT.** Contact *FAST Corporation*. for support options. Refer to the support number provided with the device.

8. **MICROSOFT .NET BENCHMARK TESTING.** The software includes one or more components of the .NET Framework (“.NET Components”). You may conduct internal benchmark testing of those components. You may disclose the results of any benchmark test of those components, provided that you comply with the conditions set forth at go.microsoft.com/fwlink/?LinkID=66406.

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THIS PRODUCT IS LICENSED UNDER ONE OR MORE VIDEO PATENT PORTFOLIO LICENSES SUCH AS, AND WITHOUT LIMITATION, THE AVC, THE VC-1, THE MPEG-4 PART 2 VISUAL, AND THE MPEG-2 VIDEO PATENT PORTFOLIO LICENSES FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE ABOVE STANDARDS (“VIDEO STANDARDS”) AND/OR (ii) DECODE VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE VIDEO UNDER SUCH PATENT PORTFOLIO LICENSES. NONE OF THE LICENSES EXTEND TO ANY OTHER PRODUCT REGARDLESS OF WHETHER SUCH PRODUCT IS INCLUDED WITH THIS PRODUCT IN A SINGLE ARTICLE. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE WWW.MPEGLA.COM.

15. **NOT FAULT TOLERANT.** The software is not fault tolerant. *FAST Corporation* installed the software on the device and is responsible for how it operates on the device.
16. **RESTRICTED USE.** The Microsoft software was designed for systems that do not require fail-safe performance. You may not use the Microsoft software in any device or system in which a malfunction of the software would result in foreseeable risk of injury or death to any person. This includes operation of nuclear facilities, aircraft navigation or communication systems and air traffic control.
17. **THIRD PARTY PROGRAMS.** The software contains third party programs. The license terms with those programs apply to your use of them.
18. **NO WARRANTIES FOR THE SOFTWARE.** The software is provided “as is”. You bear all risks of using it. Microsoft gives no express warranties, guarantees or conditions. Any warranties you receive regarding the device or the software do not originate from, and are not binding on, Microsoft or its affiliates. When allowed by your local laws, *FAST Corporation* and Microsoft exclude implied warranties of merchantability, fitness for a particular purpose and non-infringement.
19. **LIABILITY LIMITATIONS.** You can recover from Microsoft and its affiliates only direct damages up to two hundred fifty U.S. Dollars (U.S. \$250.00), or equivalent in local currency. You cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.

This limitation applies to:

- anything related to the software, services, content (including code) on third party internet sites, or third party programs, and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft should have been aware of the possibility of the damages. The above limitation may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

20. **EXPORT RESTRICTIONS.** The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.

21. ENTIRE AGREEMENT. This agreement, additional terms (including any printed-paper license terms that accompany the software and may modify or replace some or all of these terms), and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.

22. APPLICABLE LAW.

- a. United States.** If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.
- b. Outside the United States.** If you acquired the software in any other country, the laws of that country apply.

MICROSOFT SOFTWARE LICENSE TERMS

WINDOWS 10 IOT ENTERPRISE & MOBILE (ALL EDITIONS)

IF YOU LIVE IN (OR IF YOUR PRINCIPAL PLACE OF BUSINESS IS IN) THE UNITED STATES, PLEASE READ THE BINDING ARBITRATION CLAUSE AND CLASS ACTION WAIVER IN SECTION 9. IT AFFECTS HOW DISPUTES ARE RESOLVED.

Thank you for choosing Microsoft!

Depending on how you obtained the Windows software, this is a license agreement between (i) you and the device manufacturer or software installer that distributes the software with your device; or (ii) you and Microsoft Corporation (or, based on where you live or if a business where your principal place of business is located, one of its affiliates) if you acquired the software from a retailer. Microsoft is the device manufacturer for devices produced by Microsoft or one of its affiliates, and Microsoft is the retailer if you acquired the software directly from Microsoft.

This agreement describes your rights and the conditions upon which you may use the Windows software. You should review the entire agreement, including any supplemental license terms that accompany the software and any linked terms, because all of the terms are important and together create this agreement that applies to you. You can review linked terms by pasting the (aka.ms/) link into a browser window.

By accepting this agreement or using the software, you agree to all of these terms, and consent to the transmission of certain information during activation and during your use of the software as per the privacy statement described in Section 3. If you do not accept and comply with these terms, you may not use the software or its features. You may contact the device manufacturer or installer, or your retailer if you purchased the software directly, to determine its return policy and return the software or device for a refund or credit under that policy. You must comply with that policy, which might require you to return the software with the entire device on which the software is installed for a refund or credit, if any.

1. Overview.

- a. Applicability.** This agreement applies to the Windows software that is preinstalled on your device, or acquired from a retailer and installed by you, the media on which you received the software (if any), any fonts, icons, images or sound files included with the software, and also any Microsoft updates, upgrades, supplements or services for the software, unless other terms come with them. It also applies to Windows apps developed by Microsoft that provide functionality such as mail, calendar, contacts, music and news that are included with and are a part of Windows. If this agreement contains terms regarding a feature or service not available on your device, then those terms do not apply.
- b. Additional terms.** Depending on your device's capabilities, how it is configured, and how you use it, additional Microsoft and third party terms may apply to your use of certain features, services and apps.

- (i) Some Windows apps provide an access point to, or rely on, online services, and the use of those services is sometimes governed by separate terms and privacy policies, such as the Microsoft Services Agreement at (aka.ms/msa). You can view these terms and policies by looking at the service terms of use or the app's settings, as applicable; please read them. The services may not be available in all regions.
- (ii) The manufacturer or installer may also preinstall apps, which will be subject to separate license terms.
- (iii) The software may include third party software such as Adobe Flash Player that is licensed under its own terms. You agree that your use of Adobe Flash Player is governed by the license terms for Adobe Systems Incorporated at (aka.ms/adobeflash). Adobe and Flash are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- (iv) The software may include third party programs that are licensed to you under this agreement, or under their own terms. License terms, notices and acknowledgements, if any, for the third party program can be view at (aka.ms/thirdpartynotices).

2. Installation and Use Rights.

- a. **License.** The software license is permanently assigned to the device with which you acquired the software. You may only use the software on that device.
- b. **Device.** In this agreement, "device" means a physical hardware system) with an internal storage device capable of running the software. A hardware partition or blade is considered to be a device.
- c. **Restrictions.** The manufacturer or installer and Microsoft reserve all rights (such as rights under intellectual property laws) not expressly granted in this agreement. For example, this license does not give you any right to, and you may not:
 - (i) use or virtualize features of the software separately;
 - (ii) publish, copy (other than the permitted backup copy), rent, lease, or lend the software;
 - (iii) transfer the software (except as permitted by this agreement);
 - (iv) work around any technical restrictions or limitations in the software;
 - (v) use the software as server software, for commercial hosting, make the software available for simultaneous use by multiple users over a network, install the software on a server and allow users to access it remotely, or install the software on a device for use only by remote users;
 - (vi) reverse engineer, decompile, or disassemble the software, or attempt to do so, except and only to the extent that the foregoing restriction is (a) permitted by applicable law; (b) permitted by licensing terms governing the use of open source components that may be included with the software; or (c) required to debug changes to any libraries licensed under the GNU Lesser

General Public License which are included with and linked to by the software;
and

- (vii) when using Internet-based features you may not use those features in any way that could interfere with anyone else's use of them, or to try to gain access to or use any service, data, account, or network, in an unauthorized manner.

d. Multi use scenarios.

- (i) **Multiple versions.** If when acquiring the software, you were provided with multiple versions (such as 32-bit and 64-bit versions), you may install and activate only one of those versions at a time.
- (ii) **Multiple or pooled connections.** Hardware or software you use to multiplex or pool connections, or reduce the number of devices or users that access or use the software, does not reduce the number of licenses you need. You may only use such hardware or software if you have a license for each instance of the software you are using.
- (iii) **Device connections.** You may allow up to 20 other devices to access the software installed on the licensed device for the purpose of using the following software features: file services, print services, Internet information services, and Internet connection sharing and telephony services on the licensed device. The 20 connection limit applies to devices that access the software indirectly through "multiplexing" or other software or hardware that pools connections. You may allow any number of devices to access the software on the licensed device to synchronize data between devices. This section does not mean, however, that you have the right to install the software, or use the primary function of the software (other than the features listed in this section), on any of these other devices.
- (iv) **Remote access.** Users may access the licensed device from another device using remote access technologies, but only on devices separately licensed to run the same or higher edition of this software.
- (v) **Remote assistance.** You may use remote assistance technologies to share an active session without obtaining any additional licenses for the software. Remote assistance allows one user to connect directly to another user's computer, usually to correct problems.
- (vi) **POS application.** If the software is installed on a retail point of service device, you may use the software with a point of service application ("POS Application"). A POS Application is a software application which provides only the following functions: (i) process sales and service transactions, scan and track inventory, record and/or transmit customer information, and perform related management functions, and/or (ii) provide information directly and indirectly to customers about available products and services. You may use other programs with the software as long as the other programs: (i) directly support the manufacturer's specific use for the device, or (ii) provide system utilities, resource management, or anti-virus or similar protection. For

clarification purposes, an automated teller machine (“ATM”) is not a retail point of service device.

(vii) **Cloud Computing Devices.** If your device uses Internet browsing functionality to connect to and access cloud hosted applications: (i) no desktop functions may run locally on the device, and (ii) any files that result from the use of the desktop functions may not be permanently stored on the system. “Desktop functions,” as used in this agreement, means a consumer or business task or process performed by a computer or computing device. This includes but is not limited to email, word processing, spreadsheets, database, scheduling, network or internet browsing and personal finance.

(viii) **Desktop Functions.** If your system performs desktop functions, then you must ensure that they: (i) are only used to support the application, and (ii) operate only when used with the application.

e. **Specific Use.** The manufacturer designed the licensed device for a specific use. You may only use the software for that use.

f. **Backup copy.** You may make a single copy of the software for backup purposes, and may also use that backup copy to transfer the software if it was acquired as stand-alone software, as described below.

3. **Privacy; Consent to Use of Data.** Your privacy is important to us. Some of the software features send or receive information when using those features. Many of these features can be switched off in the user interface, or you can choose not to use them. By accepting this agreement and using the software you agree that Microsoft may collect, use, and disclose the information as described in the Microsoft Privacy Statement available at (aka.ms/privacy), and as may be described in the user interface associated with the software features.

4. Transfer

a. **Software preinstalled on device.** If you acquired the software preinstalled on a device, you may transfer the license to use the software directly to another user, only with the licensed device. The transfer must include the software and, if provided with the device, an authentic Windows label including the product key. Before any permitted transfer, the other party must agree that this agreement applies to the transfer and use of the software.

b. **Stand-alone software.** If you acquired the software as stand-alone software, you may transfer the software to another device that belongs to you. You may also transfer the software to a device owned by someone else if (i) you are the first licensed user of the software and (ii) the new user agrees to the terms of this agreement. You may use the backup copy we allow you to make or the media that the software came on to transfer the software. Every time you transfer the software to a new device, you must remove the software from the prior device. You may not transfer the software to share licenses between devices.

5. **Authorized Software and Activation.** You are authorized to use this software only if you are properly licensed and the software has been properly activated with a genuine product key or by other authorized method. When you connect to the Internet while

using the software, the software will automatically contact Microsoft or its affiliate to confirm the software is genuine and the license is associated with the licensed device. You can also activate the software manually by Internet or telephone. In either case, transmission of certain information will occur, and Internet, telephone and SMS service charges may apply. During activation (or reactivation that may be triggered by changes to your device's components), the software may determine that the installed instance of the software is counterfeit, improperly licensed or includes unauthorized changes. If activation fails the software will attempt to repair itself by replacing any tampered Microsoft software with genuine Microsoft software. You may also receive reminders to obtain a proper license for the software. Successful activation does not confirm that the software is genuine or properly licensed. You may not bypass or circumvent activation. To help determine if your software is genuine and whether you are properly licensed, see (aka.ms/genuine). Certain updates, support, and other services might only be offered to users of genuine Microsoft software.

6. **Updates.** You may obtain updates only from Microsoft or authorized sources, and Microsoft may need to update your system to provide you with those updates. The software periodically checks for system and app updates, and may download and install them for you. To the extent automatic updates are enabled on your device, by accepting this agreement, you agree to receive these types of automatic updates without any additional notice.
7. **Geographic and Export Restrictions.** If your software is restricted for use in a particular geographic region, then you may activate the software only in that region. You must also comply with all domestic and international export laws and regulations that apply to the software, which include restrictions on destinations, end users, and end use. For further information on geographic and export restrictions, visit (aka.ms/georestrict) and (aka.ms/exporting).
8. **Support and Refund Procedures.** For the software generally, contact the device manufacturer or installer for support options. Refer to the support number provided with the software. For updates and supplements obtained directly from Microsoft, Microsoft may provide limited support services for properly licensed software as described at (aka.ms/mssupport). If you are seeking a refund, contact the manufacturer or installer to determine its refund policies. You must comply with those policies, which might require you to return the software with the entire device on which the software is installed for a refund.
9. **Binding Arbitration and Class Action Waiver if You Live in (or if a Business Your Principal Place of Business is in) the United States.**

We hope we never have a dispute, but if we do, you and we agree to try for 60 days to resolve it informally. If we can't, you and we agree to **binding individual arbitration before the American Arbitration Association ("AAA") under the Federal Arbitration Act ("FAA"), and not to sue in court in front of a judge or jury.** Instead, a neutral arbitrator will decide and the arbitrator's decision will be final except for a limited right of appeal under the FAA. **Class action lawsuits, class-wide arbitrations, private attorney-general actions, and any other proceeding where someone acts in a representative capacity aren't allowed. Nor is combining individual proceedings without the consent of all**

parties. “We,” “our,” and “us” includes Microsoft, the device manufacturer, and software installer.

- a. Disputes covered—everything except IP.** The term “dispute” is as broad as it can be. It includes any claim or controversy between you and the manufacturer or installer, or you and Microsoft, concerning the software, its price, or this agreement, under any legal theory including contract, warranty, tort, statute, or regulation, **except disputes relating to the enforcement or validity of your, your licensors’, our, or our licensors’ intellectual property rights.**
- b. Mail a Notice of Dispute first.** If you have a dispute and our customer service representatives can’t resolve it, send a Notice of Dispute by U.S. Mail to the manufacturer or installer, ATTN: LEGAL DEPARTMENT. If your dispute is with Microsoft, mail it to Microsoft Corporation, ATTN: LCA ARBITRATION, One Microsoft Way, Redmond, WA 98052-6399. Tell us your name, address, how to contact you, what the problem is, and what you want. A form is available at (aka.ms/disputeform). We’ll do the same if we have a dispute with you. After 60 days, you or we may start an arbitration if the dispute is unresolved.
- c. Small claims court option.** Instead of mailing a Notice of Dispute, and if you meet the court’s requirements, you may sue us in small claims court in your county of residence (or if a business your principal place of business) or our principal place of business—King County, Washington USA if your dispute is with Microsoft. We hope you’ll mail a Notice of Dispute and give us 60 days to try to work it out, but you don’t have to before going to small claims court.
- d. Arbitration procedure.** The AAA will conduct any arbitration under its Commercial Arbitration Rules (or if you are an individual and use the software for personal or household use, or if the value of the dispute is \$75,000 USD or less whether or not you are an individual or how you use the software, its Consumer Arbitration Rules). For more information, see (aka.ms/adr) or call 1-800-778-7879. To start an arbitration, submit the form available at (aka.ms/arbitration) to the AAA; mail a copy to the manufacturer or installer (or to Microsoft if your dispute is with Microsoft). In a dispute involving \$25,000 USD or less, any hearing will be telephonic unless the arbitrator finds good cause to hold an in-person hearing instead. Any in-person hearing will take place in your county of residence (of if a business your principal place of business) or our principal place of business—King County, Washington if your dispute is with Microsoft. You choose. The arbitrator may award the same damages to you individually as a court could. The arbitrator may award declaratory or injunctive relief only to you individually to satisfy your individual claim.
- e. Arbitration fees and payments.**
 - (i) Disputes involving \$75,000 USD or less.** The manufacturer or installer (or Microsoft if your dispute is with Microsoft) will promptly reimburse your filing fees and pay the AAA’s and arbitrator’s fees and expenses. If you reject our last written settlement offer made before the arbitrator was appointed, your dispute goes all the way to an arbitrator’s decision (called an “award”), and the arbitrator awards you more than this last written offer, the manufacturer

or installer (or Microsoft if your dispute is with Microsoft) will: (1) pay the greater of the award or \$1,000 USD; (2) pay your reasonable attorney's fees, if any; and (3) reimburse any expenses (including expert witness fees and costs) that your attorney reasonably accrues for investigating, preparing, and pursuing your claim in arbitration. The arbitrator will determine the amounts unless you and we agree on them.

- (ii) **Disputes involving more than \$75,000 USD.** The AAA rules will govern payment of filing fees and the AAA's and arbitrator's fees and expenses.
- (iii) **Disputes involving any amount.** If you start an arbitration we won't seek our AAA or arbitrator's fees and expenses, or your filing fees we reimbursed, unless the arbitrator finds the arbitration frivolous or brought for an improper purpose. If we start an arbitration we will pay all filing, AAA, and arbitrator's fees and expenses. We won't seek our attorney's fees or expenses from you in any arbitration. Fees and expenses are not counted in determining how much a dispute involves.

f. Must file within one year. You and we must file in small claims court or arbitration any claim or dispute (except intellectual property disputes — see Section 9.a.) within one year from when it first could be filed. Otherwise, it's permanently barred.

g. Severability. If the class action waiver is found to be illegal or unenforceable as to all or some parts of a dispute, those parts won't be arbitrated but will proceed in court, with the rest proceeding in arbitration. If any other provision of Section 9 is found to be illegal or unenforceable, that provision will be severed but the rest of Section 9 still applies.

h. Conflict with AAA rules. This agreement governs if it conflicts with the AAA's Commercial Arbitration Rules or Consumer Arbitration Rules.

i. Microsoft as party or third-party beneficiary. If Microsoft is the device manufacturer or if you acquired the software from a retailer, Microsoft is a party to this agreement. Otherwise, Microsoft is not a party but is a third-party beneficiary of your agreement with the manufacturer or installer to resolve disputes through informal negotiation and arbitration.

10. Governing Law. The laws of the state or country where you live (or if a business where your principal place of business is located) govern all claims and disputes concerning the software, its price, or this agreement, including breach of contract claims and claims under state consumer protection laws, unfair competition laws, implied warranty laws, for unjust enrichment, and in tort, regardless of conflict of law principles. In the United States, the FAA governs all provisions relating to arbitration.

11. Consumer Rights, Regional Variations. This agreement describes certain legal rights. You may have other rights, including consumer rights, under the laws of your state or country. You may also have rights with respect to the party from which you acquired the software. This agreement does not change those other rights if the laws of your state or country do not permit it to do so. For example, if you acquired the software in one of the below regions, or mandatory country law applies, then the following provisions apply to you:

a. Australia. References to "Limited Warranty" are references to the express warranty

provided by Microsoft or the manufacturer or installer. This warranty is given in addition to other rights and remedies you may have under law, including your rights and remedies in accordance with the statutory guarantees under the Australian Consumer Law.

In this section, “goods” refers to the software for which Microsoft or the manufacturer or installer provides the express warranty. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

- b. Canada.** You may stop receiving updates on your device by turning off Internet access. If and when you re-connect to the Internet, the software will resume checking for and installing updates.
- c. European Union.** The academic use restriction in Section 12.d(i) below does not apply in the jurisdictions listed on this site: (aka.ms/academicuse).
- d. Germany and Austria.**
 - (i) **Warranty.** The properly licensed software will perform substantially as described in any Microsoft materials that accompany the software. However, the manufacturer or installer, and Microsoft, give no contractual guarantee in relation to the licensed software.
 - (ii) **Limitation of Liability.** In case of intentional conduct, gross negligence, claims based on the Product Liability Act, as well as, in case of death or personal or physical injury, the manufacturer or installer, or Microsoft is liable according to the statutory law.

Subject to the preceding sentence, the manufacturer or installer, or Microsoft will only be liable for slight negligence if the manufacturer or installer or Microsoft is in breach of such material contractual obligations, the fulfillment of which facilitate the due performance of this agreement, the breach of which would endanger the purpose of this agreement and the compliance with which a party may constantly trust in (so-called "cardinal obligations"). In other cases of slight negligence, the manufacturer or installer or Microsoft will not be liable for slight negligence.

- e. Other regions.** See (aka.ms/variations) for a current list of regional variations

12. Additional Notices.

- a. Networks, data and Internet usage.** Some features of the software and services accessed through the software may require your device to access the Internet. Your access and usage (including charges) may be subject to the terms of your cellular or internet provider agreement. Certain features of the software may help you access the Internet more efficiently, but the software’s usage calculations may be different from your service provider’s measurements. You are always responsible for (i) understanding and complying with the terms of your own plans and agreements,

and (ii) any issues arising from using or accessing networks, including public/open networks. You may use the software to connect to networks, and to share access information about those networks, only if you have permission to do so.

- b. H.264/AVC and MPEG-4 visual standards and VC-1 video standards.** The software may include H.264/MPEG-4 AVC and/or VC-1 decoding technology. MPEG LA, L.L.C. requires this notice:

THIS PRODUCT IS LICENSED UNDER THE AVC, THE VC-1, AND THE MPEG-4 PART 2 VISUAL PATENT PORTFOLIO LICENSES FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE ABOVE STANDARDS (“VIDEO STANDARDS”) AND/OR (ii) DECODE AVC, VC-1, AND MPEG-4 PART 2 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE SUCH VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE WWW.MPEGLA.COM

- c. Malware protection.** Microsoft cares about protecting your device from malware. The software will turn on malware protection if other protection is not installed or has expired. To do so, other antimalware software will be disabled or may have to be removed.
- d. Limited rights versions.** If the software version you acquired is marked or otherwise intended for a specific or limited use, then you may only use it as specified. You may use other programs with the software as long as the other programs directly support the manufacturer’s specific use for the device, or provide system utilities, resource management, or anti-virus or similar protection.
- (i) **Academic.** For academic use, you must be a student, faculty or staff of an educational institution at the time of purchase.
 - (ii) **Evaluation.** For evaluation (or test or demonstration) use, you may not sell the software, use it in a live operating environment, or use it after the evaluation period. Notwithstanding anything to the contrary in this Agreement, evaluation software is provided “AS IS”.
 - (iii) **NFR.** You may not sell software marked as “NFR” or “Not for Resale”.

- 13. Entire Agreement.** This agreement (together with the printed paper license terms or other terms accompanying any software supplements, updates, and services that are provided by the manufacturer or installer, or Microsoft, and that you use), and the terms contained in web links listed in this agreement, are the entire agreement for the software and any such supplements, updates, and services (unless the manufacturer or installer, or Microsoft, provides other terms with such supplements, updates, or services). You can review this agreement after your software is running by going to (aka.ms/useterms) or going to Settings - System - About within the software. You can also review the terms at any of the links in this agreement by typing the URLs into a browser address bar, and you agree to do so. You agree that you will read the terms before using the software or services, including any linked terms. You understand that by using the software and services, you ratify this agreement and the linked terms. There are also informational links in this agreement. The links containing notices and binding terms are:

- [Windows 10 Privacy Statement \(aka.ms/privacy\)](https://aka.ms/privacy)
- [Microsoft Services Agreement \(aka.ms/msa\)](https://aka.ms/msa)
- [Adobe Flash Player License Terms \(aka.ms/adobeflash\)](https://aka.ms/adobeflash)

NO WARRANTY

THE SOFTWARE ON YOUR DEVICE (INCLUDING THE APPS) IS LICENSED “AS IS.” TO THE MAXIMUM EXTENT PERMITTED BY YOUR LOCAL LAWS, YOU BEAR THE ENTIRE RISK AS TO THE SOFTWARE’S QUALITY AND PERFORMANCE. SHOULD IT PROVE DEFECTIVE, YOU ASSUME THE ENTIRE COST OF ALL SERVICING OR REPAIR. NEITHER THE DEVICE MANUFACTURER NOR MICROSOFT GIVES ANY EXPRESS WARRANTIES, GUARANTEES, OR CONDITIONS FOR THE SOFTWARE. TO THE EXTENT PERMITTED UNDER YOUR LOCAL LAWS, THE MANUFACTURER AND MICROSOFT EXCLUDE ALL IMPLIED WARRANTIES AND CONDITIONS, INCLUDING THOSE OF MERCHANTABILITY, QUALITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. YOU MAY HAVE ADDITIONAL CONSUMER RIGHTS OR STATUTORY GUARANTEES UNDER LOCAL LAWS THAT THESE TERMS CANNOT CHANGE.

IF YOUR LOCAL LAWS IMPOSE A WARRANTY, GUARANTEE, OR CONDITION EVEN THOUGH THIS AGREEMENT DOES NOT, ITS TERM IS LIMITED TO 90 DAYS FROM WHEN THE FIRST USER ACQUIRES THE SOFTWARE. IF THE MANUFACTURER OR MICROSOFT BREACHES SUCH A WARRANTY, GUARANTEE, OR CONDITION, YOUR SOLE REMEDY, AT THE MANUFACTURER’S OR MICROSOFT’S ELECTION, IS (I) REPAIR OR REPLACEMENT OF THE SOFTWARE AT NO CHARGE, OR (II) RETURN OF THE SOFTWARE (OR AT ITS ELECTION THE DEVICE ON WHICH THE SOFTWARE WAS INSTALLED) FOR A REFUND OF THE AMOUNT PAID, IF ANY. THESE ARE YOUR ONLY REMEDIES FOR BREACH OF A WARRANTY, GUARANTEE, OR CONDITION YOUR LOCAL LAWS IMPOSE.

TO THE EXTENT NOT PROHIBITED BY YOUR LOCAL LAWS, IF YOU HAVE ANY BASIS FOR RECOVERING DAMAGES, YOU CAN RECOVER FROM THE MANUFACTURER OR MICROSOFT ONLY DIRECT DAMAGES UP TO THE AMOUNT YOU PAID FOR THE SOFTWARE (OR UP TO \$50 USD IF YOU ACQUIRED THE SOFTWARE FOR NO CHARGE). YOU WILL NOT, AND WAIVE ANY RIGHT TO, SEEK TO RECOVER ANY OTHER DAMAGES OR REMEDY, INCLUDING LOST PROFITS AND DIRECT, CONSEQUENTIAL, SPECIAL, INDIRECT, OR INCIDENTAL DAMAGES, UNDER ANY PART OF THIS AGREEMENT OR UNDER ANY THEORY. THIS LIMITATION APPLIES TO (I) ANYTHING RELATED TO THIS AGREEMENT, THE SOFTWARE (INCLUDING THE APPS), THE DEVICE, SERVICES, CORRUPTION OR LOSS OF DATA, FAILURE TO TRANSMIT OR RECEIVE DATA, CONTENT (INCLUDING CODE) ON THIRD PARTY INTERNET SITES OR THIRD PARTY PROGRAMS, AND (II) CLAIMS FOR BREACH OF CONTRACT, WARRANTY, GUARANTEE, OR CONDITION; STRICT LIABILITY, NEGLIGENCE, OR OTHER TORT; VIOLATION OF A STATUTE OR REGULATION; UNJUST ENRICHMENT; OR UNDER ANY OTHER THEORY.

THE DAMAGE EXCLUSIONS AND REMEDY LIMITATIONS IN THIS AGREEMENT APPLY EVEN IF YOU HAVE NO REMEDY (THE SOFTWARE IS LICENSED “AS IS”), IF REPAIR, REPLACEMENT, OR A REFUND (IF REQUIRED BY YOUR LOCAL LAW) DOES NOT FULLY COMPENSATE YOU FOR ANY LOSSES, IF THE MANUFACTURER OR MICROSOFT KNEW OR SHOULD HAVE KNOWN ABOUT THE POSSIBILITY OF THE DAMAGES, OR IF THE REMEDY FAILS OF ITS ESSENTIAL PURPOSE.

Check with your device manufacturer to determine if your device is covered by a warranty.

修理依頼フォーム

必要事項をご記入の上、
FAX又はE-mailにてお送りください。

FAX : 046-272-8692

E-mail : support@fast-corp. co. jp
(株)ファースト ユーザ・サポート係

_____年 _____月 _____日

※内容を確認した上で、送付先等ご連絡いたします。

会社名 :	担当者名 :
部署名 :	
住 所 : 〒	
電話番号 :	FAX番号 :
E-mail :	
製品名 :	シリアルNo :

状況 または 内容	(不具合内容、操作手順、エラーメッセージなどを出来る限り詳しくご記入下さい。)
	<p>以下、該当する項目にチェックして下さい。</p> <p>パワーランプ： <input type="checkbox"/>点灯 <input type="checkbox"/>消灯 <input type="checkbox"/>つかない</p> <p>ファン： <input type="checkbox"/>回転する <input type="checkbox"/>回転しない</p> <p>他のCFカード又はシステムSSDで試したか？</p> <p><input type="checkbox"/>試した <input type="checkbox"/>試していない</p> <p><input type="checkbox"/>他のCFカードでは起動する <input type="checkbox"/>他のCFカードでも起動しない</p> <p><input type="checkbox"/>他のシステムSSDでは起動する <input type="checkbox"/>他のシステムSSDでも起動しない</p>
再現性	<input type="checkbox"/> 常に出る <input type="checkbox"/> 時々(頻度 _____)
弊社記入欄：	

[注] 1. このページはコピーしてお使いください。

FV2330-C シリーズ

FV2330-C 取扱説明書

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