

汎用画像処理装置  
FV2300シリーズ

# ***FV2300***

## **取扱説明書**

☆第 17 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但、万が一不審な点や誤り、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。

# 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、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

このたびは弊社の汎用画像処理装置『FV2300』をお買い上げいただき、誠にありがとうございます。

『FV2300』は、PC 技術を産業用画像処理装置としてカスタマイズされたハードウェアプラットフォームをもつ FA 組み込みシステム用画像処理装置です。

以下の 3 製品をご用意しております。

FV2300-XPe : Windows XP Embedded を搭載した装置

FV2300-LNX : 弊社にてカスタマイズを行った Linux『LNX システム』を搭載した装置

FV2300-DOS : Microsoft MS-DOS を搭載した装置

本説明書には、上記 3 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 FV2300 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。

## FV2300-Env/Mod/Per

- Env(ironment) : ソフトウェア動作環境  
FV2300-XPe をご購入の場合、表記は、“XPe” となります。  
FV2300-LNX をご購入の場合、表記は、“LNX” となります。  
FV2300-DOS をご購入の場合、表記は、“DOS” となります。
- Mod(el) : 製品モデル（形態）  
「本製品は、“M2” microATX 規格 No2 となります」
- Per(formance) : 性能  
「本製品は、“P4-XX” Pentium4 XXGHz となります」  
(注) XX には CPU クロックが入ります。CPU クロックは市場動向により高クロック化へと変化する可能性があります。

例) 装置銘板 = “FV2300”、装置補助ラベル “LNX/M2/P4-XX”

## ——商標について——

「Microsoft」「Windows」「WindowsXP Embedded」「MS-DOS」は Microsoft Corporation の登録商標です。

「DOS/4G」は Tenberry Software, Inc. の商標です。

「Pentium」は Intel Corporation の登録商標です。

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

「CompactFlash」は米国 SanDisk Corporation の登録商標であり、CFA (CompactFlash カード™ Association) へライセンスされています。

「Linux」は、Linus Torvalds の米国およびその他の国における登録商標または商標です。

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

### 【 FV2300-XPe 】

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

### -重要-



FV2300-XPe には、Microsoft Corporation の基本ソフト (OS) WindowsXP 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。装置を使用された場合、契約内容に承諾されたものといたします。

なお FV2300-XPe 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。

#### 2. WIL、FVX、FVL/WIN の使用許諾について

FV2300-XPe 本体には、弊社が販売する画像処理ソフトウェア製品である「WIL」「FAST Vision ActiveX Components (FVX)」「FAST Vision Library for Windows (FVL/WIN)」の実行モジュールがインストールされています。ただし、お客様に許諾されるソフトウェア使用権利は、選択によって「WIL」「FVX」「FVL/WIN」のどれか 1 つになります。どれを選択するかは購入時に決めて下さい。それ以外の実行モジュールを使用される場合は、それぞれのソフトウェア使用権利 (RTL) を必ずご購入ください。**購入されずに使用されることは違法行為となりますので、御注意ください。**

##### ■WIL を選択した場合

ソフトウェア使用権利 (RTL)	
WIL 標準ソフトウェア RTL	FV2300-XPe に標準添付の使用権利
WIL ビデオ入力ソフトウェア RTL	FV2300-XPe に標準添付の使用権利
それ以外の WIL 関連実行モジュール	別購入が必要な使用権利

##### ■FVX を選択した場合

ソフトウェア使用権利 (RTL)	
FVX 基本統合 RTL	FV2300-XPe に標準添付の使用権利
それ以外の FVX 関連実行モジュール	別購入が必要な使用権利

##### ■FVL/WIN を選択した場合

ソフトウェア使用権利 (RTL)	
FVL 基本統合 RTL/WIN	FV2300-XPe に標準添付の使用権利
それ以外の FVL/WIN 関連実行モジュール	別購入が必要な使用権利

## 【 FV2300-LNX 】

### 1. LNX システム について

FV2200-LNX・FV2300-LNX・FV1100-LNX(以下、FVxx00-LNX)には、  
GNU General Public License Version 2(以下 GPL)、  
GNU LESSER General Public License Version 2(以下 LGPL)、  
BSD License, X11 License, Zlib License, Openssl License, Openldap License,  
Artistic License に基づくソフトウェアが組込まれています。

FVxx00-LNX 取扱説明書の最後または FVL 基本 SDK/LNX にこれらのライセンス契約の原文が添付されています。  
装置をご使用になる前にそこに記載されている契約内容をよく読み、同意される場合のみ、お客様は本製品をお  
使いになることができます。尚、装置を使用された場合は、お客様は契約内容に承諾されたものといたします。

また、FVxx00-LNX の再販売や FVxx00-LNX をお客様の装置に組み込んで販売することにより使用ユーザが変わる  
場合、「お客様の販売品にこれらのライセンス契約の原文を必ず添付すること」および「そこに記載されている  
契約内容に同意する場合にのみ本製品の販売及び使用が可能であること」を明記してください。

弊社は、上記ライセンス契約条項に基づき、以下のソフトウェアパッケージリストのソフトウェアについてソ  
ースコードを開示しています。当該パッケージの複製、改変、配布を希望される方は弊社ユーザ・サポート窓口  
にお問い合わせください。但し、当該ソースコードに対しては如何なる種類の保障もいたしません。

なお、Linux kernel のライセンス (COPYING) の例外条項に基づいて、LNX 上で動作するファーストあるいはお客  
様が作成したアプリケーションソフト、ライブラリは Linux kernel の派生物ではないと判断し GPL ライセンスに  
は従いません。また、カーネルに含まれる形のドライバに関しては派生物になると判断し GPL ライセンスに従う  
必要があるとしました。したがって、お客さまの要求があれば、ドライバのソース公開、再配布を行ないます。  
該当するドライバは以下のものです。

RICE-001 (a/b), FVC02, FVC04, FVC05, FVC06, FVCM01, FI001, FHC3310

#### (1) GPL (Ver2) 適用ソフトウェアパッケージリスト

Linux kernel-2.4.20  
ファーストキャプチャボードドライバ  
SysVinit-2.84-2.i386.rpm  
grep-2.5.1-1.i386.rpm  
popt-1.6.4-7x.18.i386.rpm  
bash-2.05a-13.i386.rpm  
gzip-1.3.3-1.i386.rpm  
info-4.1-1.i386.rpm  
bdflush-1.5-17.i386.rpm  
psmisc-20.2-2.i386.rpm  
initscripts-6.67-1.i386.rpm  
chkconfig-1.3.5-3.i386.rpm  
iproute-2.4.7-1.i386.rpm  
sed-3.02-11.i386.rpm  
cracklib-2.7-15.i386.rpm  
kudzu-0.99.52-1.i386.rpm  
sh-utils-2.0.11-14.i386.rpm  
less-358-24.i386.rpm  
shadow-utils-20000902-7.i386.rpm  
libcap-1.10-8.i386.rpm  
slang-1.4.5-2.i386.rpm  
libstdc++-2.96-110.i386.rpm

dev-3.3-4.i386.rpm  
libtermcap-2.0.8-28.i386.rpm  
tar-1.13.25-4.i386.rpm  
diffutils-2.7.2-5.i386.rpm  
dosfstools-2.8-1.i386.rpm  
logrotate-3.6.4-1.i386.rpm  
e2fsprogs-1.27-3.i386.rpm  
mingetty-1.00-1.i386.rpm  
termcap-11.0.1-10.noarch.rpm  
filesystem-2.1.6-2.noarch.rpm  
textutils-2.0.21-1.i386.rpm  
fileutils-4.1-10.i386.rpm  
modutils-2.4.14-3.i386.rpm  
usermode-1.53-2.i386.rpm  
freetype-2.0.9-2.i386.rpm  
mount-2.11n-12.i386.rpm  
util-linux-2.11n-12.i386.rpm  
fvwm-2.4.15-0.20030220.i386.rpm  
vsftpd-1.0.1-5.i386.rpm  
gawk-3.1.0-4.i386.rpm  
net-tools-1.60-4.i386.rpm  
which-2.13-3.i386.rpm  
gdbm-1.8.0-14.i386.rpm  
pam-0.75-32.i386.rpm

(2) LGPL (Ver2) 適用ソフトウェアパッケージリスト

glibc-common-2.2.5-34.i386.rpm  
passwd-0.67-1.i386.rpm  
gtk+-1.2.10-15.i386.rpm  
procps-2.0.7-12.i386.rpm  
hwdata-0.75-1.noarch.rpm  
rpm-4.0.4-7x.18.i386.rpm  
libuser-0.50.2-1.i386.rpm  
newt-0.50.35-1.i386.rpm  
glib-1.2.10-5.i386.rpm  
glibc-2.2.5-34.i686.rpm

(3) BSD 適用ソフトウェアパッケージリスト

bzip2-1.0.2-2.i386.rpm  
iputils-20020124-3.i386.rpm  
cyrus-sasl-1.5.24-25.i386.rpm  
db3-3.3.11-6.i386.rpm  
telnet-0.17-20.i386.rpm  
syslogd-1.4.1-8.i386.rpm  
telnet-server-0.17-20.i386.rpm  
mktemp-1.5-14.i386.rpm  
ncurses-5.2-26.i386.rpm  
xinetd-2.3.4-0.8.i386.rpm

(4) X11 適用ソフトウェアパッケージリスト

XFree86-font-utils-4.2.0-8.i386.rpm

(5) Zlib 適用ソフトウェアパッケージリスト

zlib-1.1.3-25.7.i386.rpm

(6) Openssl 適用ソフトウェアパッケージリスト

openssl-0.9.6b-18.i386.rpm openssl



- (7) OpenIldap 適用ソフトウェアパッケージリスト  
OpenIldap-2.0.23-4.i386.rpm OSI Approved
- (8) Artistic 適用ソフトウェアパッケージリスト  
cracklib-dicts-2.7-15.i386.rpm Artistic

## 2. FVL/LNX FIE ライブラリについて

FVL 基本 SDK/LNX に含まれている FIE ライブラリには一部、オープンソースソフトウェア（OSS）を利用したライブラリが含まれています。FVL 基本 SDK/LNX をインストールすると、これら「オープンソースソフトウェア（OSS）」のライセンス契約の原文が license.txt としてインストールされ、お客様はその内容を読むことができます。ライセンス契約の原文は FVxx00-LNX 取扱説明書の最後にも記載されています。OSS を利用した FIE ライブラリをご使用になる前にそこに記載されている契約内容をよく読み、同意される場合のみ、お使いになることができます。本ライブラリを使用された場合は、お客様は契約内容を承諾されたものといたします。

OSS を利用しているライブラリファイル

libfvalg\_oss.so

FIE ライブラリで利用している OSS リスト

- ・ Mersenne twister with improved initialization (2002) mt19937
- ・ zlib version 1.2.3
- ・ libtiff version 3.82
- ・ libpng version 1.2.29
- ・ libjpeg-6b
- ・ f2clibs/libF77 20021004, f2clibs/libI77 20030321
- ・ LAPACK 3.1.1

※具体的にどのライブラリで OSS が利用されているかについては FIE ライブラリマニュアルをご参照下さい。

## 3. FVL/LNX 使用許諾について

FV2300-LNX 本体には、「Fast Vision Library for LNX」実行モジュールとして“FVL 基本ソフトウェア RTL/LNX”が付随しています。

ソフトウェア使用権利（RTL）	
FVL 基本統合 RTL/LNX	FV2300-LNX に標準添付の使用権利

## 【 FV2300-DOS 】

### 1. MS-DOS の使用許諾について

FV2300-DOS はシステム起動、ファイルシステム等に MS-DOS が使われています。

製品の購入時に「MS-DOS 使用許諾契約書（和文および英文）」が添付されていますので、装置を使用する前に契約内容をよく読み、許諾される場合のみ使用を開始してください。

なお FV2300-DOS の再販や装置に組み込んだの販売により使用ユーザが変わる場合、この「MS-DOS 使用許諾契約書」を添付し、契約内容の許諾時のみ本製品が使用可能である事を明記してください。

また、FV2300-DOS には MS-DOS を拡張する目的で DOS/4G が使用されています。

### 2. FVL/DOS 使用許諾について

FV2300-DOS 本体には、「Fast Vision Library for DOS」実行モジュールとして“FVL 基本統合 RTL/DOS”が付随しています。それ以外の実行モジュールを使用される場合は、それぞれのソフトウェア使用権利（RTL）を必ずご購入ください。**購入されずに使用されることは違法行為となりますので、御注意ください**

ソフトウェア使用権利（RTL）	
FVL 基本統合 RTL/DOS	FV2300-DOS に標準添付の使用権利
それ以外の実行モジュール	別購入が必要な使用権利

## -重要-



弊社ソフトウェア製品使用許諾については、“ソフトウェア製品使用権許諾書（B-001579）”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。

### (2) ユーザ登録をお願いします

弊社の製品を始めてご購入になったお客様、またはまだユーザ登録を済まされていないお客様は、製品に添付されているユーザ登録用紙に必要事項をご記入になり、弊社に返送してください。ユーザ・サポート、今後のバージョンアップ情報の提供が可能になります。

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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ください。  
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 FV2300

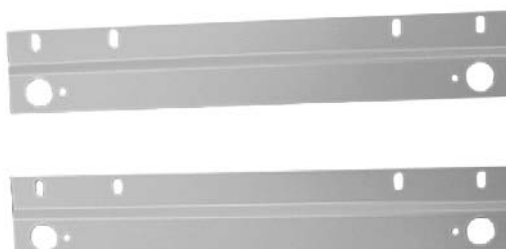
### FV2300 本体（1 台）



### 3P 電源ケーブル（1 本・約 3m・125V・10A）



### 取付金具（2 枚、3mm ネジ×4 ヶ）



## 1.2 別売品 及び 購入品ガイド

### 標準別売品

**CompactFlash カード** 弊社で選定、検査、カスタマイズを行った物しか使用できません。

CompactFlash カードはお客様の用途に合わせて、容量を選定して頂けるよう別売品としています。  
ご購入頂いた CompactFlash カード容量からシステム占有のカード容量を引いた部分が、お客様の利用できるカード容量となります。

なお、FV2300-XPe 用のシステム CompactFlash カードは、2 つパーティション（C: ドライブ / D: ドライブ）に区切られ、D: ドライブがお客様に開放されています。



販売（搭載）可能な CompactFlash カード（容量）は、市場動向で大容量化へと変化していく可能性が有ります。詳しくは、弊社営業にお問い合わせ下さい。

装置の故障、操作ミス、開発時のプログラム不備等による、CompactFlash カードの破損、内容破壊に迅速に対処するためバックアップ目的の CompactFlash カードを購入することが可能です。弊社営業にお問い合わせ下さい。

CompactFlash カードに含まれる内容物（OS や、その他ソフトウェア等）は、ウイルスチェックされたマスタより製造していますので、安心してご使用いただけます。

**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 トラックボール  
 ケーブル長：約 1,500mm



マウス製品の世代交代は激しく、本説明書記載の内容と異なる場合があります。ご了承下さい。

**PS/2 キーボード****【 FV2300-XPe 】**

日本語キーボード

**RS232C ケーブル**

注：「図と現品は異なります」

RS232C ケーブルは豊富に市販されておりますが、弊社でも RS232C ケーブルの販売をしております。  
 詳しくは弊社営業にご相談下さい。

（本説明書『6. ケーブル配線図』の RS232C ケーブル）

**パラレル・リンクケーブル****【 FV2300-D0S 】**

注：「図と現品は異なります」

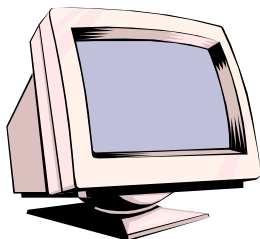
パラレル・リンク（P-LINK）用のケーブルを弊社でも販売しております。詳しくは弊社営業にご相談下さい。  
 （本説明書『6. ケーブル配線図』のパラレル・リンクケーブル）

## お客様での購入品・仕様ガイド

お客様個々で購入物が異なりますので、弊社での販売を見合わせていただきました。  
お客様方で選定御購入をお願いします。

### CRT ディスプレイ/液晶ディスプレイ

#### 【 FV2300-XPe/FV2300-LNX 】

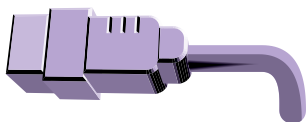


PC/AT 互換機の VGA ポートに直接接続できる機種を選定願います。特に液晶ディスプレイには専用ボードとペアで使用するものがありますが使用することは出来ません。ご注意ください。

お客様の使用する解像度表示に対応できるものをお選び下さい。

### LAN ケーブル (RJ45 ・ カテゴリ 5)

#### 【 FV2300-XPe/FV2300-LNX 】



100BASE-TX で使用される場合は勿論の事、10BASE-T で使用される場合でも、FA 用途での信頼性を確保するためにカテゴリ 5、又はエンハンスド・カテゴリ 5 ケーブルを使用されることを推奨いたします。

LAN ケーブルは速度に応じていくつかのグレードを設けています。主なものとして、10M ビット/秒用のカテゴリ 3、100M ビット/秒用のカテゴリ 5、1G ビット/秒用のエンハンスド・カテゴリ 5、カテゴリが高いほど規格で定められた基準値のレベルが高くなります。これから LAN を構築するなら、予算の許す範囲で、出来るだけ上位のカテゴリケーブルを選ぶ事を推奨します。

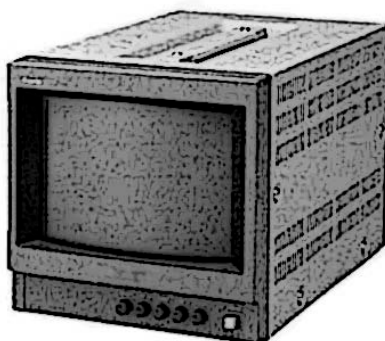
ケーブルの結線には、ストレート・ケーブルと、クロス・ケーブルの 2 種類があります。

2 台の装置間を 1 対 1 で接続する場合は、クロス・ケーブルで接続できますが、3 台以上の機器をネットワークに接続させるには、ストレート・ケーブルを使い、さらに集線装置 (ハブ: HUB) の介在が必要になります。



## 白黒ビデオモニタ

【 FV2300-D0S 】



映像は画面いっぱいに表示されるため、モニタを調整しないと端部が見えない場合があります。  
アンダスキャン対応のモニタを用意されると簡単に調整する事が出来ます。



## 2. 仕 様

### 2.1 一般仕様

	仕 様
外形寸法（注）	（横幅）145mm×（奥行き）311.5mm×（高さ）275mm
ゴム足（高さ）	6mm
重量	約 4.8kg（取付金具は含まず）
電源	AC100～240V
電源周波数	50/60Hz
消費電力	320VA 以下
動作周囲温度	0～40℃
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
その他	日本製電源ユニット、長時間寿命ファンを採用

（注）取付け部分やコネクタ等の突起部は含んでおりません。

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

- 一般的に電源装置やファンには寿命があります。本装置を周囲温度 40℃で連続運転した場合の期待耐用年数は、電源装置が約 3 年、ファンが約 3 年です。ただし、期待耐用年数はその期間の動作を保証するものではありません。弊社ではメンテナンスサービスとして、電源装置、ファンの有償交換を行っております。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

ビデオ入力に関する機能は、本体に搭載される PCI バス仕様画像入力ボードによって異なりますので、詳細は各ボードの取扱説明書等をご覧ください。

### 【 FV2300-XPe 】

標準 I/F	RS232C	チャンネル数	2 チャンネル
		転送スピード	1,200～115,200bps
		通信条件等	データ長、パリティ、ストップビット長 → 全て可変
	ネットワーク I/F		100Base-TX (IEEE802.3u) / 10Base-T (IEEE802.3)
	表示機能		最大解像度 1280×1024 (24bit/16,777,216 色)
	弊社指定ボード用スロット		『5.4 組み込み可能なボード』の章をご覧ください。
一般 事項	PCI バススロット数		3
	使用プロセッサ		Pentium4 相当
	メインメモリ [注 1]		標準 256MB (増設オプション有)
	ファイル装置		フラッシュファイル装置 (CompactFlash カード：別売り) (容量は購入時に選択します)
その他	マウス I/F		PS/2 仕様

[注 1] 市場動向により、標準容量および増設オプションの容量が変更される場合があります。



本装置が FVC01, FVC02, FVC05 を通してカメラへ供給できる+12V は 3A (36W) までです。

### 【 FV2300-LNX 】

標準 I/F	RS232C	チャンネル数	2 チャンネル
		転送スピード	1,200～115,200bps
		通信条件等	データ長、パリティ、ストップビット長 → 全て可変
	ネットワーク I/F		100Base-TX (IEEE802.3u) / 10Base-T (IEEE802.3)
	表示機能		最大解像度 1280×1024 (24bit/16,777,216 色)
	弊社指定ボード用スロット		『5.4 組み込み可能なボード』の章をご覧ください。
一般 事項	PCI バススロット数		3
	使用プロセッサ		Pentium4 相当
	メインメモリ [注 1]		標準 256MB (増設オプション有)
	ファイル装置		フラッシュファイル装置 (CompactFlash カード：別売り) (容量は購入時に選択します)
その他	マウス I/F		PS/2 仕様

[注 1] 市場動向により、標準容量および増設オプションの容量が変更される場合があります。

## 【 FV2300-D0S 】

標準 I/F	RS232C	チャンネル数	2 チャンネル
		転送スピード	1,200～115,200 bps
		データ・ビット長等	データ長、パリティ、ストップビット長 → 全て可変
	高速通信 ポート	チャンネル数	1 チャンネル
		機能	パラレル・リンク接続 (P-LINK)
	弊社指定ボード用スロット		『5.4 組み込み可能なボード』の章をご覧ください。
一般 事項	PCI バススロット数		3
	使用プロセッサ		Pentium4 相当
	メインメモリ[注 1]		標準 256MB
	ファイル装置		フラッシュファイル装置 (CompactFlash カード: 別売り) (容量は購入時に選択します)
その他	マウス I/F		PS/2 仕様
	漢字表示		JIS 第一水準漢字フォント

**Note** FV2300 に使われている PC 部品について

FV2300 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。

**Note** ご購入後のメインメモリ増設について

弊社ではメモリ単体の販売を行っておりませんので、ご購入後のメモリ増設を希望される場合は弊社工場において増設をいたします。

また、市販メモリには本装置で正常に動作しないものがありますので、弊社はお客様がメモリの増設を行った場合の動作保証はいたしかねます。

## 2.3 電源の切り方について

### 【 FV2300-LNX/FV2300-DOS 】

HDD 表示用 LED が消えていること確認してから、背面にある電源スイッチを OFF にしてください。



システムの起動中や HDD 表示が点灯中は絶対に装置前面の PWR-SW スイッチや装置背面の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。

### 【 FV2300-XPe 】

## 1. 電源の切り方

WindowsXP Embedded 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] キーを同時に押して、タスクマネージャを起動します。
2. タスクマネージャのシャットダウンメニューから「コンピュータの電源を切る」を選択すると、電源を切る事が出来ます。
3. 電源を再投入する場合は、電源スイッチを一度 OFF にしてから ON にします。または筐体前面の PWR-SW を押しても電源を再投入出来ます。電源を切ってから再投入するまでは 10 秒以上の時間をおいて下さい。

## 2. 電源の再投入

電源スイッチ OFF 後に再投入 (ON) にする場合は、10 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、WindowsXP Embedded 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るとファイル装置(システム CompactFlash カード)の内容に致命的な損傷を与える恐れがあります。

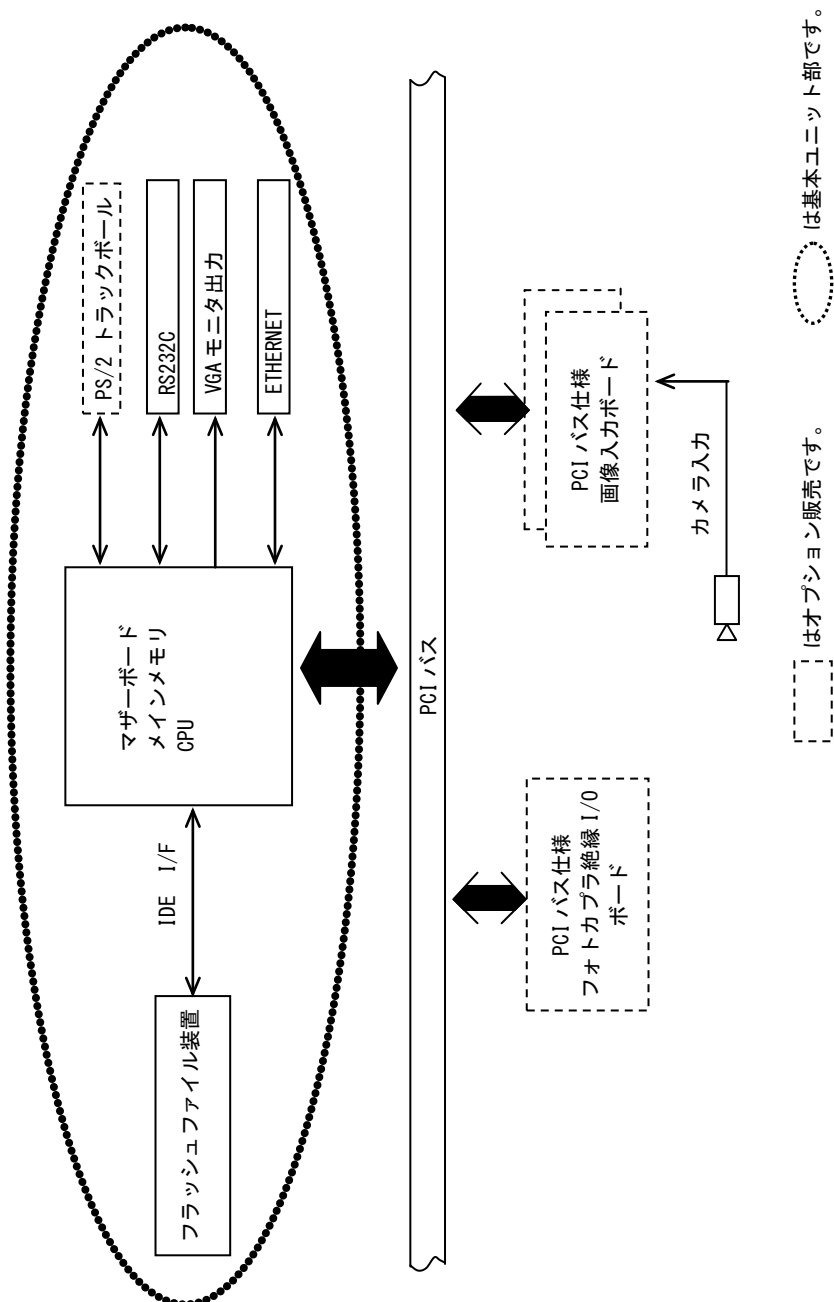
## Note ファイルのバックアップ

万が一、CompactFlash カードの内容が破壊された場合の復旧が迅速に出来るよう、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。CompactFlash カード内のシステム領域を破壊した場合は、弊社工場での再書き込みが必要になります。

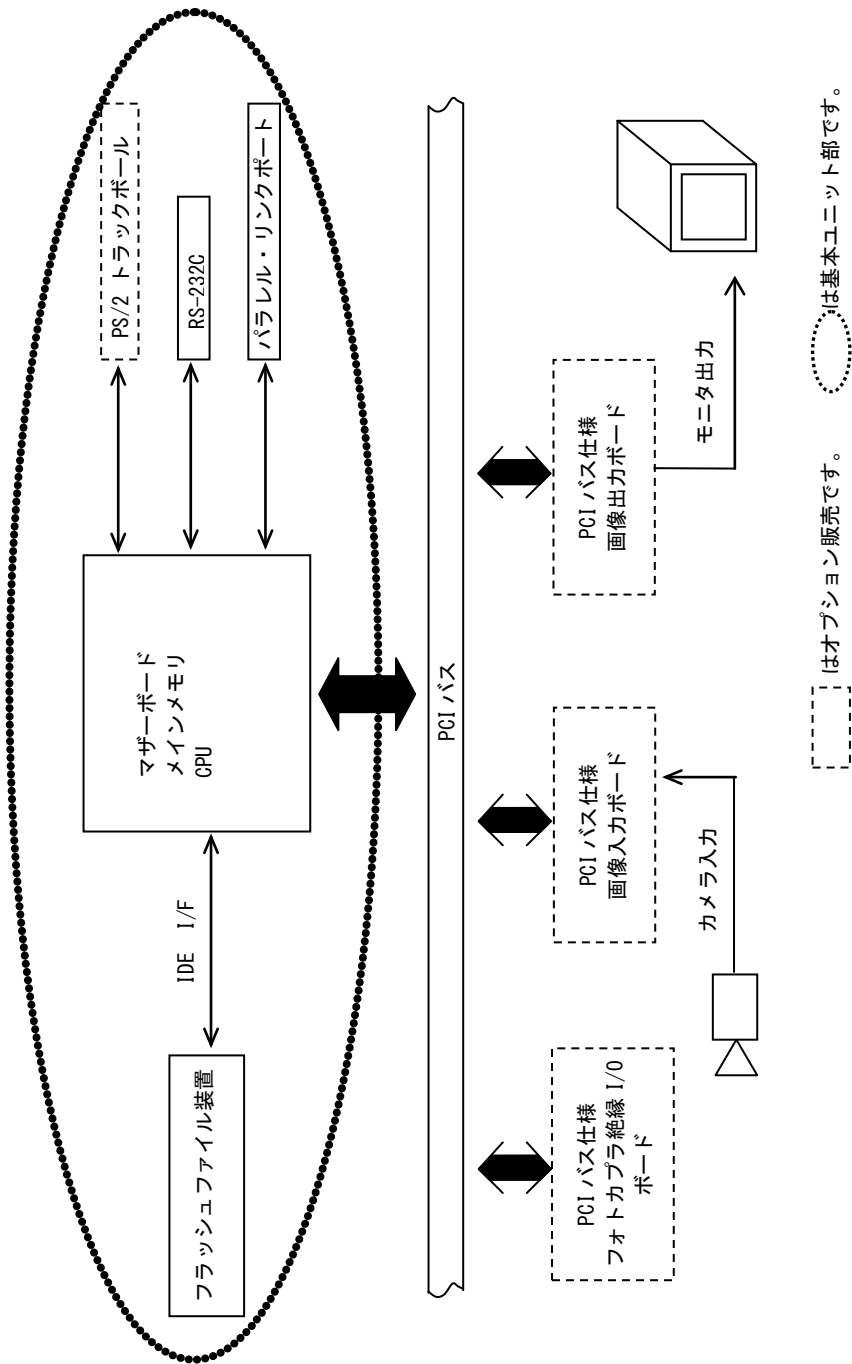
## 2.4 ブロック図

(注) PCI バス仕様の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。

### 【 FV2300-XPe/FV2300-LNX 】



【 FV2300-D0S 】





## 3. 設置と点検



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、装置を破壊する又は、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や故障の原因になりますので、通風口から 50mm 以上の空間を設けて設置してください。



次のような場所は避けて設置してください。

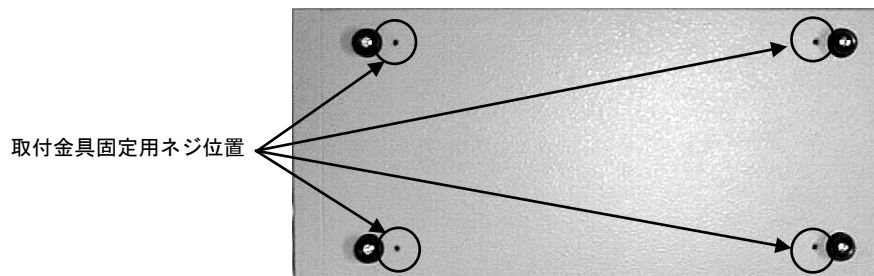
- 周囲温度が 0～40℃の範囲を超える場所
- 温度変化が急激で結露するような場所（結露した場合は乾燥させてから電源を投入してください）
- 相対湿度が 30～85%の範囲を超える場所
- 強力な電界、磁界の発生している場所
- 発熱源に近い場所
- 本体に直接振動や衝撃がかかる場所
- 直射日光の当たる場所
- 塵、埃の多い場所
- 水、油、薬品等の飛沫のある場所

## 3.2 取付金具の付け方

FV2300 は、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。

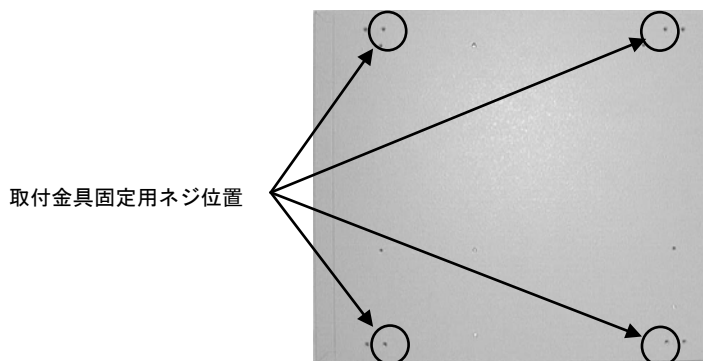
<縦置きにするとき> (出荷設定)

- (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。



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



#### 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。



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。

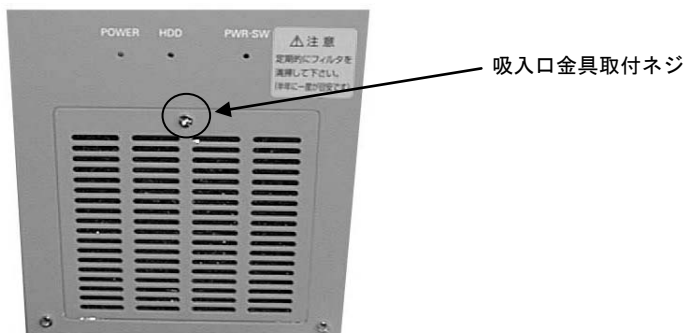
### 注意

- 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ジストン 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。



### 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

フラッシュファイル装置（CompactFlash カード）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、装置の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。

CompactFlash カードのデータはパソコン等に必ずバックアップを取るようにしてください。

### **Note** 保守用 CompactFlash カードご購入を推奨します

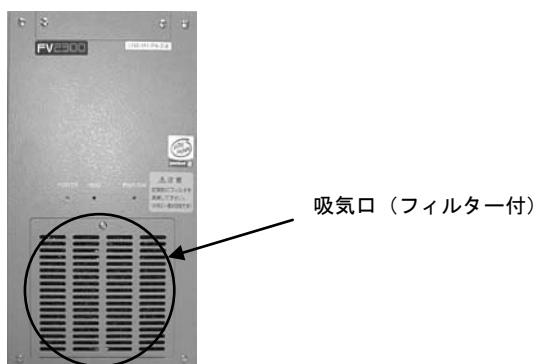
何らかの原因で CompactFlash カード内部のファイルが壊れた場合、アプリケーションプログラム等は復旧可能ですが、システム領域等に問題があった場合は CompactFlash カードを交換しなければいけません。即座に対応できるように保守用 CompactFlash カードのご購入をお勧めします。



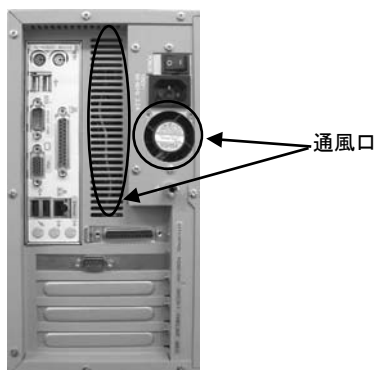
## 4. 本体各部の名称と取扱い

### 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。

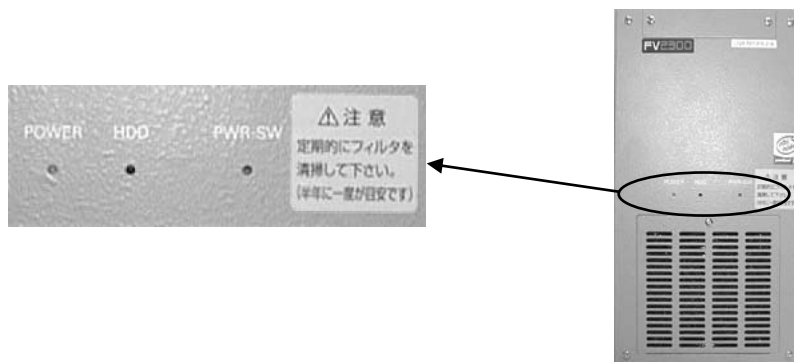


### 注意

吸気口は周囲と 50mm 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/PWR-SW



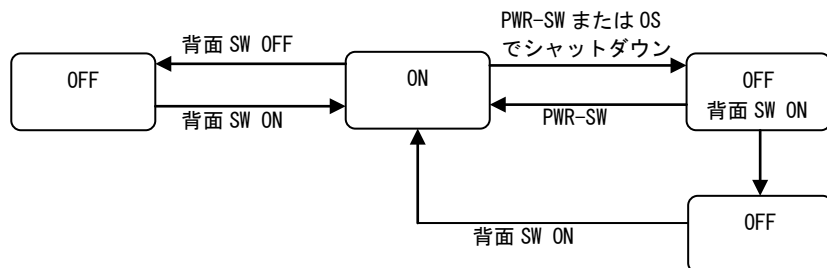
- POWER（緑色）  
電源スイッチを ON にすると点灯し、装置が通電状態であることを示します。
- HDD（赤色）  
フラッシュファイル装置のアクセス中に点灯します。
- PWR-SW  
メンテナンスに使用します。詳しくは下記の『PWR-SW の機能』を参照下さい。  
操作は細い棒などを用いてスイッチを押してください。



## PWR-SW の機能

### 【 FV2300-XPe 】

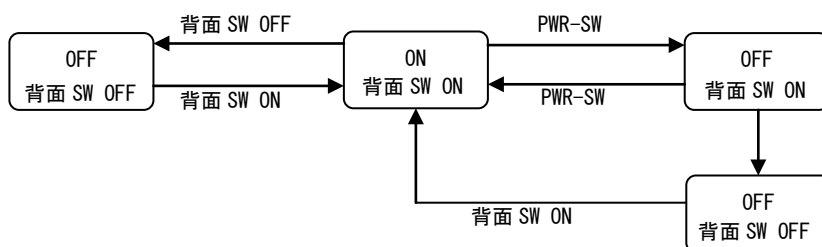
PWR-SW は、一般的なコンピュータの電源スイッチに相当します。本体背面の電源スイッチが ON のときに本スイッチを押すと、そのまま電源が OFF になります。もう一度本スイッチを押してやることで本体が起動します。何らかの原因で、本体背面の電源スイッチを ON にしても起動しない場合に使用します。





## 【 FV2300-LNX/FV2300-DOS 】

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。本体背面の電源スイッチが ON のときに本スイッチを押すと、そのまま電源が OFF になります。もう一度本スイッチを押してやることで本体が起動します。何らかの原因で、本体背面の電源スイッチを ON にしても起動しない場合に使用します。



システムの起動中や HDD 表示が点灯中は絶対に PWR-SW 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 フラッシュファイル装置メンテナンス用パネル



注) 写真は FV2300-LNX です。

フラッシュファイル装置のメンテナンス用パネルです。

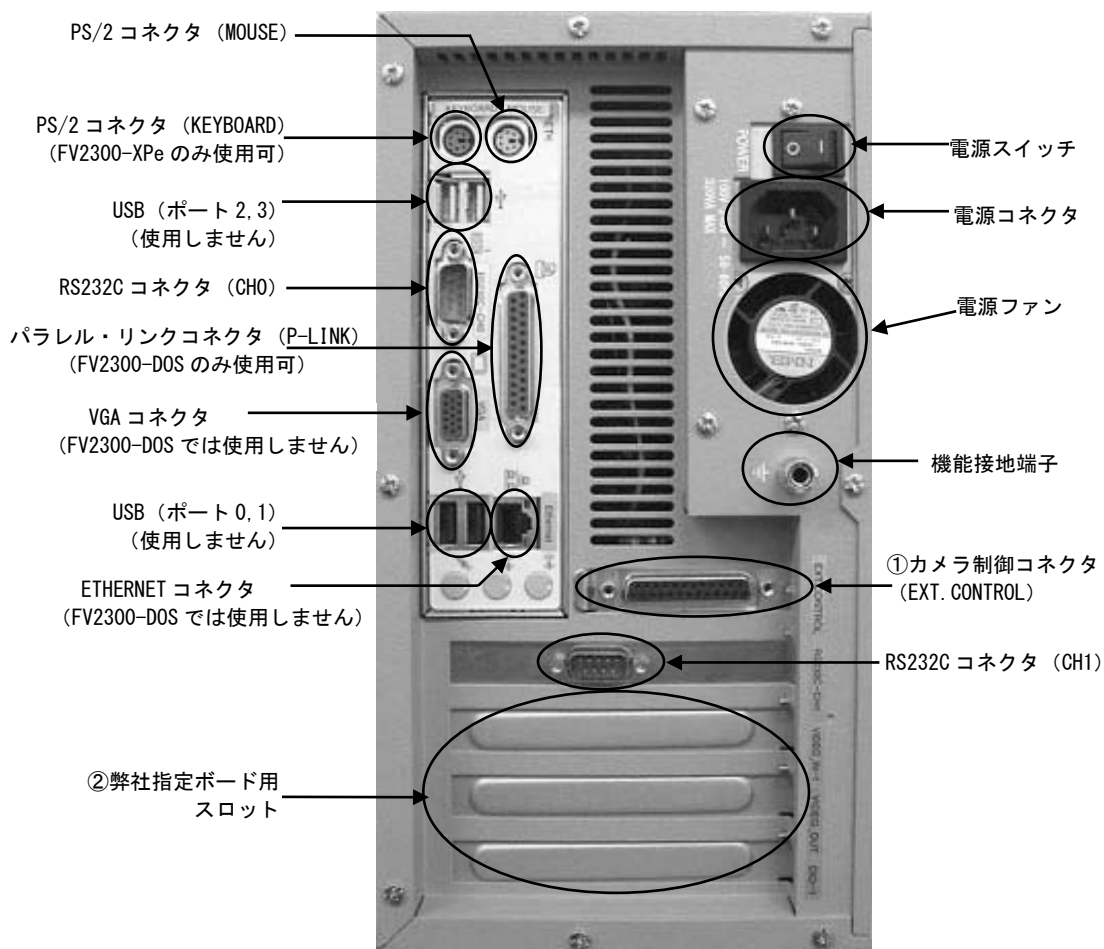
(基本的には弊社工場が開閉しますが、トラブルの調査確認時等にお客様に開閉を依頼する場合があります)

### 注意

メンテナンス用パネルの内部には、フラッシュファイル装置 (CompactFlash カード) が取付けてあります。メンテナンス目的で開閉する場合、下記の注意事項を守ってください。

- 電源スイッチが ON 状態 (通電中) での CompactFlash カード挿抜は、絶対に行わないでください。CompactFlash カード又は装置を破壊する場合があります。
- 内部の CompactFlash カードの挿入が不完全な場合、システム動作が正常に行われない場合があります。

## 4.3 背面各部

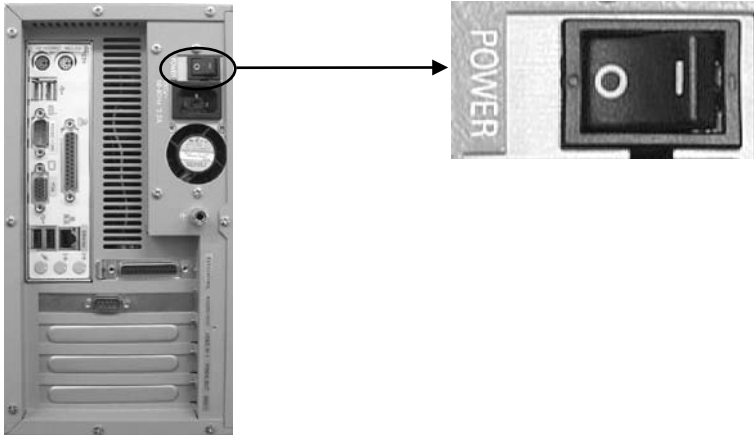


### Not e

- ① カメラ制御コネクタ (EXT. CONTROL) は、RICE-001 (a/b) のオプションです。  
ただし、RICE-001a/b を 2 枚搭載時、カメラ制御コネクタ (EXT. CONTROL) は搭載できません。  
本コネクタの詳細は、これを使用する各ボードの説明書の関連項目に記載してあります。
- ② 弊社指定ボード用スロットには、PCI バス仕様の製品ボードのコネクタが出てきます。

装置の外観は改良のため予告なく変更することがあります。

### 4.3.1 電源スイッチ

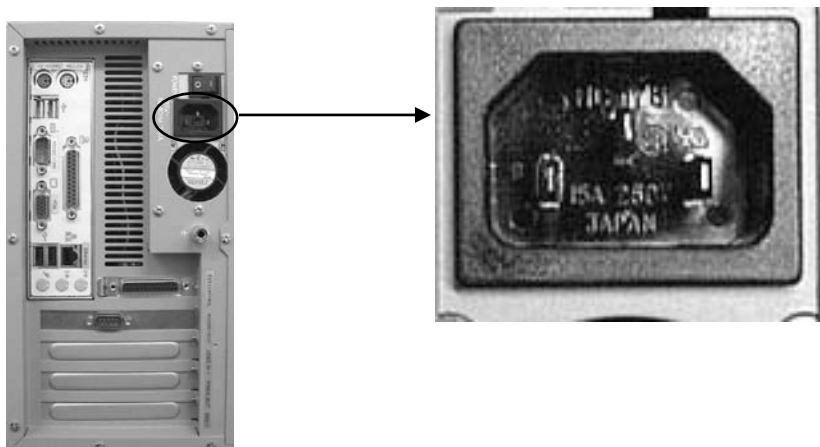


- 一側を押すと ON になります。○側を押すと OFF になります。  
各種ケーブル等の接続完了後に電源スイッチを ON にして装置を使用してください。
- 電源スイッチを ON にすることにより、システムが起動します。



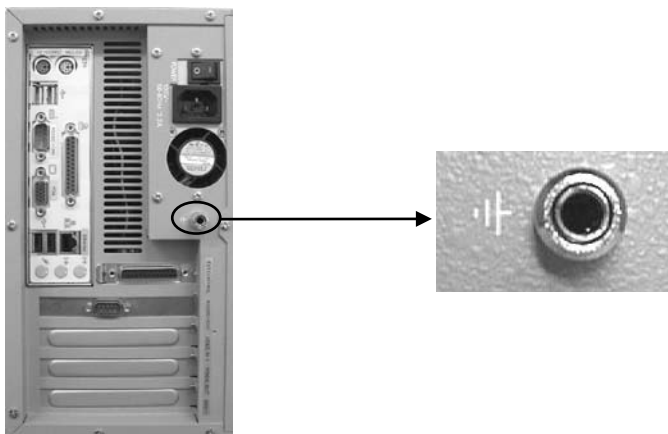
システムの起動中やファイル装置アクセス中（HDD 表示点灯中）は、絶対に電源を切らないでください。ファイルの内容を破壊する場合があります。

### 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 320VA 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。

### 4.3.3 機能接地端子

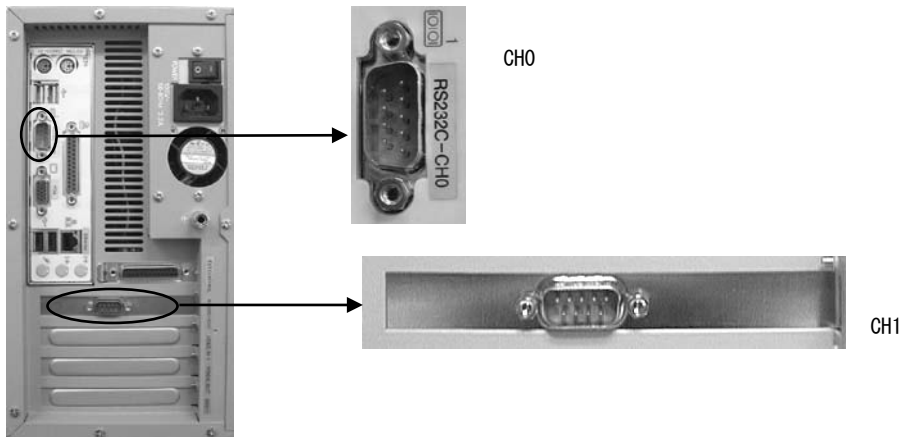


本装置と床面やラック等とのグラウンドレベルを合わせるときに使用します。

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 RS232C コネクタ (CH0/CH1)



- 「RS232C CH0/RS232C CH1」で RS232C 規格・調歩同期式のシリアル通信を提供します。

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)

C-LINK 通信仕様

【 FV2300-DOS 】

- 通信速度 ..... 約 50kbps～100kbps  
(パソコン側の性能に依存します。)
- 半二重通信 ..... パソコンとの通信、または 90x シリーズとの通信をサポートしています。  
(PC-9800 シリーズ、PC/AT 互換機に対応：ホスト通信プログラムや C-LINK ライブラリの形で提供しています。)

RS232C (CH0/CH1) コネクタ (勘合固定ネジ：インチネジ)

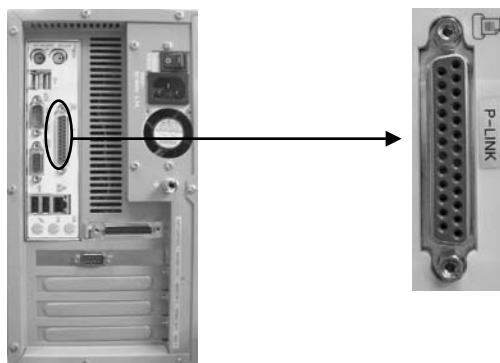
ピン番号	信号名	方向	信号説明
1	(予約)		
2	RXD	←	データ受信の信号線
3	TXD	→	データ送信の信号線
4	DTR	→	FV2300 が活動状態であることを示す。
5	GND		信号 GND
6	DSR	←	相手側が活動状態であることを確認する。
7	RTS	→	送信要求を相手に出す
8	CTS	←	相手が送信可であることを確認する。
9	(予約)		

〔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 パラレル・リンクポート (P-LINK)

#### 【 FV2300-D0S 】



- パラレル・リンクとは、ホストパソコンとの高速データ通信としてソフトウェア開発時の高速ダウンロード用に用意しているものです。弊社ではP-LINKと呼んでいます。
- このポートは、プリンタポートとして定義されているハードウェアを利用しています。  
下表はプリンタポートとしての一般的な方向/信号名/信号説明です。（弊社の使い方で、信号名/方向は変わる場合があります。）

#### パラレル・リンクコネクタ（勘合固定ネジ：インチネジ）

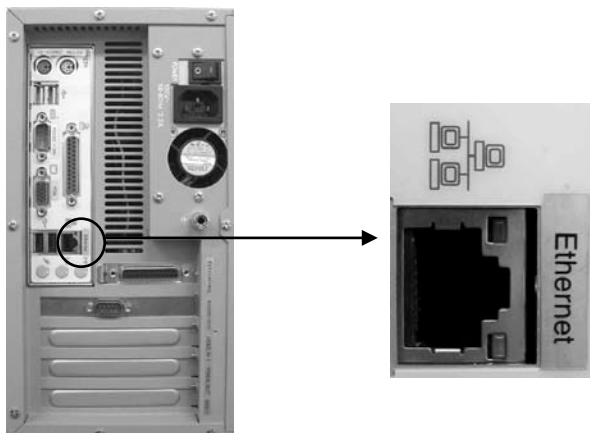
ピン番号	方向	信号名	信号説明
1	→	STOROE	データ取り込み同期信号
2	→	Data Bit 0	送信データ・ビット0
3	→	Data Bit 1	送信データ・ビット1
4	→	Data Bit 2	送信データ・ビット2
5	→	Data Bit 3	送信データ・ビット3
6	→	Data Bit 4	送信データ・ビット4
7	→	Data Bit 5	送信データ・ビット5
8	→	Data Bit 6	送信データ・ビット6
9	→	Data Bit 7	送信データ・ビット7
10	←	ACK	データ取り込み完了
11	←	BUSY	プリンタが受信不能
12	←	PE	ペーパ・エンド
13	←	SLCT	プリンタの選択状態
14	→	AUTO FEED	印刷後自動改行
15	←	ERROR	プリンタ・エラー
16	→	INIT	プリンタ初期化
17	→	SLCT IN	プリンタ選択
18		Ground	
19		Ground	
20		Ground	
21		Ground	
22		Ground	
23		Ground	
24		Ground	
25		Ground	

（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、25ピンDSUBメスコネクタ（RDED-25SE-LNA ヒロセ相当品）です。

## 4.3.6 ETHERNET コネクタ

## 【 FV2300-XPe/FV2300-LNX 】



- 「ETHERNET」コネクタには、LAN ケーブルを接続します。  
10BASE-T/100BASE-TX の UTP ケーブルを接続するためのコネクタです。このポートは、オートネゴシエーションによって通信速度（10Mbps/100Mbps）と通信モード（Full Duplex/Half Duplex）を自動検出し、最適な状態で接続します。  
ネットワークを 100Mbps で正しく稼働させるためには、カテゴリ 5 以上のケーブルを使用してください。カテゴリ 3 またはカテゴリ 4 のケーブルを使用されると、最初は働いていても、各種の不具合（データ損失等）に悩まされる場合があります。  
10Mbps で稼働させるときは、カテゴリ 3、4 または 5 以上の何れかのケーブル配線を使用できますが、FA 現場での信頼性を考慮して、カテゴリ 5 の使用を推奨いたします。  
また、本装置と集線装置（ハブ）の間の長さは、最長 100m までとし、この長さを超えることはできません。

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）：100Base-T 時に点灯します。10Base-T 時に消灯します。

## 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

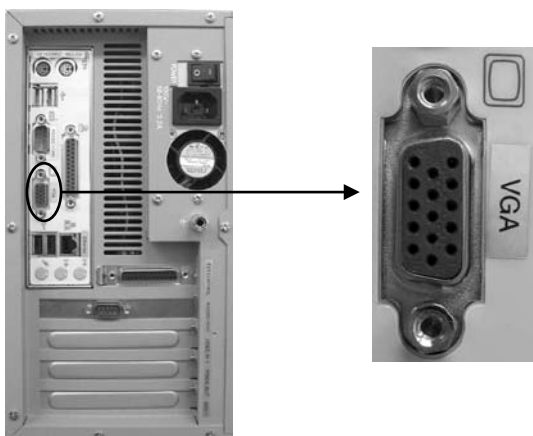
【注1】 方向の“1”は入力、“0”は出力、“1/0”は入出力、“N/A”は電源または、予約を示す。

【注2】 使用コネクタは RJ45 コネクタです。



### 4.3.7 VGA コネクタ

#### 【 FV2300-XPe/FV2300-LNX 】



- 「VGA」コネクタには、VGA 規格の CRT モニタを接続します。

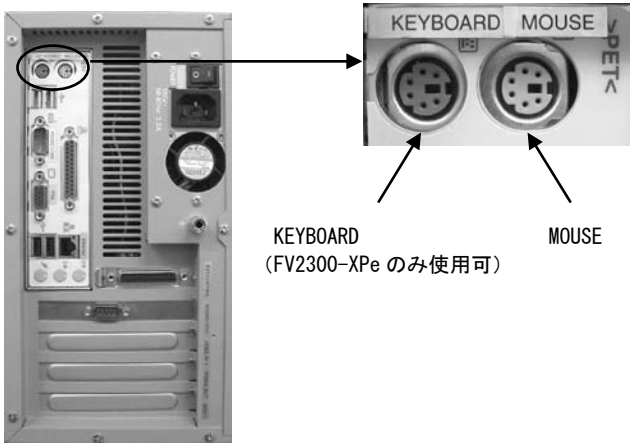
#### VGA コネクタ

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	VSNC
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. 8 PS/2 コネクタ (MOUSE/KEYBOARD)



- 「MOUSE」には、トラックボール（PS/2 仕様のトラックボールまたはマウス）を接続します。
- 「KEYBOARD」には何も接続しないでください。（FV2300-XPe のみ使用可）



電源投入時にトラックボールが接続されていることを確認してから電源を入れてください。

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 (FV2300-XPe のみ使用可)

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もらう場合があります。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



- 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。



このネジをはずします。

## 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 (<http://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ください。

#### 【 FV2300-XPe 】

FV2300-XPe 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-001 (a/b)	EIA 準拠カメラ用画像入力ボード	PCI
FVC01	白黒カメラ用画像入力ボード	PCI
FVC02	高速アナログ画像入力ボード	PCI
FVC04 (a)	カメラリンク対応画像入力ボード	PCI
FVC05	高速アナログ画像入力ボード	PCI
FVC06	カメラリンク対応画像入力ボード	PCI
FHC3310 (A)	高速・高分解能画像入力ボード	PCI
FHC3310CL	カメラリンク対応高速画像入力ボード	PCI
FHC3321 (A)	高分解能デジタル画像入力ボード	PCI
FHC3328	カラー画像入力ボード	PCI
FI001	フォトカブラ絶縁 I/O ボード	PCI

※お客様がお手持ちの装置に RICE-001b を搭載する際には、事前にドライバソフトウェア Ver4. 0.0 以上にバージョンアップする必要があります。それ以前のバージョンのドライバソフトウェアでは、正常に取込が出来ない等の不具合が発生します。ご注意ください。

#### 【 FV2300-LNX 】

FV2300-LNX 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-001 (a/b)	EIA 準拠カメラ用画像入力ボード	PCI
FVC02	高速アナログ画像入力ボード	PCI
FVC04 (a)	カメラリンク対応画像入力ボード	PCI
FVC05	高速アナログ画像入力ボード	PCI
FVC06	カメラリンク対応画像入力ボード	PCI
FHC3321 (A)	高分解能デジタル画像入力ボード	PCI
FHC3310 (A)	高速・高分解能画像入力ボード	PCI
FI001	フォトカブラ絶縁 I/O ボード	PCI

※お客様がお手持ちの装置に RICE-001b を搭載する際には、事前にシステムソフトウェア Ver2. 00 以上にバージョンアップする必要があります。それ以前のバージョンのシステムソフトウェアでは、正常に取込が出来ない等の不具合が発生します。ご注意ください。

## 【 FV2300-D0S 】

FV2300-D0S 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
PLUM-001	EIA 準拠モニタ表示用画像出力ボード	PCI
RICE-001 (a/b)	EIA 準拠カメラ用画像入力ボード	PCI
FVC01	白黒カメラ用画像入力ボード	PCI
FVC02	高速アナログ画像入力ボード	PCI
FVC05	高速アナログ画像入力ボード	PCI
FHC330A	高分解能アナログ画像入力ボード	PCI
FHC3310 (A)	高速・高分解能画像入力ボード	PCI
FHC3321 (A)	高分解能デジタル画像入力ボード	PCI
FI001	フォトカブラ絶縁 I/O ボード	PCI

※お客様がご手持ちの装置に RICE-001b を搭載する際には、事前にシステムソフトウェア Ver5.10 以上にバージョンアップする必要があります。それ以前のバージョンのシステムソフトウェアでは、正常に取込が出来ない等の不具合が発生します。ご注意ください。

## 5.5 ボード搭載ルール

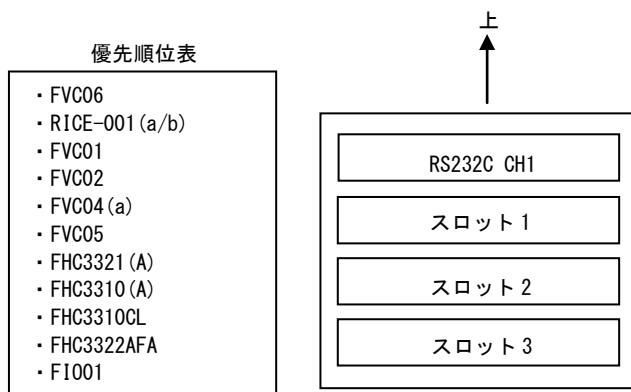
弊社が用意しているボードには本体に搭載するための組み合わせのルールがあります。本章は『5.4 組み込み可能なボード』の章をご覧になりながらお読みください。

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 (<http://www.fast-corp.co.jp/>) 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 FV2300 本体を縦置き（標準）した場合のものです。

### 【 FV2300-XPe 】



※ボードはスロット 1 から優先順位表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。

- ※ 同一画像入力ボードは 2 枚まで搭載できます。
- ※ RICE-001 (a/b) の EXT. CONTROL コネクタはオプションです。
- ※ RICE-001 は 2 枚搭載することはできません。(RICE-001a/b を除く)
- ※ FVC06 は 2 スロット占有するため 1 枚しか搭載できません。
- ※ RICE-001a/b を 2 枚搭載した場合、オプションの EXT. CONTROL コネクタは搭載できません。
- ※ 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。

FAST Vision Library for Windows をご利用の場合は、上記の制限に加え以下の制限があります。

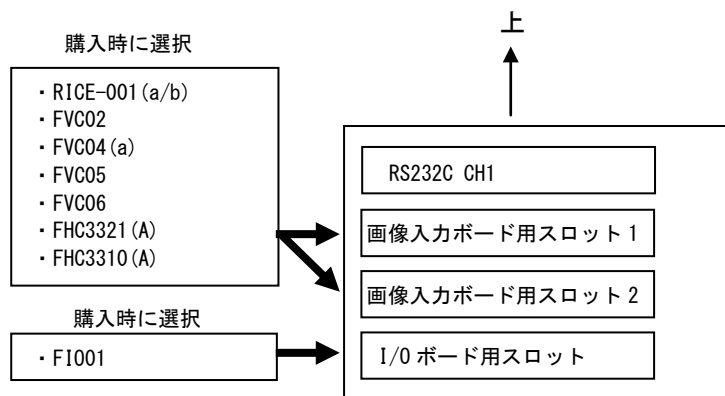
- ※ 異なる画像入力ボードを混載することはできません。
- ※ RICE-001a/b を 2 枚搭載することはできません。



本装置が FVC01, FVC02, FVC05 を通してカメラへ供給できる+12V は 3A (36W) までです。



## 【 FV2300-LNX 】

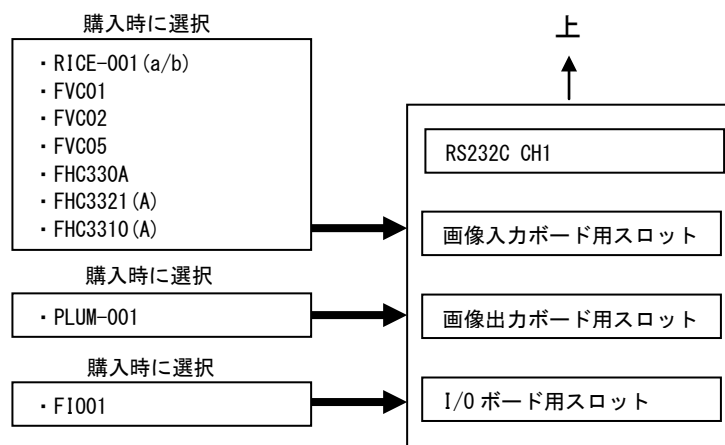


画像入力ボード用スロット 1、2 には最大 2 枚まで画像入力ボードを搭載可能ですが、システムの仕様等により組み合わせには以下の制限があります。ご注意ください。

- ※ FVC06 は 2 スロット占有するため、他のボードと組み合わせることはできません。
- ※ RICE-001 (a/b)、FVC06 は 1 枚のみ対応、それ以外のボードは 2 枚までの対応です。
- ※ RICE-001 (a/b) の EXT. CONTROL コネクタはオプションです。
- ※ FVC04 (a) は他のボードと組み合わせて搭載することは出来ません。
- ※ RICE-001 (a/b)、FVC02、FVC05 は組み合わせて搭載することは出来ません。
- ※ 画像入力ボード用スロット 1 は、RICE-001 (a/b)、FVC02、FVC05、FVC04 (a) の搭載が優先されます。
- ※ 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。

	システムの仕様による 搭載可能枚数	最大 2 枚搭載可能				
		縦列で組合せて選択可能				
RICE-001 (a/b)	1	●	—	—	—	—
FVC02	2	—	●	—	—	—
FVC05	2	—	—	●	—	—
FVC04 (a)	2	—	—	—	●	—
FVC06	1	—	—	—	—	●
FHC3321 (A)	2	●	●	●	—	—
FHC3310 (A)	2	●	●	●	—	—

## 【 FV2300-D0S 】

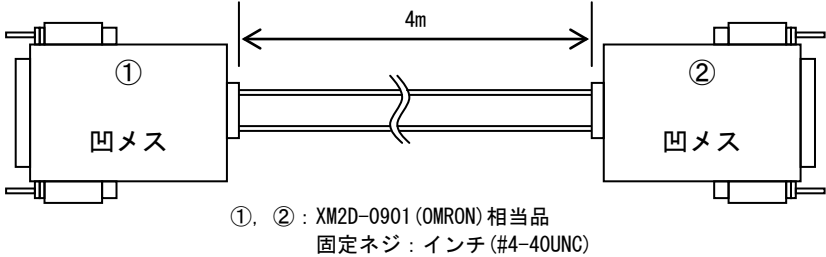




6. ケーブル配線図

6.1 RS232C ケーブル (オプション)

RS232C シリアルケーブル 5 (9pin メス－9pin メス)



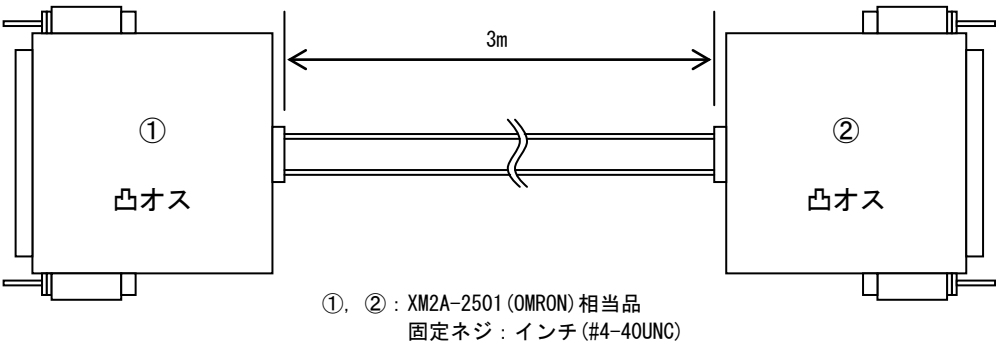
RS232C シリアルケーブル 5

①FV2300			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	

6.2    平行・リンクケーブル(オプション)

【 FV2300-D0S 】

平行・リンクケーブル 1 (25pin オス-25pin オス)



平行・リンクケーブル 1

①FV2300-D0S/M2			②相手機器		
信号名	ピン番号			ピン番号	信号名
data0	2			15	ERROR
data1	3			13	SLCT
data2	4			12	PE
data3	5			10	ACK
data4	6			11	BUSY
BUSY	11			6	data4
ACK	10			5	data3
PE	12			4	data2
SLCT	13			3	data1
ERROR	15			2	data0
GND	25			25	GND

## 7. 保証について

### 保証の制限

保証は、明示した保証期間および条件のもとで下記に記載の保証内容をお約束するものです。従いまして明示、暗示を問わず、その他の一切の保証を行うものではありません。

また、本製品は、一般的な商業・工業用途で使用されていることを意図して設計されております。従いまして、極めて高い信頼性が要求される下記のような特定用途でご使用される場合は当保証適用外とさせていただきます。

自動車電装、列車制御、交通信号制御、燃焼制御、防火・防犯装置、航空宇宙機器、  
海底中継機器、原子力制御システム、生命維持のための医療機器等

### 保証内容

商品は、厳格な検査を経て出荷されておりますが、万一製造上の不備による故障または輸送中の事故等による故障が発生した場合には、弊社営業までご連絡ください。

- (1) 製品の保証期間は出荷日から1年です。  
取扱説明書・仕様書に従った正常な使用状態で製品が故障した場合には、保証保守条件に従い無償修理させていただきます。
- (2) 修理は、本体または部品の交換で対応させていただきます。  
部品は製造中止等により、互換品を使用する場合があります。
- (3) 保証期間後は有償修理となります。  
修理費は、基本修理費3万円及び交換部品費です。
- (4) 保証期間内でも次の場合は有償修理となります。
  - 火災、地震、水害、落雷、その他の天変地異、公害や異常電圧、異常周波数による故障または損害
  - お買い上げ後の輸送、移動時の落下等のお取扱いが不適切な為に生じた故障または損害
  - 取扱説明書、仕様書に記載された使用方法や注意に反するお取扱いによって生じた故障または損害
  - お客様ご自身の修理、改造による故障または損害
  - 接続している他の機器に起因する故障または損害
  - 車両や船舶等に搭載された場合による故障または損害
- (5) 修理は弊社工場のみで行い、出張修理は行いません。
- (6) 修理対応期間は、製造終了より6年間です。修理に要する期間は4～5週間程度です。
- (7) 修理部品の変更等により、修理後性能が向上する場合があります。
- (8) 弊社から提出する修理報告書は、交換した部品名を通知する程度の情報となります。  
故障原因等の調査を必要とされる場合は、別途調査費用を請求させていただきます。
- (9) 弊社の指定外の部品等を搭載することによって起こった不具合修理、サポートは行いません。
- (10) 日本国外からの修理品の受領および、日本国外への修理品の発送は行いません。

### 責任の制限

当社製品の故障または損傷に起因するお客様での二次災害(装置の損傷、機械損失、逸失利益など)および、いかなる損害も保証の対象外とさせていただきます。

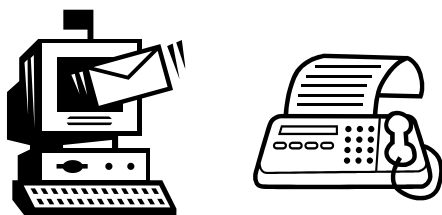
## 7.1 サポートが必要な場合

本製品について疑問や問題が生じた場合、ユーザ・サポートでは技術的なお問い合わせに関して E-Mail、FAX、電話にて対応させていただいております。

なお、お問い合わせの際は、

- ユーザ登録番号（「ユーザ登録完了のお知らせ」に記載されているユーザ登録 No「U-XXXX」）
- 本装置の型番（装置前面に装置銘板、及び補助シールが貼られています）
- 本装置のシリアル番号（装置の背面に貼られています）

を必ずお知らせください。これらはサポート上、製品の構成や世代などを知るうえで大変重要な情報となります。また、より正確な情報を確認し、迅速なサポートをするためになるべくお問い合わせは、E-Mail、FAX にてお問い合わせください。

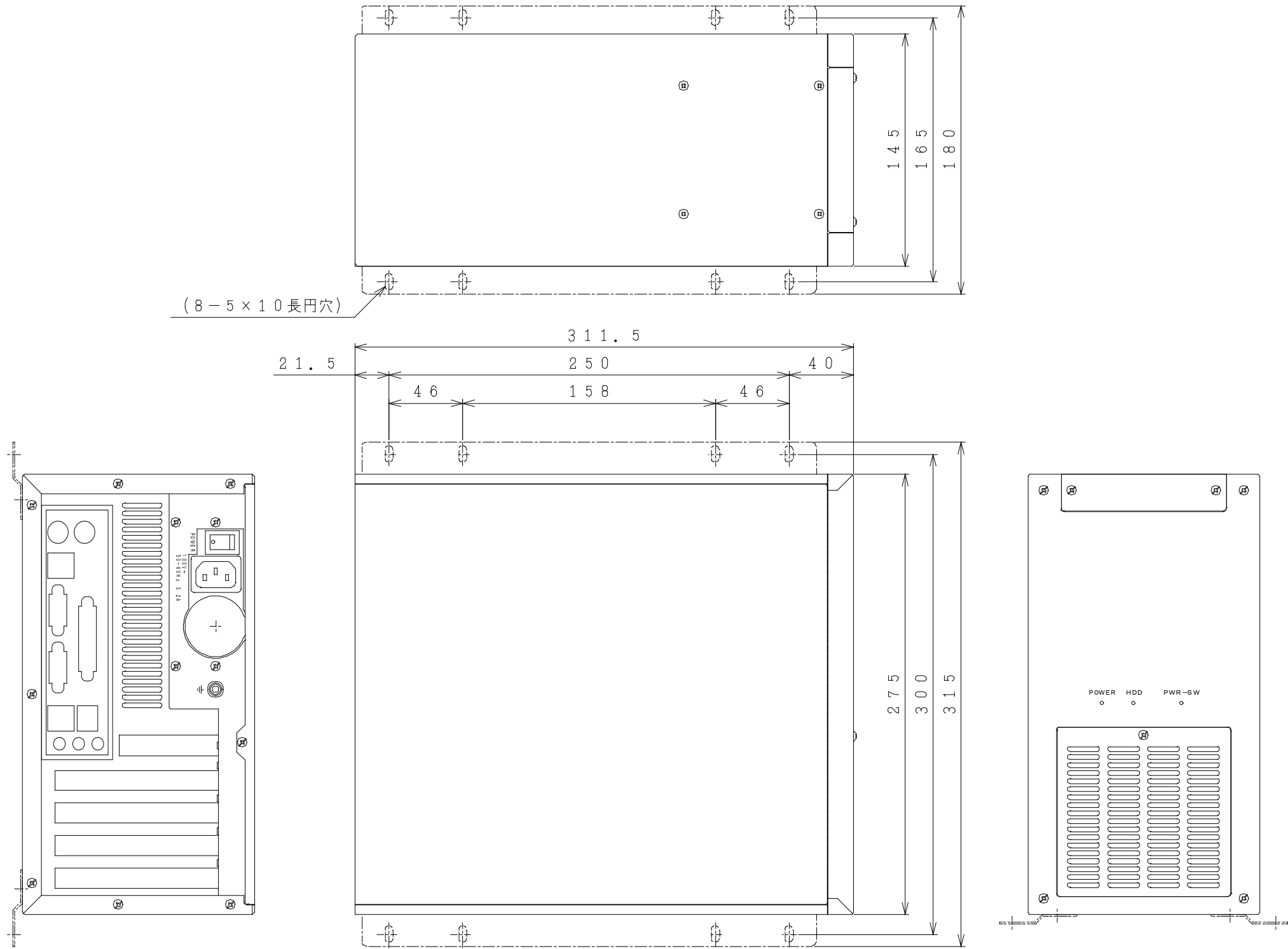


専門のエンジニアが折返し、電話、E-Mail、または FAX でお答えいたします。  
ご協力をお願いいたします。

ユーザ・サポート

FAX 046-272-8692 TEL 046-272-8691  
E-mail : support@fast-corp.co.jp

ユーザ・サポートの受付は月曜～金曜（除く祝祭日）の午前 9:00～12:00、午後 1:00～5:00 となっております。  
なお、弊社ホームページ（<http://www.fast-corp.co.jp/>）でも様々な情報を提供しておりますので、併せてご利用ください。



				製図	M. ZENIBUKURO	2003. 3. 3	尺度	1/3	(品名)	F V 2 3 0 0 外観図
				設計					(図番)	C S C 3 3 8 6
				承認						
記号	変更内容	承認	日付	(株) ファースト						

## Microsoft Software License Terms for:

### Windows® XP Embedded Runtime

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These license terms are an agreement between you and *FAST Corporation*. Please read them. They apply to the software included on this device. The software also includes any separate media on which you received the software.

The software on this device includes software licensed from Microsoft Corporation or its affiliate.

The terms also apply to any Microsoft

- Updates,
- Supplements,
- Internet-based services, and
- Support services

for this software, unless other terms accompany those items. If so, those terms apply. If you obtain updates or supplements directly from Microsoft, then Microsoft, and not *FAST Corporation*, licenses those to you.

As described below, using some features also operates as your consent to the transmission of certain standard computer information for Internet-based services.

By using the software, you accept these terms. If you do not accept them, do not use or copy the software. Instead, contact *FAST Corporation* to determine its return policy for a refund or credit.

If you comply with these license terms, you have the rights below.

#### 1. Use Rights.

You may use the software on the device with which you acquired the software.

#### 2. Additional Licensing Requirements and/or Use Rights.

- a. **Specific Use.** *FAST Corporation* designed this device for a specific use. You may only use the software for that use.
- b. **Other Software.** 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.

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.

#### c. Device Connections.

- You may use terminal services protocols to connect the device to another device running business task or processes software such as email, word processing, scheduling or spreadsheets.
- 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.



3. **Scope of License.** The software is licensed, not sold. This agreement only gives you some rights to use the software. *FAST Corporation* and Microsoft reserve all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that allow you to use it only in certain ways. For more information, see the software documentation or contact *FAST Corporation*. Except and only to the extent permitted by applicable law despite these limitations, you may not:

- Work around any technical limitations in the software;
- Reverse engineer, decompile or disassemble the software;
- Make more copies of the software than specified in this agreement;
- Publish the software for others to copy;
- Rent, lease or lend the software; or
- Use the software for commercial software hosting services.

Except as expressly provided in this agreement, rights to access the software on this device do not give you any right to implement Microsoft patents or other Microsoft intellectual property in software or devices that access this device.

You may use remote access technologies in the software such as Remote Desktop to access the software remotely from another device. You are responsible for obtaining any licenses required for use of these protocols to access other software.

- **Remote Boot Feature.** If the *FAST Corporation* enabled the device Remote Boot feature of the software, you may
  - (i) use the Remote Boot Installation Service (RBIS) tool only to install one copy of the software on your server and to deploy the software on licensed devices as part of the Remote Boot process; and
  - (ii) use the Remote Boot Installation Service only for deployment of the software to devices as part of the Remote Boot process; and
  - (iii) download the software to licensed devices and use it on them.

For more information, please refer to the device documentation or contact *FAST Corporation*.

- **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 software features described below connect to Microsoft or service provider computer systems over the Internet. In some cases, you will not receive a separate notice when they connect. You may switch off these features or not use them. For more information about these features, visit

<http://www.microsoft.com/windowsxp/downloads/updates/sp2/docs/privacy.mspx>.

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

b. **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, browser and 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.

- **Web Content Features.** Features in the software can retrieve related content from Microsoft and provide it to you. To provide the content, these features send to Microsoft the type of operating system, name and version of the software you are using, type of browser and language code of the device where the software was installed. Examples of these features are clip art, templates, online training, online assistance and Appshelp. These features only operate when you activate them. You may choose to switch them off or not use them.
- **Digital Certificates.** The software uses digital certificates. These digital certificates confirm the identity of Internet users sending X.509 standard encrypted information. The software retrieves certificates and updates certificate revocation lists. These security features operate only when you use the Internet.

- ***Auto Root Update.*** The Auto Root Update feature updates the list of trusted certificate authorities. You can switch off the Auto Root Update feature.
  - ***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:  
<http://microsoft.com/windows/windowsmedia/mp10/privacy.aspx>.
  - ***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.
- 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.
4. **Windows Update Agent (also known as Software Update Services).** The software on the device includes Windows Update Agent ("WUA") functionality that may enable your device to connect to and access updates ("Windows Updates") from a server installed with the required server component. Without limiting any other disclaimer in this Microsoft Software License Terms or any EULA accompanying a Windows Update, you acknowledge and agree that no warranty is provided by MS, Microsoft Corporation or their affiliates with respect to any Windows Update that you install or attempt to install on your device.
  5. **Product Support.** Contact *FAST Corporation* for support options. Refer to the support number provided with the device.
  6. **Backup Copy.** You may make one backup copy of the software. You may use it only to reinstall the software on the device.
  7. **Proof Of License.** If you acquired the software on the device, or on a disc or other media, a genuine Certificate of Authenticity label with a genuine copy of the software identifies licensed software. To be valid, this label must be affixed to the device, or included on or in *FAST Corporation's* software packaging. If you receive the label separately, it is not valid. You should keep the label on the device or packaging to prove that you are licensed to use the software. To identify genuine Microsoft software, see <http://www.howtotell.com>.
  8. **Transfer to a Third Party.** You may transfer the software only with the device, the Certificate of Authenticity label, and these license terms directly to a third party. Before the transfer, that party must agree that these license terms apply to the transfer and use of the software. You may not retain any copies of the software including the backup copy.
  9. **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.
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/\* zlib.h -- interface of the 'zlib' general purpose compression library  
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libjpeg-6b

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他のCFカード又はシステムSSDで試したか？

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