

付録A 仕様

項目		Express5800/320La	Express5800/320La-R
		N8800-018	N8800-019
出荷時のモデル形態		インストールモデル	インストールモデル
CPU	タイプ	Intel® Pentium® III Processor (800MHz/256KB)	
	標準	2個(各モジュールごとの搭載数)	
チップセット		ServerWorks ServerSet III LE	
メモリ	標準	256MB (DIMM×1枚、各モジュールごとの搭載数)	
	最大	2GB (標準装備のDIMMも交換必要)	
	増設単位	1枚単位 (128/256/512MB)	
	増設機会	4回	
	メモリモジュール	SDRAM DIMM (PC100 Buffered Type)	
	Check方式	ECC	
グラフィックス (VRAM)		CT69000 (VRAM 2MB)	
補助入力装置	70ピポディスク (標準)	3.5インチドライブ×1 (IDE)	
	CD-ROM (標準)	ATAPIドライブ×1 (トレードロード24倍速以上)	
	ハードディスク (標準)	36.2GB (18.1GB×2)	
	ハードディスク (最大)	439.2GB (73.2GB×6) * ただし、ソフトウェアミラーを行うためユーザー使用領域は物理容量の1/2となる。	
拡張ベイ	5.25インチ	2スロット (内蔵デバイスベイ増設キットが必要)	なし
	3.5インチ	6スロット	
拡張スロット	PCI (32-bit)	8スロット (グラフィックスボードで2スロット使用)	
LAN		100Base-TX/10Base-T (2ポート)	
外部インタフェース	USB	4-pinコネクタ (3ポート。キーボードで1ポート使用)	
	シリアル	D-sub 9-pin (2ポート)	
	ネットワーク	RJ-45 (2ポート)	
	ディスプレイ	MINI D-sub 15-pin (1ポート)	
筐体デザイン		デスクサイド、ミニタワー	ラックマウント
外形寸法		350mm (幅) × 525mm (高さ) × 694mm (奥行き)	483mm (幅) × 350mm (高さ) × 694mm (奥行き)
質量		最大64kg	
電源		AC100V ± 10%、50/60Hz	
消費電力		880VA、870W	
環境条件		温度: 10~35°C、湿度: 20~80% (ただし、結露しないこと)	
バンドルOS		Linux	
サポートOS		Linux	
標準添付品		109型キーボード、2ボタンマウス、電源コード、EXPRESSBUILDER™ (CD-ROM)、バックアップCD-ROM1、バックアップCD-ROM2、構成品表、スタートアップガイド、ユーザーズガイド (本書)、保証書、お客様登録申込書	電源コード、EXPRESSBUILDER™ (CD-ROM)、バックアップCD-ROM1、バックアップCD-ROM2、構成品表、スタートアップガイド、ユーザーズガイド (本書)、保証書、お客様登録申込書
標準添付ソフトウェア		なし	

付録B I/Oポートアドレス

I/Oポートアドレスは、出荷時に次のように割り当てられています。オプションを増設するときなどに参考にしてください。

アドレス	使用チップ	注釈	設定	デフォルト (_PRS)
00-1Fh	8-bit DMAコントロールレジスタ	ROSB4	OS標準	
20-21h	マスタ8259プログラミングインタフェース	ROSB4	OS標準	
2E-2Fh	コンフィグレーション	PC97317		
40-43h	8254プログラミングインタフェース	ROSB4	OS標準	
60h	キーボード/マウス	PC97317	OS標準	000 (IRQ = 1)
61h	NMIステータスレジスタ/システムコントロールポートB	ROSB4	OS標準	
64h	キーボード/マウス	PC97317	OS標準	000 (IRQ = 1)
70h	NMIイネーブルレジスタ/リアルタイムクロックインデックス	ROSB4, PC97317	OS標準	
71h	リアルタイムクロックデータ	PC97317	OS標準	
80-8Fh	16-bit DMAコントロールレジスタ	ROSB4	OS標準	
90-91h	システム		OS標準	
92h	システムコントロールポートA	ROSB4	OS標準	
93-9Fh	システム		OS標準	
A0-A1h	スレーブ8259プログラミングインタフェース	ROSB4	OS標準	
C0-DFh	DMAコントローラページレジスタ	ROSB4	OS標準	
E0-E9h	317論理デバイスページ	PC97317	BIOS	
F0h	レジスタIRQ13	ROSB4	OS標準	
F0-FFh	コプロセッサ		OS標準	
102-105h		ROSB4		
107h, 170-177h	EDMA2互換モードセカンダリコマンドブロックレジスタ	ROSB4 ROSB4	OS標準	
1F0-1F7h	EDMA2互換モードプライマリコマンドブロックレジスタ	ROSB4	OS標準	
201h	(ジョイスティックインタフェース)		OS標準	
220-22Fh	サウンドプラスタ		OS標準	
278-27Fh	(パラレルポート3)	PC97317	BIOS, ASL	001 (IRQ = 7)
2E8-2EFh	シリアルポート	PC97317	BIOS, ASL	003 (IRQ = 3), 007 (IRQ = 4)
2F8-2FFh	シリアルポート2	PC97317	BIOS, ASL	001 (IRQ = 3), 005 (IRQ = 4)
376h	EDMA2互換モードセカンダリコマンドブロックレジスタ	ROSB4	OS標準	
370-377h	(フロッピーディスク2), IDE 2	PC97317		
378-37Fh	(パラレルポート2)	PC97317	BIOS, ASL	000 (IRQ = 7)
388-38Bh	FM シンセシス		OS標準	
3B0-3BBh	MDA, EGA/VGA		OS標準	
3BC-3BEh	(パラレルポート1)	PC97317	BIOS, ASL	002 (IRQ = 7)
3C0-3DFh	EGA/VGA		OS標準	
3E0-3E7h	PCIC PCMCIAコントローラ		OS標準	
3E8-3EFh	シリアルポート	PC97317	BIOS, ASL	002 (IRQ = 4), 006 (IRQ = 3)
3F6h	EDMA2互換モードプライマリコマンドブロックレジスタ	ROSB4		
3F0-3F7h	(フロッピーディスク1), IDE 1	PC97317	OS標準	000 (IRQ = 6)
3F8-3FFh	シリアルポート1	PC97317	BIOS, ASL	000 (IRQ = 4), 004 (IRQ = 3)

アドレス	使用チップ	注釈	設定	デフォルト (_PRS)
400-403h	PM1a_BLK	PC97317	BIOS	
404-407h	PM_TMR	PC97317	BIOS	
408-409h	PM1a_CTRL_BLK	PC97317	BIOS	
40Bh	DMA1拡張ライトモードレジスタ	ROSB4		
410-417h	GP0_BLK	PC97317	BIOS	
418h	汎用2イネーブルレジスタ	PC97317		
419-41Bh	将来用(RO)			
41D-41Fh	将来用(RO)			
4D0h	マスタ8259 ELCRプログラミング	ROSB4		
4D1h	スレーブ8259 ELCRプログラミング	ROSB4		
4D6h	DMA2拡張ライトモードレジスタ	ROSB4		
534-537h	Windowsサウンドシステム互換		OS標準	
580-58Ch	SMバス	ROSB4	BIOS	
678-67Fh	(パラレルポート)	PC97317	BIOS, ASL	ECP: 001 (IRQ = 7, DMA = 0, 1, 3)
778-77Fh	(パラレルポート)	PC97317	BIOS, ASL	ECP: 000 (IRQ = 7, DMA = 0, 1, 3)
7BC-7C3h	(パラレルポート)	PC97317	BIOS, ASL	ECP: 002 (IRQ = 7, DMA = 0, 1, 3)
800-803h	PM1a_BLK	ROSB4	BIOS	
804-805h	PM1a_CTRL_BLK	ROSB4	BIOS	
808-80Bh	PM_TMR	ROSB4	BIOS	
80C-811h	P_BLK	ROSB4	BIOS	
814-81Bh	GP0_BLK	ROSB4	BIOS	
81Ch	SMI_CMD	ROSB4	BIOS	
820h	PM2_CTR_BLK	ROSB4	BIOS	
C00h	PCI IRQマッピングインデックスレジスタ	ROSB4		
C01h	PCI IRQマッピングデータレジスタ	ROSB4		
C06h	ブラックボックスコマンドレジスタ	ROSB4		
C07h	ブラックボックスデータレジスタ	ROSB4		
C08h	ブラックボックスステータスレジスタ	ROSB4		
C14h	PCIエラーステータスレジスタ	ROSB4		
C49h	アドレス/ステータスコントロール	ROSB4		
C4Ah	ライズタイムカウンタ値	ROSB4		
C50h	CMインデックスレジスタ	ROSB4		
C51h	CMデータレジスタ	ROSB4		
C52h	汎用レジスタ(GPMs)	ROSB4		
C6Ch	ISAウェイトレジスタ	ROSB4		
C6Fh	その他コントロールレジスタ	ROSB4		
CA2, CA3h	BMC SMSレジスタ	BMC		
CA4, CA5h	BMC SMIレジスタ	BMC		
CD6h	パワーマネージメントインデックスレジスタ	ROSB4		
CD7h	パワーマネージメントデータレジスタ	ROSB4		
CF8, CFCh	PCIコンフィグレーションスペース	CNB30LE	OS標準	
CF9h	リセットコントロール	CNB30LE		
F50-F58h	汎用チップセット	ROSB4		
(BAR4+00-0Fh)	(EDMA2 PCIベースアドレスレジスタ4)	ROSB4		

付録C 保守サービス会社網一覧

NEC Express5800シリーズ、および関連製品のアフターサービスは、お買い上げのNEC販売店、最寄りのNEC、またはNECフィールディング株式会社までお問い合わせください。下記にNECフィールディングのサービス拠点所在地一覧を示します。

(受付時間：AM9:00～PM5:00 土曜日、日曜日、祝祭日を除く)

次のホームページにも最新の情報が記載されています。

<http://www.fielding.co.jp/>

このほか、NEC販売店のサービス網がございます。お買い上げの販売店にお問い合わせください。

2001年5月現在

都道府県名	拠点名	電話番号	郵便番号	所在地
北海道	札幌支店	011-221-3705	060-0042	北海道札幌市中央区大通西4-1 新大通ビル9F
	新札幌支店	011-894-1131	004-0041	北海道札幌市厚別区大谷地東4-2-20 第二西村ビル1F
	釧路営業所	0154-43-2361	085-0847	北海道釧路市大町1-1-1 道東経済センタービル7F
	旭川支店	0166-24-2098	070-0033	北海道旭川市南三条通9丁目左1号 明治生命旭川ビル1F
	オホーツク営業所	0157-25-7520	090-0024	北海道北見市北四条東3-1-1 富士火災北見ビル3F
	苫小牧営業所	0144-36-3846	053-0022	北海道苫小牧市王子町3-2-23 朝日生命苫小牧ビル2F
	室蘭営業所	0143-46-3180	050-0083	北海道室蘭市東町2-24-4 石井第5ビル3F
	函館支店	0138-54-5642	040-0001	北海道函館市五稜郭町1-14 住友生命五稜郭ビル3F
	帯広営業所	0155-25-4892	080-0013	北海道帯広市西三条南10-32 日本生命帯広駅前ビル5F
	小樽営業所	0134-24-5685	047-0036	北海道小樽市長橋3-4-14
青森	青森支店	017-739-8501	030-0112	青森県青森市八ツ役字芦谷208-25 NECソフトウェア青森本社ビル1F
	八戸営業所	0178-44-4354	031-0081	青森県八戸市柏崎1-10-2 八戸第一生命ビル1F
	弘前営業所	0172-34-9083	036-8001	青森県弘前市代官町38 安田生命弘前ビル1・2F
岩手	盛岡支店	019-635-3011	020-0866	岩手県盛岡市本宮3-13-20
	一関営業所	0191-21-5506	021-0031	岩手県一関市青葉1-6-4 シャトレー壱號館1F
宮城	仙台支店	022-262-3445	980-0811	宮城県仙台市青葉区一番町4-7-17 小田急不動産仙台ビル6F
秋田	秋田支店	018-863-7938	010-0951	秋田県秋田市山王1-3-29
山形	山形支店	023-631-3502	990-2445	山形県山形市南栄町3-6-1
	鶴岡営業所	0235-24-6973	997-0031	山形県鶴岡市大宝寺町1-30
	米沢営業所	0238-21-1281	992-0027	山形県米沢市駅前3-5-22 かなつビル1F
福島	郡山支店	024-938-5209	963-8022	福島県郡山市西ノ内22-13
	福島支店	024-536-3662	960-8131	福島県福島市北五老内町7-5 I・S・M37ビル5F
	いわき営業所	0246-29-5301	970-8034	福島県いわき市平上荒川字桜町34-1
	会津若松営業所	0242-29-3699	965-0818	福島県会津若松市東千石2-1-45
茨城	鹿島支店	0299-82-4860	314-0014	茨城県鹿嶋市光3 住友金属構内
	つくば支店	0298-37-1620	305-0853	茨城県つくば市榎戸783-12 沼尻産業ビル1F
	古河営業所	0280-31-4165	306-0235	茨城県猿島郡総和町大字下辺見2075-18 アメニティビル1F
	水戸支店	029-257-1860	310-0911	茨城県水戸市見和3-575-3
	栃木	宇都宮支店	028-632-8140	321-0954
群馬	小山営業所	0285-21-1495	323-0807	栃木県小山市城東1-14-12 ウエルストーン1ビル1F
	群馬支店	027-243-6316	371-0026	群馬県前橋市大手町2-6-20 安田生命前橋ビル5F
	高崎営業所	027-365-3500	370-0073	群馬県高崎市緑町1-22-5
	太田支店	0276-45-0666	373-0853	群馬県太田市浜町58-24
埼玉	大宮支店	048-660-1881	330-0038	埼玉県さいたま市宮原町2-85-5
	熊谷営業所	048-527-0597	360-0036	埼玉県熊谷市桜木町1-1-1 秩父鉄道熊谷ビル4F
	浦和支店	048-866-5471	336-0022	埼玉県さいたま市白幡4-12-19
	川口営業所	048-225-6722	332-0012	埼玉県川口市本町4-3-2 住友生命川口ビル5F
	川越支店	042-955-7695	350-1331	埼玉県狭山市新狭山2-11-10
	越谷営業所	0489-78-9500	343-0042	埼玉県越谷市千間台東1-7-25 エムケービル1F

都道府県名	拠点名	電話番号	郵便番号	所在地	
千葉	千葉支店	043-252-4309	260-0043	千葉県千葉市中央区弁天町250-1 白樺ビル4F	
	成田営業所	0476-22-5390	286-0044	千葉県成田市不動ヶ岡2152-2 成田旭ビル1F	
	君津営業所	0439-55-7278	299-1144	千葉県君津市東坂田1-3-2 京葉君津ビル3F	
	船橋支店	047-434-1611	273-0012	千葉県船橋市浜町2-1-1 ららぽーと三井ビル1F	
	柏営業所	0471-35-2400	277-0827	千葉県柏市松葉町2-5-1	
東京	東京中央支店	03-3456-5213	108-0073	東京都港区三田1-4-28 三田国際ビル1F	
	大森支店	03-3764-0007	140-0013	東京都品川区南大井6-25-3 ピリーヴ大森ビル8F	
	五反田支店	03-3443-7905	141-0022	東京都品川区東五反田5-25-16 朝日生命五反田ビル1F	
	新橋支店	03-3431-9868	105-0021	東京都港区東新橋2-12-7 住友東新橋ビル2号館3F	
	赤坂支店	03-5413-1701	107-0052	東京都港区赤坂4-9-6 タク赤坂ビル2F	
	三田支店	03-3452-6168	108-0073	東京都港区三田1-4-28 三田国際ビル1F	
	渋谷支店	03-5458-3341	150-0036	東京都渋谷区南平台町2-17 日交渋谷南平台ビル8F	
	新宿支店	03-3352-8071	160-0022	東京都新宿区新宿4-2-18 新宿光風ビル3F	
	池袋支店	03-3985-3194	170-0013	東京都豊島区東池袋1-32-7 三井生命池袋ビル4F	
	日本橋支店	03-3297-0783	104-0033	東京都中央区新川1-11-11 新川東邦ビル3F	
	江東支店	03-3649-3230	135-0016	東京都江東区東陽3-27-32 玉河ビル5F	
	秋葉原支店	03-5821-2474	111-0052	東京都台東区柳橋2-19-6 秀和柳橋ビル8F	
	足立営業所	03-3888-7151	120-0034	東京都足立区千住1-11-2 第百生命千住ビル7F	
	神田支店	03-3233-2411	101-0064	東京都千代田区猿樂町2-7-8 住友水道橋ビル8F	
	府中支店	042-362-6833	183-0036	東京都府中市日新町1-4-5 第六MKビル1F	
	立川支店	042-527-2527	190-0022	東京都立川市錦町2-4-6 住友生命立川ビル3F	
	小金井支店	042-385-7666	184-0013	東京都小金井市前原町5-9-7	
	神奈川	神奈川支店	045-314-7621	220-0004	神奈川県横浜市西区北幸2-8-4 横浜西口KNビル1F
		横須賀営業所	0468-27-3188	238-0004	神奈川県横須賀市小川町14-1 ニッセイ横須賀センタービル1F
川崎営業所		044-244-1083	210-0023	神奈川県川崎市川崎区小川町11-10 第10平沼ビル5F	
相模原支店		042-746-6111	228-0803	神奈川県相模原市相模大野7-1-6 相模大野第一生命ビル4F	
厚木支店		046-225-0411	243-0032	神奈川県厚木市恩名900-4	
平塚支店		0463-21-4777	254-0035	神奈川県平塚市宮の前1-2 大東京火災ビル2F	
藤沢営業所		0466-22-0204	251-0055	神奈川県藤沢市南藤沢17-10 コア湘南田村ビル1F	
小田原営業所		0465-35-9578	250-0042	神奈川県小田原市狹窪362 第二オギクボビル1F	
玉川支店		044-814-1551	213-0002	神奈川県川崎市高津区二子5-1-1 高津パークプラザビル4F	
新潟		新潟支店	025-243-2315	950-0983	新潟県新潟市神道寺275-3
	長岡支店	0258-35-5217	940-0034	新潟県長岡市福住2-3-6 小林石油ビル	
	柏崎営業所	0257-22-2362	945-0833	新潟県柏崎市若葉町2-22 柏崎情報開発センター2F	
富山	富山支店	076-442-2605	930-0004	富山県富山市桜橋通り1-18 住友生命富山ビル1F	
	黒部営業所	0765-54-0447	938-0031	富山県黒部市三日市宇新光寺1880-1	
	高岡営業所	0766-25-4212	933-0912	富山県高岡市丸の内1-40 高岡商工ビル8F	
石川	金沢支店	076-223-3188	920-0864	石川県金沢市高岡町1-39 住友生命金沢高岡町ビル7F	
	小松営業所	0761-24-3782	923-0926	石川県小松市竜助町36 小松東京海上ビル3F	
	七尾営業所	0767-54-0298	926-0012	石川県七尾市相生町45	
福井	福井支店	0776-54-6637	918-8206	福井県福井市北四ツ居518	
山梨	甲府支店	055-226-7564	400-0858	山梨県甲府市相生2-3-16 住友海上甲府ビル3F	
	富士吉田営業所	0555-23-9515	403-0005	山梨県富士吉田市上吉田3726 ヤマナン文具センタービル2F	
長野	松本支店	0263-27-7070	399-0033	長野県松本市笹賀6096-1	
	岡谷営業所	0266-24-4870	394-0028	長野県岡谷市本町4-5-18	
	長野支店	026-224-0050	380-0824	長野県長野市南石堂町1293 清水長野ビル1F	
	上田営業所	0268-27-6336	386-0032	長野県上田市諏訪形5-1 豊成ビル5F	
	飯田営業所	0265-53-7043	395-0815	長野県飯田市松尾常盤台73-10	
岐阜	東濃営業所	0572-55-4578	509-5132	岐阜県土岐市泉町大富261-8	
	岐阜支店	058-275-8801	500-8367	岐阜県岐阜市宇佐南3-4-7	
	高山営業所	0577-33-6524	506-0021	岐阜県高山市名田町5-95-2 第3みたかビル5F	
	中濃営業所	0574-27-6431	505-0041	岐阜県美濃加茂市太田町飛鹿1927-2	

都道府県名	拠点名	電話番号	郵便番号	所在地
静岡	静岡支店	054-251-4688	420-0851	静岡県静岡市黒金町3 NEC静岡ビル5F
	富士営業所	0545-64-6735	416-0944	静岡県富士市横割1-17-24 FCビル2F
	沼津支店	0559-73-6001	411-0906	静岡県駿東郡清水町八幡88-1
	浜松支店	053-466-0205	435-0047	静岡県浜松市原島町111
愛知	掛川営業所	0537-23-2181	436-0056	静岡県掛川市中央1-4-2 タウンビル3F
	名古屋支店	052-264-7561	460-0007	愛知県名古屋市中区新栄2-28-22 NEC名古屋ビル5F
	名西営業所	052-442-7451	490-1111	愛知県海部郡甚目寺町大字甚目寺字山王22 (株) シーエスイー山王ビル
	名南支店	052-694-1066	457-0862	愛知県名古屋市南区内田橋1-8-5 アートライフ・タケセイ1F
	半田営業所	0569-22-2762	475-0903	愛知県半田市出口町1-130-1 森田ビル4F
	小牧支店	0568-75-5594	485-0029	愛知県小牧市中央1-271 大垣共立銀行小牧支店ビル4F
	豊田営業所	0565-34-1168	471-0034	愛知県豊田市小坂本町1-5-3 朝日生命新豊田ビル4F
	三河支店	0564-23-5020	444-0044	愛知県岡崎市康生通南3-5 住友生命岡崎第二ビル1F
三重	豊橋北営業所	0532-55-3063	440-0084	愛知県豊橋市下地町瀬上83番地
	三重支店	0593-51-0425	510-0074	三重県四日市市鶴の森1-5-16 第百生命四日市ビル6F
	津営業所	059-227-1622	514-0028	三重県津市東丸之内33-1 津フェニックスビル4F
	松阪営業所	0598-51-6185	515-0002	三重県松阪市郷津町234-1
滋賀	伊賀上野営業所	0595-23-8914	518-0873	三重県上野市丸之内128 共立ビル2F
	滋賀支店	077-525-3156	520-0043	滋賀県大津市中央4-5-4 BKビル
	彦根営業所	0749-24-1784	522-0073	滋賀県彦根市旭町8-20
京都	八日市営業所	0748-25-0680	527-0022	滋賀県八日市市上之町2-7 ウイング八日市3F
	京都支店	075-812-5800	604-8804	京都府京都市中京区壬生坊城町24-1 古川勘ビル4F
	宇治営業所	0774-20-1210	611-0042	京都府宇治市小倉町久保111-1 辻岩ビル新館4F
	福知山支店	0773-23-6287	620-0942	京都府福知山市宇田288 竹下駅南ビル2F
	舞鶴営業所	0773-63-7236	625-0036	京都府舞鶴市字浜160 スクウェアビル大門3F
大阪	亀岡営業所	0771-25-7320	621-0805	京都府亀岡市安町中島1-2 スカイビル5F
	大阪中央支店	06-6264-2820	541-0053	大阪府大阪市中央区本町2-1-6 堺筋本町センタービル5F
	寝屋川営業所	072-833-5284	573-0094	大阪府枚方市南中振1-16-27 宅建ハウジングビル6F
	此花営業所	06-6463-7871	553-0005	大阪府大阪市福島区野田2-13-5 うおいちニッセイビル6F
	淀川支店	06-6305-5444	532-0011	大阪府大阪市淀川区西中島1-11-16 住友商事淀川ビル2F
	北摂営業所	0726-73-5481	569-0071	大阪府高槻市城北町1-5-25 高槻FJYビル1F
	千里支店	06-6835-0017	565-0082	大阪府豊中市新千里東町1-2-4 信用保証ビル7F
	東大阪支店	0729-24-6780	581-0803	大阪府八尾市光町1-61 嶋野・住友生命ビル7F
	堺支店	0722-23-8595	590-0026	大阪府堺市向陵西町2-1-24
	泉南営業所	0724-63-2190	598-0012	大阪府泉佐野市高松東1-10-37 泉佐野センタービル8F
	兵庫	豊岡営業所	0796-24-0331	668-0043
神戸支店		078-332-5431	650-0031	兵庫県神戸市中央区東町126 神戸シルクセンタービル3F
姫路支店		0792-89-2684	670-0947	兵庫県姫路市北条宮の町113
神戸西営業所		078-914-0550	673-0898	兵庫県明石市樽屋町1-29 日工・住生ビル2F
阪神支店		06-6482-2315	660-0892	兵庫県尼崎市東灘波町5-17-23 住友生命尼崎ビル1F
奈良	奈良支店	0742-36-1161	630-8115	奈良県奈良市法華寺町219-1
	橿原営業所	0744-23-6240	634-0813	奈良県橿原市四条町277-1 シェ・ホーム・ヤマ2F
和歌山	和歌山支店	073-428-3222	640-8154	和歌山県和歌山市六番丁5 和歌山第一生命ビル
鳥取	鳥取営業所	0857-28-6068	680-0911	鳥取県鳥取市千代水4-97
	米子営業所	0859-22-8280	683-0044	鳥取県米子市大工町33-32 米子ISビル3F
島根	山陰支店	0852-21-0988	690-0825	島根県松江市学園1-18-5
	出雲営業所	0853-25-1013	693-0005	島根県出雲市天神町869 天神ビル1F
	浜田営業所	0855-22-6092	697-0006	島根県浜田市下府町323-5 日興興産ビル3F
岡山	岡山支店	086-232-7232	700-0826	岡山県岡山市磨屋町1-6 住友生命岡山磨屋町ビル5F
	倉敷営業所	086-426-1371	710-0057	岡山県倉敷市昭和2-4-6 住友生命倉敷ビル2F
	津山営業所	0868-28-2649	708-0872	岡山県津山市平福181-15 カワシマ商事(株)本社ビル3F

都道府県名	拠点名	電話番号	郵便番号	所在地
広島	広島支店	082-248-9898	730-0042	広島県広島市中区国泰寺町2-5-11 西橋屋ビル4F
	呉営業所	0823-21-5129	737-0051	広島県呉市中央1-6-9 日本団体生命ビル6F
	東広島営業所	0824-22-6411	739-0003	広島県東広島市西条町大字土与丸441-1
	三次営業所	0824-63-3186	728-0013	広島県三次市十日市東6-13-14
	福山支店	0849-31-8907	720-0973	広島県福山市南蔵王町3-13-12
	備後府中営業所	0847-46-4835	726-0003	広島県府中市元町475-1 カルチャープラザ4F
	尾道営業所	0848-22-3736	722-0037	広島県尾道市西御所町14-15 第六堀田ビル4F
山口	山口支店	083-973-1858	754-0011	山口県吉敷郡小郡町御幸町4-9 山陽ビル小郡1F
	徳山営業所	0834-31-4114	745-0063	山口県徳山市今住町18
	岩国営業所	0827-22-9534	740-0018	山口県岩国市麻里布町1-5-26 岩国通運ビル2F
	宇部営業所	0836-33-5120	755-0043	山口県宇部市相生町8-1 宇部興産ビル10F
	下関営業所	0832-53-3230	751-0853	山口県下関市川中豊町2-6-36
	萩営業所	0838-22-7472	758-0022	山口県萩市浜崎町121-1 Kビル2F
	徳島	徳島支店	088-622-1270	770-0852
香川	高松支店	087-833-1708	760-0008	香川県高松市中野町29-2 NEC四国ビル7F
	丸亀営業所	0877-23-8563	763-0034	香川県丸亀市大手町3-5-18 協栄生命丸亀ビル7F
愛媛	松山支店	089-945-4145	790-0878	愛媛県松山市勝山町1-19-3 青木第一ビル5F
	南予営業所	0894-24-6158	796-0010	愛媛県八幡浜市大字松柏丙804-2 宇和島自動車八幡浜駅前ビル2F
	宇和島営業所	0895-25-1000	798-0032	愛媛県宇和島市恵美須町2-4-14 井上ビル
	今治営業所	0898-31-5741	794-0043	愛媛県今治市南宝来町1-7-7 住友海上今治ビル2F
	新居浜支店	0897-34-4774	792-0003	愛媛県新居浜市新田町3-2 住友商事新居浜ビル5F
	伊予三島営業所	0896-24-3855	799-0404	愛媛県伊予三島市宮川13-5-25 ホホワイトヴィラ1F
高知	高知支店	088-883-8884	780-0872	高知県高知市杉井流70-5 マノワール杉井流
福岡	福岡支店	092-472-2853	812-0004	福岡県福岡市博多区榎田2-3-27 STS第二ビル3F
	福岡中央営業所	092-472-2853	812-0004	福岡県福岡市博多区榎田2-3-27 STS第二ビル3F
	博多営業所	092-472-2853	812-0004	福岡県福岡市博多区榎田2-3-27 STS第二ビル3F
	福岡東営業所	092-472-2853	812-0004	福岡県福岡市博多区榎田2-3-27 STS第二ビル3F
	北九州支店	093-522-0581	802-0081	福岡県北九州市小倉北区砂津1-5-34 小倉興産23号館4F
	飯塚営業所	0948-24-0919	820-0005	福岡県飯塚市新飯塚13-11 北代ビル2F
	久留米支店	0942-44-5298	839-0807	福岡県久留米市東合川町2-4-29
	大牟田営業所	0944-51-2655	836-0843	福岡県大牟田市不知火町2-7-1 中島物産ビル5F
佐賀	佐賀支店	0952-31-9301	849-0937	佐賀県佐賀市鍋島3-2-19
長崎	佐賀西営業所	0954-22-6567	843-0022	佐賀県武雄市武雄町大字武雄5014-1 東洋リーセントビル5F
	長崎支店	095-838-4442	850-0134	長崎県長崎市田中町586-6
	佐世保営業所	0956-22-2779	857-0043	長崎県佐世保市天満町3-23
	諫早営業所	0957-23-0471	854-0016	長崎県諫早市高城町5-15 諫早商工会館5F
熊本	熊本支店	096-383-6777	862-0925	熊本県熊本市保田窪本町1-40
大分	大分支店	097-503-2555	870-0921	大分県大分市萩原4-9-65
	中津営業所	0979-23-1182	871-0058	大分県中津市豊田町2-423-10 日本団体生命中津ビル5F
宮崎	宮崎支店	0985-27-4477	880-0806	宮崎県宮崎市広島1-18-7 大同生命宮崎ビル9F
	延岡営業所	0982-35-7545	882-0872	宮崎県延岡市愛宕町2-1-12 センコービルディング5F
	都城営業所	0986-23-4821	885-0021	宮崎県都城市平江町13街区15 富士火災海上保険ビル3F
	鹿児島支店	099-285-2266	890-0062	鹿児島県鹿児島市与次郎2-4-35 KSC鴨池ビル1F
鹿児島	出水営業所	0996-62-8922	899-0202	鹿児島県出水市昭和町13-1 第二丸久ビル2F
沖縄	沖縄支店	098-876-2788	901-2132	沖縄県浦添市伊祖2-7-11

~Memo~

A series of horizontal lines for writing a memo.

索引

記号

1000BASE-SX接続ボード [8-38](#)
1000BASE-T接続ボード [8-39](#)
100BASE-TX/10BASE-Tコネクタ [2-8](#), [2-14](#)
100BASE-TX接続ボードセット [8-35](#)
3.5インチデバイスベイ [2-8](#)
3.5インチハードディスク [2-11](#), [8-5](#)
3.5インチフロッピーディスクドライブ [2-11](#)
5.25インチデバイス [2-11](#), [8-46](#)
5.25インチデバイスケーブルカバー [2-10](#), [2-11](#)
5.25インチデバイスベイ [2-8](#)

A

AC-LINK [4-20](#)
ACインレット [2-10](#), [2-11](#)

B

BMC監視 [5-39](#)
BMCファームウェア更新 [5-55](#)
BMCファームウェアの更新 [5-6](#)

C

CD-ROMドライブ [2-8](#), [2-9](#), [2-11](#), [2-31](#)
CDトレイジェクトスイッチ [2-9](#)
CMOSのクリア [4-38](#)
Configuration Data [4-11](#)
CPU [2-13](#), [付録-1](#)
CPU/PCIモジュールの実装状態の変更 [5-28](#)
CPU#1ソケット [2-13](#)
CPU情報 [5-27](#)
CPUターミネーターボード [2-13](#)
CPUのタイプ [4-9](#)

CPUモジュール [2-8](#), [2-11](#), [2-13](#), [8-11](#)
CPUモジュールの監視 [5-33](#)
CPUモジュールの状態 [5-27](#)
CPUモジュールのランプ [2-18](#)
CPUモジュールボード [2-12](#), [2-13](#)

D

DIMM [2-13](#), [8-17](#)
DIMMソケット [2-13](#)
DISK ACCESSランプ [2-7](#), [2-17](#)
DISK故障ランプ [2-17](#)
DISKパワー/アクセスランプ [2-17](#)
DUMPスイッチ [2-10](#), [7-32](#)

E

ESMPRO
概要 [5-12](#)
監視 [5-15](#)
ESMPRO/ServerAgent [3-40](#)
CPU/PCIモジュールの実装状態の変更 [5-28](#)
CPU情報 [5-27](#)
CPUモジュールの状態 [5-27](#)
LAN監視 [5-28](#)
PCIモジュールの状態 [5-27](#)
portmap [5-19](#)
SNMPサービス [5-19](#)
アラート通報内のデバイスID [5-25](#)
アンインストール [5-31](#)
インストール [5-20](#)
温度監視連携 [5-29](#)
監視機能 [5-22](#)
コントロールパネル [5-22](#)
しきい値 [5-29](#)
制限事項 [5-18](#)
注意事項 [5-18](#)
通報設定 [5-23](#)
動作環境 [5-18](#)

パッケージ [5-18](#)
補足説明 [5-27](#)
メモリエラー [5-29](#)
ESMPRO/ServerManager [3-41](#)
BMC監視 [5-39](#)
BMCファームウェア更新 [5-55](#)
CPUモジュールの監視 [5-33](#)
MTBF情報の参照とクリア [5-47](#)
PCIスロット/PCIデバイス監視 [5-36](#)
PCIモジュールの監視 [5-35](#)
SCSIアダプタ監視 [5-38](#)
イーサネットアダプタの監視 [5-40](#)
インストール [5-32](#)
クイックダンプ [5-53](#)
コンポーネントの起動と停止 [5-43](#)
システム動作設定 [5-53](#)
ダンプ採取 [5-50](#)
注意事項 [5-32](#)
データピュア [5-32](#)
ファームウェア自動更新 [5-53](#)
保守作業 [5-41](#)
モジュール自動起動 [5-53](#)
Express5800/ftサーバについて [2-2](#)
Express5800/ftサーバの保守作業 [5-41](#)
EXPRESSBUILDER [5-2](#), [7-28](#)
EXPRESSBUILDER トップメニュー [5-3](#)

F

FastUTIL [4-27](#)
Fibre Channelコントローラ (Copper) [8-37](#)
Fibre Channelコントローラ (Optical) [8-37](#)
fsck [7-34](#)
ftdiskadm [3-28](#)

H

<http://club.express.nec.co.jp/> [xii](#)
<http://nec8.com/> [1-22](#)
HWコンソール [4-23](#)

I

I/Oポートアドレス [付録-2](#)
IDEデバイス中継ボード [2-12](#)
IPMI情報のバックアップ [7-33](#)
IPアドレス [3-25](#)

L

LEDコネクタ [2-13](#), [2-14](#)
Linuxのセットアップ [3-20](#)

M

Management Workstation
Application [5-58](#)
MTBF情報の参照とクリア [5-47](#)
MWA [3-41](#), [5-58](#)

N

N8104-84 1000BASE-SX接続ポ
ード [8-38](#)
N8104-90 1000BASE-T接続ポ
ード [8-39](#)
N8803-002 SCSIコントローラ [8-
34](#)
N8803-030 Fibre Channelコント
ローラ (Copper) [8-37](#)
N8803-031 Fibre Channelコント
ローラ (Optical) [8-37](#)
N8804-001P1 100BASE-TX接続
ボードセット [8-35](#)
NECフィールドイング [1-22](#), [付録-
4](#)
NICの設定 [3-20](#)

P

PCIスロット/PCIデバイス監視 [5-
36](#)

PCIボード [2-14](#), [8-28](#)
PCIボードスロット [2-14](#)
PCIボードランプ [2-20](#)
PCIモジュール [2-8](#), [2-11](#), [2-
14](#), [8-22](#)
PCIモジュールの監視 [5-35](#)
PCIモジュールの状態 [5-27](#)
PCIモジュールのランプ [2-19](#)
PCIモジュールボード [2-12](#), [2-14](#)
portmap [5-19](#)
POST [2-25](#), [4-11](#), [7-15](#)
Power On Self-Test [2-25](#)
POWERスイッチ [2-8](#), [2-24](#), [4-19](#)
POWERランプ [2-7](#), [2-15](#)

R

RAIDの設定 [3-26](#)
RomPilot [4-11](#)

S

SCSI BIOS
Autoconfigure SCSI Device
[4-32](#)
Configuration Settings [4-30](#)
Host Adapter Settings [4-30](#)
Raw Nvram Data [4-33](#)
Restore Default Settings [4-
33](#)
Scan SCSI Bus [4-34](#)
SCSI Bus Settings [4-32](#)
SCSI Device Settings [4-31](#)
SCSI Disk Utility [4-34](#)
Select Host Adapter [4-34](#)
Selectable Boot Settings [4-
33](#)
起動 [4-27](#)
終了 [4-35](#)
保存 [4-35](#)
SCSIアダプタ監視 [5-38](#)
SCSI機器用設定リスト [4-36](#)
SCSIコネクタ [2-11](#)
SCSIコントローラ [8-34](#)

SCSIトポロジ [3-31](#)

SETUP

AC-LINK [4-20](#)
Advanced [4-10](#), [4-11](#)
Boot [4-24](#)
Console Redirection [4-23](#)
Exit [4-25](#)
HWコンソール [4-23](#)
Keyboard Features [4-17](#)
LANコントローラ [4-16](#)
Main [4-8](#)
Memory Information [4-13](#)
Monitoring Configuration [4-
15](#)
Option ROM [4-16](#)
PCIバス [4-16](#)
Peripheral Configuration [4-14](#)
Processor Information [4-12](#)
SCSI BIOS [4-16](#)
Security [4-18](#)
System Hardware [4-20](#)
Thermal Sensor [4-21](#)
Wake On Events [4-22](#)
オプションROMスキャン [4-15](#)
温度センサ監視 [4-21](#)
画面の説明 [4-4](#)
キー [4-4](#)
キーボード [4-17](#)
起動 [4-3](#)
シリアルポート [4-14](#)
スーパバイザのパスワード [4-
19](#)
設定例 [4-5](#)
パスワード [4-18](#)
パラメータ [4-8](#)
ブート監視 [4-15](#)
プロセッサのタイプ [4-12](#)
メモリ [4-13](#)
ユーザーのパスワード [4-19](#)
リモートパワーオン [4-22](#)
SMI/VGAコネクタ [2-14](#)
SNMPサービス [5-19](#)
STATUS1ランプ [2-15](#)
STATUS2ランプ [2-15](#)
STATUSランプ [2-7](#)
syslogメッセージ [7-21](#)

U

UPS [3-19](#)

USB

コネクタ [2-10](#)

USBコネクタ [2-8](#)

USBコネクタ1 [2-10](#)

USBコネクタ2 [2-10](#)

V

VRM [2-13](#)

VRMソケット [2-13](#)

ア

アラートの確認 [6-2](#)

安全上のご注意 [1-6](#)

安全にかかわる表示 [ii](#)

イーサネットアダプタの監視 [4-40](#)

イジェクトSWコネクタ [2-13](#), [2-14](#)

イジェクトスイッチ [2-9](#)

インタフェース [付録-1](#)

インタフェースボード [2-12](#)

液晶ディスプレイ [2-7](#), [2-15](#), [7-3](#)

液晶ディスプレイボード [2-12](#)

エクスプレス受付センター [1-22](#)

エクスプレス通報サービス [1-19](#), [3-42](#), [5-61](#)

エマージェンシーイジェクトホール [2-9](#)

エマージェンシーホール [2-29](#), [2-33](#)

エラーメッセージ [7-3](#)

オプションPCIボードのセットアップ [8-34](#)

オプションSCSI機器用設定リスト [4-36](#)

オプションボードのセットアップ [3-44](#)

オフライン保守ユーティリティ [3-43](#), [6-9](#)

温度センサ監視 [4-21](#)

オンラインドキュメント [xii](#)

カ

各種BIOS/FWのアップデート [5-6](#)

各部の名称 [2-7](#)

管理ユーティリティのインストール [3-40](#)

キースロット [2-7](#)

キーボードの選択 [5-4](#)

記号 [iii](#), [iii](#)

起動メニュー [5-2](#)

機能 [2-7](#)

基本的な操作 [2-22](#)

キャッシュRAM [4-9](#)

強制シャットダウン [4-37](#)

切り替え時の運用・注意点 [6-3](#)

クイックダンプ [5-53](#)

グラフィックス [付録-1](#)

クリーニング [6-4](#)

クリア [4-37](#)

クロックスピード [4-9](#)

警告ラベル [1-2](#)

言語 [4-9](#)

コアナット [3-12](#)

交換

DIMM [8-21](#)

PCIボード [8-33](#)

電源ユニット [8-9](#)

ハードディスク [8-8](#)

故障かな?と思ったときは [7-1](#)

コネクタ

100BASE-TX/10BASE-T [2-8](#), [2-14](#)

ACインレット [2-10](#), [2-11](#)

CPU#1ソケット [2-13](#)

DIMM [2-13](#)

LED [2-13](#), [2-14](#)

PCIボードスロット [2-14](#)

SCSI [2-11](#)

SMI/VGA [2-14](#)

USB [2-8](#)

VRMソケット [2-13](#)

イジェクトSW [2-13](#), [2-14](#)

シリアルポート1 [2-10](#)

シリアルポート2 [2-10](#)

ターミネーターボード実装ソケット [2-13](#)

バックボード接続 [2-13](#), [2-14](#)

モニタ [2-10](#)

冷却ファン1 [2-13](#), [2-14](#)

冷却ファン2 [2-13](#)

コンソールリダイレクション [5-8](#), [5-9](#)

コンソールレスメニュー [5-7](#)

コントロールパネル [5-22](#)

コンフィグレーションジャンパピン [2-14](#), [4-38](#)

コンポーネントの起動と停止 [5-43](#)

サ

再インストール [3-39](#)

再購入 [iii](#)

サポートOS [付録-1](#)

サポートディスク [5-5](#)

時刻 [4-9](#)

システムBIOS [4-2](#)

システム情報のバックアップ [3-43](#)

システム診断 [6-7](#)

システム動作設定 [5-53](#)

システムのアップグレード [8-1](#)

システムのコンフィグレーション [4-1](#)

システムの修復 [7-34](#)

システムマネージメント機能 [5-6](#)

システムマネージメントの設定 [5-6](#)

知っておきたいこと [2-1](#)

質量 [付録-1](#)

修理 [1-17](#)

仕様 [付録-1](#)

使用上のご注意 [1-1](#)

障害情報の採取 [7-31](#)

譲渡 [1-14](#)

消費電力 [付録-1](#)

情報サービス [1-22](#)

シリアルポート [4-14](#)

シリアルポート1コネクタ [2-10](#)

シリアルポート2コネクタ [2-10](#)

スイッチ

CDトレーイジェクト [2-9](#)

DUMP [2-10](#)

POWER [2-8](#), [2-24](#), [4-19](#)

イジェクト [2-9](#)

ステータスランプ [2-8](#), [2-9](#)
寸法 [付録-1](#)
静電気対策 [8-3](#)
設置 [3-5](#)
設定情報ファイルの作成 [5-7](#)
セットアップ [3-1](#)
 Linux [3-20](#)
 オプションボード [3-44](#)
 ハードウェア [3-4](#)
セットアップを始める前に [3-2](#)
接続 [3-17](#)
増設・交換の基本 [8-4](#)
ソフトウェアの初期状態 [3-3](#)

タ

ターミネーターボード実装ソケット [2-13](#)
タワーモデルの設置 [3-5](#)
ダンプ採取 [5-50](#), [7-31](#)
注意事項
 PCIモジュール [8-22](#)
ツールメニュー [5-5](#)
データビューア [5-32](#)
ディスク管理ツール [3-28](#)
デバイス構成 [2-11](#)
電源 [付録-1](#)
電源のOFF [2-24](#)
電源のON [2-24](#)
電源ユニット [2-10](#), [2-11](#), [8-9](#)
電源ユニットボード [2-12](#)
トラブルシューティング [7-23](#)
取り扱い上のご注意 [1-13](#)
取り付け
 5.25インチデバイス [8-46](#)
 CPUモジュール [8-15](#)
 DIMM [8-18](#)
 PCIボード [8-29](#)
 PCIモジュール [8-26](#)
 内蔵デバイスベイ増設キット [8-40](#)
 ハードディスク [8-6](#)
 フロントベゼル [2-23](#)
取り付け部品 [3-9](#), [3-15](#)
取り外し
 5.25インチデバイス [8-50](#)

CPUモジュール [8-12](#)
DIMM [8-20](#)
PCIボード [8-32](#)
PCIモジュール [8-23](#)
内蔵デバイスベイ増設キット [8-45](#)
ハードディスク [8-8](#)
フロントベゼル [2-23](#)
トレイ [2-9](#)

ナ

内蔵デバイスベイ増設キット [8-40](#)
日常の保守 [6-2](#)

ハ

ハードウェア構成について [2-2](#)
ハードウェアのセットアップ [3-4](#)
ハードディスク [2-11](#), [8-5](#)
ハードディスクバックボード [2-12](#)
廃棄 [1-15](#)
箱の中身の確認 [3-4](#)
はじめに [i](#)
パスワード [4-18](#)
パスワードのクリア [4-38](#)
バックアップ [6-4](#)
バックボード接続コネクタ [2-13](#), [2-14](#)
バッテリー [2-14](#)
パワーアラートランプ [2-10](#), [2-18](#)
パワーサブライランプ [2-10](#), [2-18](#)
パワーボード [2-12](#)
パワーロウランプ [2-10](#), [2-18](#)
ピーブ音 [7-20](#)
日付 [4-9](#)
ビデオボード [2-14](#), [8-28](#)
ブート監視 [4-15](#)
ブートデバイスの優先順位 [4-24](#)
ファーストコンタクトセンター [1-22](#)
ファームウェア自動更新 [5-53](#)
ファン [2-11](#)
付属品 [iv](#), [3-4](#)

フロー制御 [4-23](#)
フロッピーディスクドライブ [2-8](#), [2-9](#), [2-11](#), [2-28](#)
フロントパネルボード [2-12](#)
フロントベゼル [2-7](#), [2-22](#), [2-23](#)
ボード構成 [2-12](#)
保管 [6-11](#)
保守 [6-1](#)
補修用部品 [1-18](#)
保守サービス [1-18](#)
保守サービス会社網一覧 [付録-4](#)
保証 [1-16](#)
本書について [ii](#)
本書の構成 [ii](#)
本書の再購入 [iii](#)

マ

マスターコントロールメニュー [5-11](#), [7-29](#)
ミラーリング
 ハードディスク [8-5](#)
名称 [2-7](#)
メモリ [4-9](#), [4-13](#), [8-17](#), [付録-1](#)
メモリダンプの採取 [7-31](#)
モジュール自動起動 [5-53](#)
モジュール着脱ハンドル [2-13](#), [2-14](#)
モジュールバックボード [2-12](#)
モニタコネクタ [2-10](#)

ヤ

ユーザーサポート [1-16](#)
ユーザー登録 [xii](#)
ユーティリティのインストールと操作 [5-1](#)

ラ

ラックの設置 [3-7](#)
ラックへの取り付け [3-8](#), [3-14](#)
ラックマウントモデルの設置 [3-7](#)
ランプ
 CPUモジュール [2-18](#)
 DISK ACCESS [2-7](#), [2-17](#)
 DISK故障 [2-17](#)
 DISKパワー/アクセス [2-17](#)

PCIモジュール [2-19](#)
POWER [2-7](#), [2-15](#)
STATUS [2-7](#)
STATUS1 [2-15](#)
STATUS2 [2-15](#)
ステータス [2-8](#), [2-9](#)
パワーアラート [2-10](#), [2-18](#)
パワーサプライ [2-10](#), [2-18](#)
パワーロウ [2-10](#), [2-18](#)
リセット [4-37](#)
リチウム電池 [1-15](#), [2-14](#)
リモートパワーオン [4-22](#)
レールアセンブリ [3-10](#), [3-16](#)
冷却ファン [2-13](#), [2-14](#)
冷却ファン1コネクタ [2-13](#), [2-14](#)
冷却ファン2コネクタ [2-13](#)

~Memo~

The BSD Copyright

Copyright © 1991, 1992, 1993, 1994

The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:
This product includes software developed by the University of California, Berkeley and its contributors.
4. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

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

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

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

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

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

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

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

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

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

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

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

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

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

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

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

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

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

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

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

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

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

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

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

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

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

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

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

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

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

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

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

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

NO WARRANTY

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

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

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

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

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

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) 19yy <name of author>
```

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

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

```
You should have received a copy of the GNU General Public License  
along with this program; if not, write to the Free Software  
Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
```

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) 19yy name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

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

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

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

```
<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

GNU LESSER GENERAL PUBLIC LICENSE
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

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

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

Preamble

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

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

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

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

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

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

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

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

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

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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

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

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

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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

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

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

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

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

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

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

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

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

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

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

NO WARRANTY

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

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

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

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

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

<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

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

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

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

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

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

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice

That's all there is to it!

■ 謝辞

Linus Torvalds氏をはじめとするLinuxに関わるすべての皆様に心より感謝いたします。

NEC Express サーバ

N8800-018

Express5800/320La

N8800-019

Express5800/320La-R

ユーザーズガイド

2002 年 7 月 初版

日本電気株式会社

東京都港区芝五丁目7番1号

TEL (03) 3454-1111 (大代表)

© NEC Corporation 2002

日本電気株式会社の許可なく複製・改変などを行うことはできません。