

BDwb†KvW Dc†hvMx  
RvZxq Kx-†evW©(evsj v)  
e`envi -wb†`@kKv

UNICODE Compliant  
**National Keyboard (Bengali)**  
Users Guide

June - 2006

**Bangladesh Computer Council**  
Ministry of Science and Information & Communication Technology

এসজি টেকনিক্যালিউটিভস্‌ কন্সাল্টিং সলিউশন্স প্রাইভেট লিমিটেড  
এন্ড ইঞ্জিনিয়ারিং সার্ভিসেস্‌ প্রাইভেট লিমিটেড

সংগৃহীত  
ফেব্রুয়ারি ২০০৬

সংগৃহীত  
এসজি টেকনিক্যালিউটিভস্‌ কন্সাল্টিং  
সলিউশন্স প্রাইভেট লিমিটেড  
ফেব্রুয়ারি, আবুল মঈন  
টেকনিক্যালিউটিভস্‌, খুলনা-১২০৭।

Software Developed by:  
Information Engineers & Consultant BD Ltd. (IECB).  
Dhaka, Bangladesh

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1971 mvtj i 16B wWtm=† evsj vt`k `vaxb t`k wntmte cwl\_xi gvbwP† AvZxcKvk Kti |  
1952 mvtj i Agi 21tk tde°qixi fvlv Avt`vj tbi ga` w`tq Gt`tki `vaxbZv mSMtgi  
mPbv nq| GLb mvi we†k; 21tk tde°qix AvŠRZK gvZ.fvlv w`em wnmvte cvj b Kiv nq|

`vaxbZvi ci t`tk `xNmgq AwZemZ ntqtQ| evsj v fvlvi KivúDUvi vtqbi KvR Avkvbjfc  
nqwb| `tLRbK ntj l mZ`, KivúDUvi cth³i mvt\_ m½wZ ti†L Avgvt`i wcdq gvZ.fvlv  
evsjvi e`envi l cth³i msvš-AMWZ LpB `=| hw l wwfboamgq wwfboe`w³ l cth³ôvb  
Gi Dcti KvR Kti†Q, wKš`mWk w`Kwb`Rbv l weÁvbm=Z KgRvtÜi Afvte`ii` t`tk  
`Zix mKj evsj v mdwI q`vi B cth³MZ w`K t`tk wQj m½wZnx| mvs`wZK l ewYwR`K  
wekjqb l Z\_` cth³i h†M KivúDUvti evsj v fvlvi cth³i msvš Rb` KivúDUvti mbvZb  
evsj v mdwI q`vti i `tj BDwb†KwW DcthvMx evsj v mdwI q`vti i cth³i Rb mZxe†

bvbwea cth³MZ l fvwI K RvUj Zv `ixKiYmn KivúDUvti cth³i evsj v fvlv e`envi e`vcK  
l Rbwcq Kivi j††` miKvi KZK BDwb†KwW DcthvMx evsj v Kx-tevW†j -AvDU l evsj v  
eY°gvj v weY`v†mi D†i`vM MhY Kiv nq| evsj vt`k miKvi KZK MwZ GKwU RvZxq KvgwU  
mrcwi†ki wfwE†Z cth³Z 4 `† wekó GB Kx-tevW†j RvZxq gvb nj BDS-1738:2004 |  
evsj vt`k KivúDUvi KvDwYj, weÁvb Ges Z\_` l thvM†hvM cth³i gšYvj q-Gi D†i`v†M  
Db† cth³hvMzvq wbe†PZ cth³ôvb tgmvm†Information Engineers & Consultants Bangladesh  
Ltd. (IECB) ebbx, XvKv-Gi gva†tg BDwb†KwW DcthvMx (UNICODE Compliant) RvZxq Kx-  
tevW†(evsj v) Ges BDwb†KwW DcthvMx (UNICODE Compliant) evsj v d†Um RvZxq wj wc (Jatiyo  
Lipi) Db†b Kiv ntqtQ| Db†bKZ evsj v mdwI q`vi wU e`env†i Acvti wUs wnt`÷g (Windows  
95, 98, Mac BZ`w`)-Gi t††† cth³MZ wKQymxgve×Zv (Limitations) vK†j l Windows 2000,  
XP Ges Linux (Red Hat, Fedora Core-2, Debian Surge) BZ`w` Acvti wUs wnt`÷g-Gi DcthvMx  
Kti Db†b Kiv ntqtQ| evsj v fvlvi mnMvgx msvk-fvlv, t†j vt†Z l GB wj wc e`envi Kti GB  
A††j wj wci mvgÄm` NUvtbv hv†| BDwb†KwW wfwEK GB RvZxq Kx-tevW†(evsj v)  
mdwI q`vti i me††i e`vcK e`envi GKvš-Kvg`| GQovl cth³MZ DrK†I† mvt\_ m½wZ  
ti†L mdwI q`vi wU DE†iv†i Db†b l m†c†hv†Y-Gi `i`Zi Ab`†Kvh†

ˆeY©

eY©	UNICODE
A	0985
Av	0986
B	0987
C	0988
D	0989
E	098A
F	098B
ঞ	098C
G	098F
H	0990
I	0993
J	0994
<b>কর</b>	<b>UNICODE</b>
v	09BE
w	09BF
x	09C0
y	09C1
ˆ	09C2
"	09C3
‡	09C7
ˆ	09C8
‡v	09CB
§	09D7
‡§	09CC

eˆAbeY©

eY©	UNICODE	eY©	UNICODE
K	0995	g	09AE
L	0996	h	09AF
M	0997	i	09B0
N	0998	j	09B2
O	0999	k	09B6
P	099A	l	09B7
Q	099B	m	09B8
R	099C	n	09B9
S	099D	o	09DC
T	099E	p	09DD
U	099F	q	09DF
V	09A0	r	09BA <sup>2</sup>
W	09A1	s	0982
X	09A2	t	0983
Y	09A3	ঞ	09FA
Z	09A4	¶	09BB <sup>1</sup>
–	09A5	ˆ	09CD 09AF
ˆ	09A6	a	09CD 09B0
a	09A7	©	09B0 09CD
b	09A8	ˆ	09B3 <sup>3</sup>
c	09AA		
d	09AB		
e	09AC		
f	09AD		

weivg wPý

wełkl wPý (Special Character)

eY©	UNICODE	eY©	UNICODE	eY©	UNICODE
!	0021	#	0023	0	09E6
"	0022	&	0026	1	09E7
'	0027	(	0028	2	09E8
,	002C	)	0029	3	09E9
.	09BC	{	007B	4	09EA
:	003A	}	007D	5	09EB
;	003B	[	005B	6	09EC
?	003F	]	005D	7	09ED
	0964	%	0025	8	09EE
	0965	+	002B	9	09EF
-	0020	-	002D	\$	09F3
_	005F	×	00D7	✓	09F4
ò	201C	÷	00F7	✓	09F5
ó	201D	/	002F	✓	09F6
ô	2018	\	005C		09F7
õ	2019	<	003C	h	09F8
&	09CD	>	003E		
		@	0040		
		=	003D		
		*	002A		

# Kx-fewW©inwib™ (Keyboard Layout)

## 1g -li (1st Layer) (Default)

Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12		
	1	2	3	4	5	6	7	8	9	0			Backspace	
	09E7	09E8	09E9	09EA	09EB	09EC	09ED	09EE	09EF	09E6				
Tab	0	h	W	c	U	P	R	n	M	o				
	0999	09AF	09A1	09AA	099F	099A	099C	09B9	0997	09DC				
Caps Lock	,	y	w	e	&	v	K	Z	`				Enter	
	09C3	09C1	09BF	09AC	09CD	09BE	0995	09A4	09A6					
Shift	☺	‡v	‡	৳	b	m	g						Shift	
	0981	09CB	09C7	09B0	09A8	09B8	09AE							
Ctrl	Windows Key	Alt	Space Bar					Alt GR	Windows Key	Right Button Key	Ctrl			

Kx-teW©einieÖ vm (Keyboard Layout)  
2q -li (2<sup>nd</sup> Layer)  
 (2q -li -G thtZ ntj Shift Key tPtC thtZ nte)

Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	
													Backspace
Tab	s	q	X	d	V	Q	S	T	N	p			
	0982	09DF	09A2	09AB	09A0	099B	099D	099E	0998	09DD			
Caps Lock	§	~	x	f		A	L	_	a				Enter
	09D7	09C2	09C0	09AD	0964	0985	0996	09A5	09A7				
Shift	t	‡§	%	j	Y	I	k						Shift
	0983	09CC	09C8	09B2	09A3	09B7	09B6						
Ctrl	Windows Key	Alt	Space Bar					Alt GR	Windows Key	Right Button Key	Ctrl		

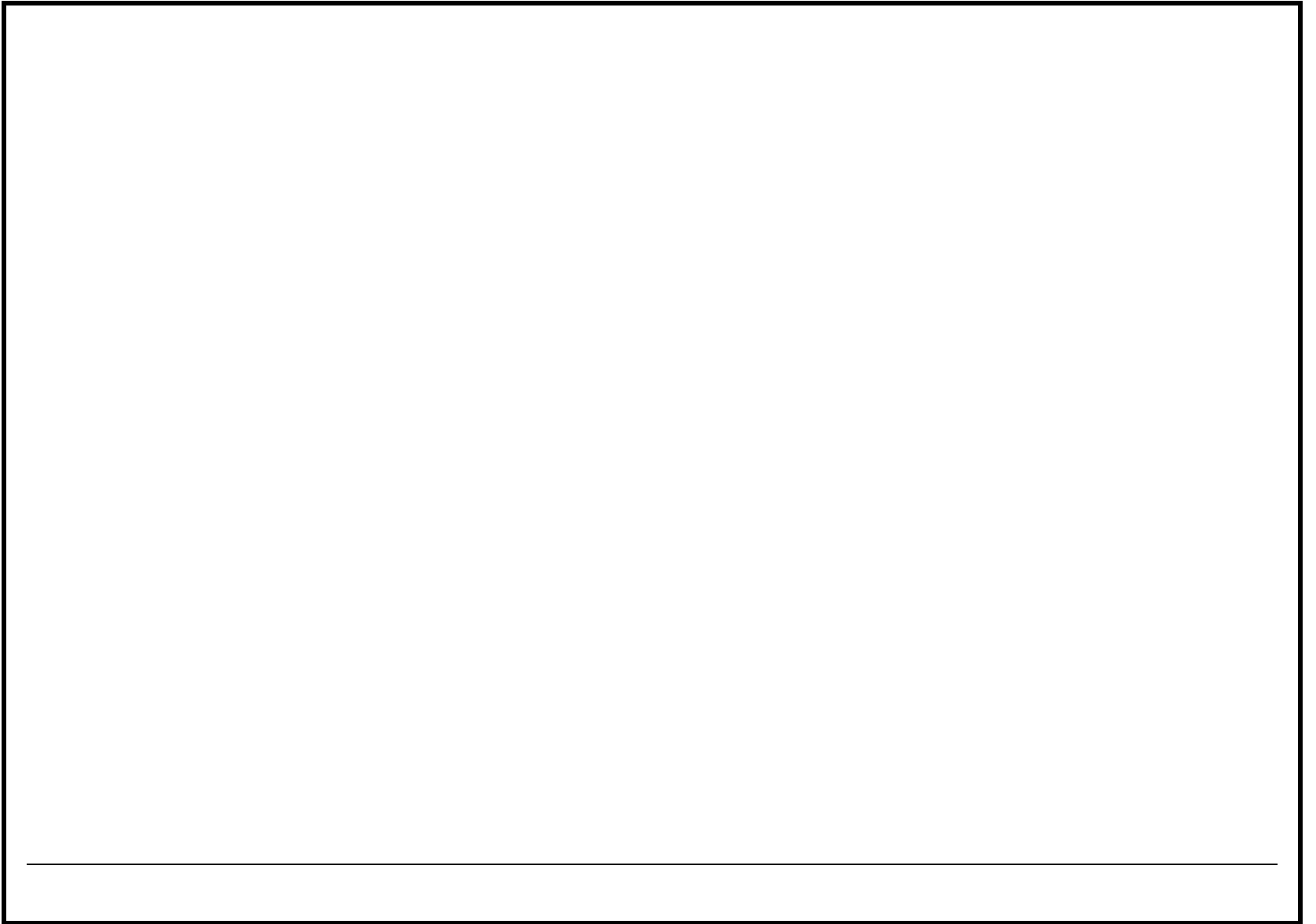


# Kx-tevW©einieB™vm (Keyboard Layout)

## 3q -li (3<sup>rd</sup> Layer)

(3q -li -G thtZ ntj Kx-tevW© Wwb w` tKi Alt (Alt GR) Key tPtC thtZ nte)







Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12		
	✓	ʹ	ʻ	\$		h	◌̇		◌̇	ZWNJ	ZWJ	Backspace		
	09F4	09F5	09F6	09F3	09F7	09F8	0902		09F9	200C	200D			
Tab	◌̇	..	◌̇					২						
	09E2	09CD 09AF	09C4					09BD						
Caps Lock	F	D	B	ব	ll	Av	¶	r	৯			Enter		
	098B	0989	0987	09F0	0965	0986	09BB1	09BA2	098C					
Shift	◌̇	I	G	ˆ					◌̇			Shift		
	09FA	0993	098F	09CD 09B0					09BC					
Ctrl	Windows Key	Alt	Space Bar					Alt GR	Windows Key	Right Button Key	Ctrl			



# Kx-tevW<sup>©</sup>einweö<sup>®</sup>vm (Keyboard Layout)

## 4\_©<sup>°</sup>li (4<sup>th</sup> Layer)

(4\_©<sup>°</sup>li -G th†Z ntj **Shift** Ges Kx-tev†W<sup>®</sup> Wwb w †Ki **Alt (Alt GR)** Kx-`†Uv GK†Î †P†c th†Z n†e)

Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	
				↵		^							Backspace
				09F2		09B3 <sup>3</sup>							
Tab													
	09E3												
Caps Lock		E	C										Enter
	09E0	098A	0988	09F1					09E1				
Shift t			H										Shift t
		0994	0990	09B0 09CD									
Ctrl	Windows Key	Alt	Space Bar					Alt GR	Windows Key	Right Button Key	Ctrl		

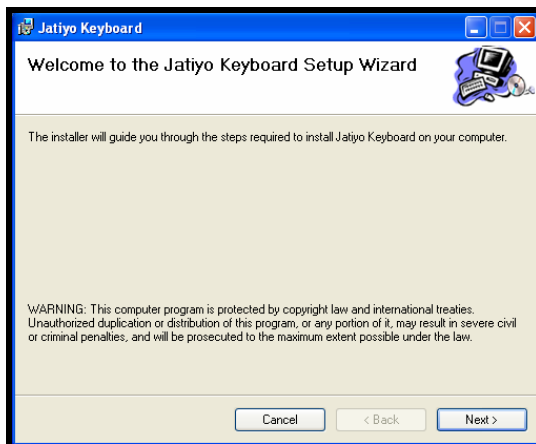
# KwáúDUvfi RvZxq Kx-tevW©(evsj v) Bb÷ fj kb (Installation)

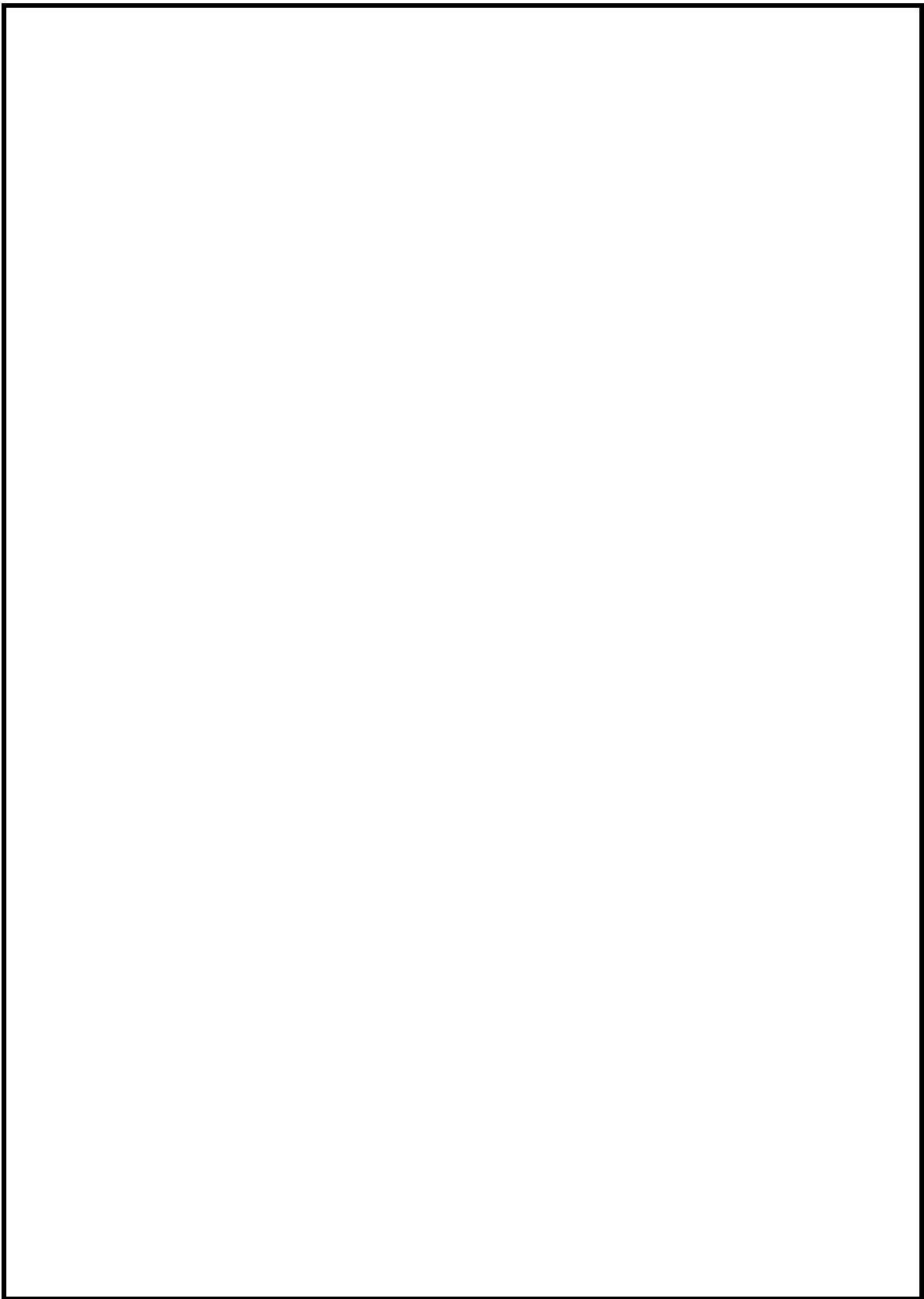
RvZxq Kx-tevW©(evsj v) GKw Unicode DcþhMx Kx-tevW© Windows 2000 Ges Windows XP (and onward) Operating System Unicode Complaint weavq Windows 2000 Ges Windows XP þZ RvZxq Kx-tevW©(evsj v) KvR Kþi | wKŠ' Gþŋŋŋ Microsoft Office XP (or higher) Install KiþZ nþe | þKbbv Microsoft Office XP-Gi cþeP Microsoft Office-Gi version mgr cþivcyi Unicode Compliant bv nI qvq RvZxq Kx-tevW©(evsj v) e'envþi i mgq Rendering-Gi mgm'v t`Lv w`þZ cvþi | cŋŋšþi Windows 95, Windows 98, Windows ME Acvþi wUs wmt÷g Unicode Complaint bv nI qvq D<sup>3</sup> wmt÷þg RvZxq Kx-tevW©(evsj v) mvtcvU©Kþi bv | GQvovI Red Hat Linux (Fedora Core-2) Ges Debian Surge (and onward) Operating System-G RvZxq Kx-tevW©(evsj v) KvR Kþi | Gw þþKvb GTK+2.x (or higher) application G Pj þe | GQvov QT wFwEK Application-I Gw Support Kiþe | AwAKŠ' Linux-Gi Rb" metþþq Rbwčq Unicode based input method, SCIM (Smart Common Input Method) þh mg`-Application Support Kiþe, RvZxq Kx-tevW©(evsj v)I tm mg`-Application Support Kiþe | RvZxq Kx-tevW©(evsj v) GLbI Mac Operating System Gi Kg© DcþhMx Kþi `Zix Kiv nq bvB | Zþe cieZx©Dbqþb Kvhþþgi AvI Zvq Mac Operating System G Kg©DcþhMx Kþi Software Dbqþb Kiv nþe |

## 1. Windows 2000 & Windows XP Operating System-G RvZxq Kx-tevW©(evsj v) Installation CxwZ:

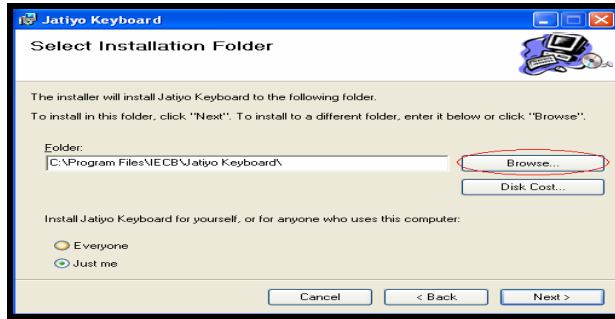
- Load the installation CD in the CD / DVD drive
- *Run setup.exe(setup.exe G `þevi click Ki`b)*

wbþg





☞ Next Button G click Ki "b  
wb̄t̄ḡi: W̄q̄ȳj M box w̄J Avm̄t̄e

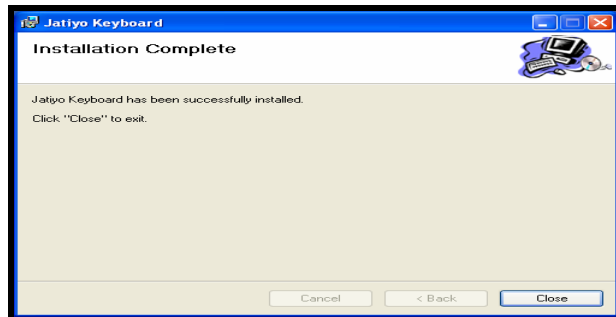


☞ Default Directory-İZ Installation-Gi Rb" Next Button-G click Ki "b A\_ev Ab" directory Ab̄m̄Üv̄t̄bi Rb" Browse ev̄Üb e"envi K̄ti c̄Z"mk̄Z directory / sub-directory select Ki "b |

☞ Next Button-G click Ki "b  
wb̄t̄ḡi: W̄q̄ȳj M box w̄J Avm̄t̄e



☞ Next Button-G click Ki "b  
wb̄t̄ḡi: W̄q̄ȳj M box w̄J Avm̄t̄e

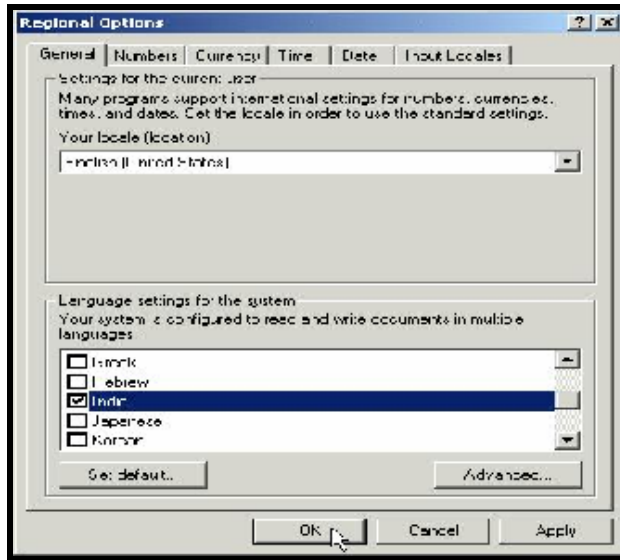


☞ Installation m... Kivi Rb... Close Button-G Click Ki "b

RvZxq Kx-teW®(evsj v) Activate Ki Z Operating System-G East Asian Language Support  
c0qRb | GRb" wbtg³ c×WZ Abmi Y Ki Z nte |

### a) Windows 2000 Operating System-Gi tñtñ t

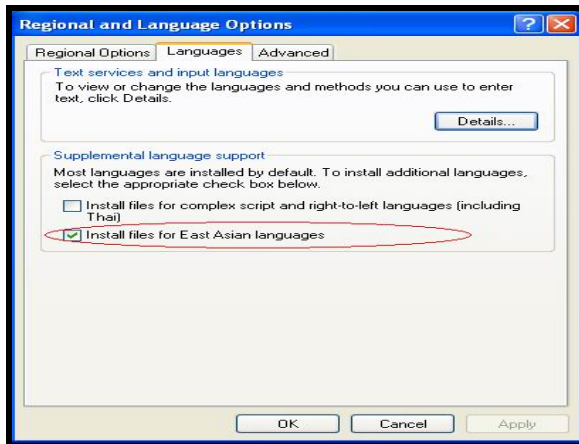
- ☞ Start → Settings → Control Panel → Regional Options → Languages
- ☞ Select **Indic** from the list as shown in the figure below



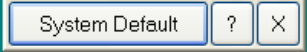
- ☞ Press **Apply** Button and then press **OK**.

### b) Windows XP Operating System-Gi tñtñ t

- ☞ Start → Settings → Control Panel → Regional and Language Options → Languages
- ☞ Now enable install files for **East Asian Language** as shown below, then press **Apply** Button and then press **OK**.





☞ Start → Programs → Jatiyo Keyboard → Jatiyo Keyboard-G Click Ki"b|  
G†¶†Ā Avcbri Desktop Gi Dc†i i Wwb cv†k  GB mURvU tgb|  
Avm†e| GLb Avcbri Operating System G RvZxq Kx-†ewW<sup>©</sup>(eivj v) e envi Ki†Z cvi†eb|  
D`vni Ymifc, Microsoft Word G GKwJ Document Open K†i D<sup>3</sup> mURvU tgb†Z Click Ki"b  
A\_ev F12 key press Ki"b| Gi ci Fonts pull down tgb††\_†K Jatiyo Lipi dUm†j ± K†i  
Avcbri K†w†¶†Z WK†gU UvBc Ki"b ev c†Z Ki"b|

## 2. Linux Operating System-G RvZxq Kx-†ewW<sup>©</sup>(eivj v) Installation c×wZ:

In order to use Jatiyo keyboard in Linux, the setup has to be completed in 3 steps as follows:

**Step 1: Prerequisites of Installation**

**Step 2: Installation of Fonts**

**Step 3: Installation of Jatiyo keyboard**

**Prerequisite:** Jatiyo Key-board on Linux based system depends on Smart Common Input Method (SCIM) for proper functioning. That is, if SCIM is not installed, Jatiyo Key-board on Linux will not work. So, you must first install SCIM and only then you will be able to install Jatiyo Key-board and write Bangla on Linux based platform. A brief description on SCIM is given below for your proper understanding and running of the system.

- ❑ **SCIM (Smart Common Input Method):** Smart Common Input Method (SCIM) platform provides a user friendly, full featured input method user interface for POSIX-style operating systems (including Linux, FreeBSD and other UNIX). Using SCIM a user can type in multiple languages on a supported operating system. In JatiyoKeyboard, SCIM is used for its ability to interface with many different applications for multi lingual typing. The JatiyoKeyboard provides the Bangla language keyboard information and SCIM feeds those input character to various application.
- ❑ You can get more detail information on their official website <http://www.scim-im.org/>
- ❑ **m17n:** m17n stands for Multilingualization. The m17n project provides an interface for JatiyoKeyboard to interact with SCIM. So, JatiyoKeyboard interacts with SCIM by using m17n as medium.
- ❑ To know more details about m17n, you can visit their official website at <http://www.m17n.org/>

## Step-1: Prerequisites of Installation

### For Fedora Core:

Please follow any of the options below to install prerequisites for Fedora Core

a) **Using yum:** Installing yum is the most easy way to install yum. The following command on bash shell will install all the prerequisites for Jatiyo Keyboard on a Fedora Core 5 system.

```
bash$ su -c 'yum groupinstall bengali-support'
```

b) **Using Fedora Extra CDs:** If you have fedora extra CDs, please insert the CDs and install the following RPM (Replace x with your version number) from there:

[scim-x.x.x-x.fc.x.i386.rpm](#)  
[scim-m17n-x.x.x-x.fc.x.i386.rpm](#)  
[m17n-db-x.x.x-x.fc.x.noarch.rpm](#)  
[m17n-lib-x.x.x-x.fc.x.i386.rpm](#)  
[scim-qtimmm-x.x.x-x.fc.x.i386.rpm](#)

c) **Installing from Internet:** You can download the following RPMs from internet from official Fedora Core site (From their "extras" directory of distribution) or from other third party site. Then just install them by double clicking on the RPMs.

d) **Using Source Code:** Please follow the steps given below:

☞ Download the following source code from official website:

<http://www.scim-im.org/downloads>

- [scim-x.y.z.tar.gz](#)
- [scim-m17n-x.y.z.tar.gz](#)
- [scim-qtimmm-x.y.z.tar.bz2](#)

☞ Download the following files from m17n official website:

<http://m17n.org/m17n-lib/download.html>

- [m17n-lib-x.y.z.tar.gz](#)
- [m17n-db-x.y.z.tar.gz](#)

☞ Unzip the files as given below:

- Unzip [scim-x.y.z.tar.gz](#) to scim-x.y.z folder
- Unzip [scim-m17n-x.y.z.tar.gz](#) to scim-m17n-x.y.z folder
- Unzip [scim-qtimmm-x.y.z.tar.bz2](#) to scim-qtimmm-x.y.z folder
- Unzip [m17n-lib-x.y.z.tar.gz](#) to m17n-lib-x.y.z folder
- Unzip [m17n-db-x.y.z.tar.gz](#) to m17n-db-x.y.z folder

☞ Install the files as specified below:

```
# cd scim-x.y.z  
# ./configure  
# make  
# make install
```

```
# cd m17n-lib-x.y.z  
# ./configure  
# make  
# make install
```

```
# cd m17n-db-x.y.z  
# ./configure  
# make  
# make install
```

```
# cd scim-m17n-x.y.z  
# ./configure  
# make  
# make install
```

```
#cd scim-qtimmm-x.y.z  
#./configure  
# make  
# make install
```

#### For Debian Sarge:

Please follow any of the options below to install prerequisites for Debian Sarge

**a) Using 14 CD pack:** If you have the full 14 CDs on Debian Sarge, installing the prerequisites requires very little effort. Just follow the steps below:

☞ Scan the CDs by running the following commands:

```
# apt-cdrom add
```

☞ Now install by running the following commands

```
# apt-get install scim  
# apt-get install scim-m17n scim-gtk2-immodule
```

(Answer Y to the question)

**b) Using Source Code:** Installing from source code is completely identical to the Installation from Source Code in Fedora Core. The same steps is repeated below for your convenience

☞ Download the following source code from official website:

<http://www.scim-im.org/downloads>

- scim-x.y.z.tar.gz
- scim-m17n-x.y.z.tar.gz
- scim-qtimmm-x.y.z.tar.bz2

☞ Download the following files from m17n official website:

<http://m17n.org/m17n-lib/download.html>

- m17n-lib-x.y.z.tar.gz
- m17n-db-x.y.z.tar.gz

☞ Unzip the files as given below:

- Unzip scim-x.y.z.tar.gz to scim-x.y.z folder
- Unzip scim-m17n-x.y.z.tar.gz to scim-m17n-x.y.z folder
- Unzip scim-qtimmm-x.y.z.tar.bz2 to scim-qtimmm-x.y.z folder
- Unzip m17n-lib-x.y.z.tar.gz to m17n-lib-x.y.z folder
- Unzip m17n-db-x.y.z.tar.gz to m17n-db-x.y.z folder

☞ Install the files as specified below:

```
# cd scim-x.y.z
# ./configure
# make
# make install

# cd m17n-lib-x.y.z
# ./configure
# make
# make install

# cd m17n-db-x.y.z
# ./configure
# make
# make install

# cd scim-m17n-x.y.z
# ./configure
```

```
# make
# make install

#cd scim-qtimmm-x.y.z
#./configure
# make
# make install
```

c) **From internet (Using apt):** If you do not have 14 CDs pack for Debian Sarge, apt can install from internet directly. The following command on a Debian Sarge system with an active internet connection will look all the necessary prerequisite packages and install them automatically.

```
#apt-get update
# apt-get install scim
# apt-get install scim-m17n scim-gtk2-immodule
(Answer Y to the question)
```

## Step-2: Installation of Fonts:

The following section is a customized version of "Bangla in GNU/Linux HOWTO", which can be found at <http://www.tldp.org/HOWTO/Bangla-HOWTO/usersguide.html#fonts>

### For Fedora Core:

Please follow any of the steps below to install fonts on Fedora Core

☞ Create a new directory where you want to install JatiyoLipi fonts. For the rest of this document, we will assume we are installing the fonts in `/usr/X11R6/lib/X11/fonts/bengali/`

☞ Copy the `jatiyo.ttf`, `jatiyoB.ttf` and `jatiyoI.ttf` files to this directory, and execute the following commands:

```
bash$cd /usr/X11R6/lib/X11/fonts/bengali
bash$ttmkfdir
bash$mkfontdir
bash$chkfontpath -q -a /usr/X11R6/lib/X11/fonts/Bengali
```

☞ Add the newly created directory to fontconfig configuration. Usually this configuration file is `/etc/fonts/fonts.conf`. Open this file with you choice of text editor and look for the part that looks somewhat like shown below

```
<dir>/usr/X11R6/lib/X11/fonts/Type1</dir>
<dir>/usr/share/fonts</dir>
<dir>~/.fonts</dir>
```

☞ Add the line

```
<dir>/usr/X11R6/lib/X11/fonts/bengali</dir>
```

☞ so that now it looks something like this:

```
<dir>/usr/X11R6/lib/X11/fonts/Type1</dir>  
<dir>/usr/share/fonts</dir>  
<dir>/usr/X11R6/lib/X11/fonts/bengali</dir>  
<dir>~/.fonts</dir>
```

☞ Save the file

☞ Execute the following commands

```
bash$fc-cache
```

### For Debian Sarge:

Please follow any of the steps below to install fonts on Debian Sarge

☞ Create a new directory where you want to install JatiyoLipi fonts. For the rest of this document, we will assume we are installing the fonts in `/usr/X11R6/lib/X11/fonts/bengali/`

☞ Copy the `jatiyo.ttf`, `jatiyoB.ttf` and `jatiyoL.ttf` files to this directory, and execute the following commands:

```
bash$cd /usr/X11R6/lib/X11/fonts/bengali  
bash$mkfontdir
```

☞ Add the newly created directory to fontconfig configuration. Usually this configuration file is `/etc/fonts/fonts.conf`. Open this file with your choice of text editor and look for the part that looks somewhat like shown below

```
<dir>/usr/X11R6/lib/X11/fonts/Type1</dir>  
<dir>/usr/share/fonts</dir>  
<dir>~/.fonts</dir>
```

☞ Add the line

```
<dir>/usr/X11R6/lib/X11/fonts/bengali</dir>
```

☞ so that now it looks something like this:

```
<dir>/usr/X11R6/lib/X11/fonts/Type1</dir>
<dir>/usr/share/fonts</dir>
<dir>/usr/X11R6/lib/X11/fonts/bengali</dir>
<dir>~/.fonts</dir>
```

☞ Save the file

☞ Execute the following commands

```
bash$fc-cache
```

### Step-3: Installation of JatiyoKeyboard (Applicable to both Fedora Core and Debian Sarge):

☞ Copy the bn-National.mim file from installation CD-ROM to your /usr/local/share/m17n directory (Note: on some system, this can be located to /usr/share/m17n)

☞ Open the /usr/share/m17n/mdb.dir (Or /usr/local/share/m17n/mdb.dir based on your system) file in any editor and add the following line in the input section:

*(input-method bn national "bn-National.mim")*

### Typing with JatiyoKeyboard

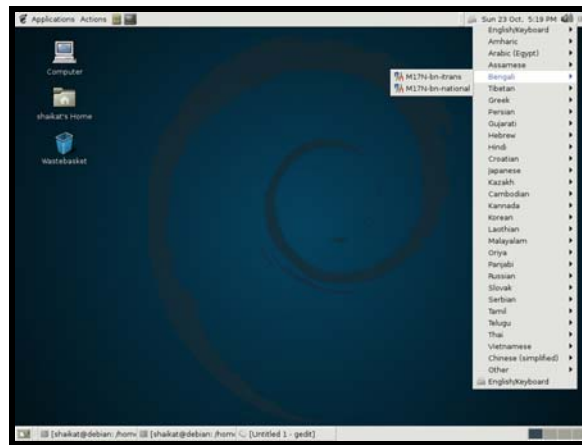
#### For Typing in gedit:

☞ Open the bash shell

☞ Type the following

```
bash$scim -d
```

☞ Your desktop should look something like the image given below (Note: based on your system, the image may be different). If clicked on this icon, a drop down menu will show up (as shown in the picture below):



☞ Configure gtk2 IM submenu: **If you are running a Fedora version lower than 5 (FC5) or Debian Sarge, you do not need to do this step.**

Enable gtk2 IM submenu on the command line with the following command; the \ is for printing purposes and this should appear all on one line:

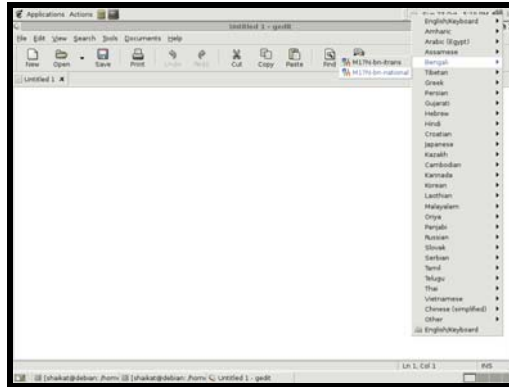
```
gconftool-2 --type bool --set \  
'/desktop/gnome/interface/show_input_method_menu' true  
  
'/desktop/gnome/interface/show_input_method_menu' true
```

☞ Now run **gedit**. Right click on the writing area and select Smart Common Input Method (SCIM) as the chosen input method. Then click on the **scim** icon on the top of the screen, a pull down menu will be shown (as shown in the picture below), select **Bengali** from there

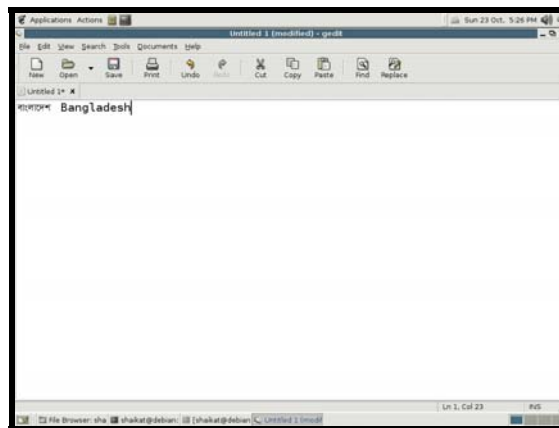




☞ Now select **M17n-bn-National**



☞ Now you can type Bengali



### For Typing in Openoffice:

☞ Open the bash shell

☞ Type the following commands in the shell

```
#GTK_IM_MODULE=scim; export GTK_IM_MODULE  
#XIM_PROGRAM="scim -d"; export XIM_PROGRAM  
#export XMODIFIERS=@im=SCIM  
#oowriter
```

☞ The last command will launch Openoffice writer

☞ Now select **M17n-bn-National** in scim (Same as in gedit)

☞ You can now type Bengali in Openoffice

## Bengali Fonts / Documents Converter Installation

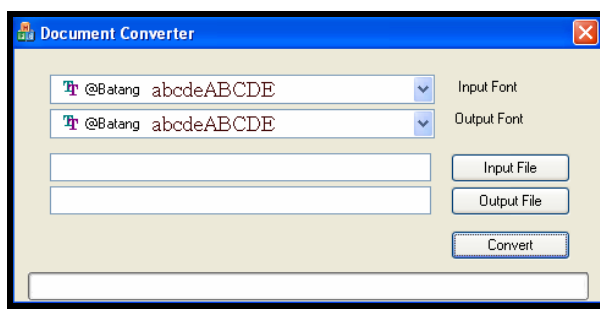
eZgvtb tKej gvI 4uU mbvZb bb-BDwbtkW fonts-Gi gva'tg %ZixKZ WKtgUmgñ unicode G convert Kiv mæ| thgb-

1. Sutonny
2. Sulekha
3. Moina
4. Sutonny MJ

Bengali Fonts Converter Installation cñuqv wbgñct

- ☞ Start Menu-tZ Click Ki "b|
- ☞ Program-G Click Ki "b|
- ☞ Jatiyo Keyboard-G Click Ki "b|
- ☞ Legacy Document Converter-G Click Ki "b|

wbtgñ Wwqvj M box uU Avmte



- ☞ Input Font-Gi Nñi Pull Down Menu t\_tK Dcñi ewYZ 4 uU thtkvb GKU Font select Ki "b|
- ☞ Output Font-Gi Nñi Unicode based Font (Jatiyo Lipi) Select Ki "b|
- ☞ Input File A\_ñ th Document uU Convert Ki tZ Pvb Zv Select Ki "b|
- ☞ Output File A\_ñ Conversion Gi ci th Document uU %Zix nte Zvi bvg Entry / Select Ki "b|
- ☞ Convert-G Click Ki "b|

Documents uU Unicode based Fonts G Convert ntq hvte| Dtj E msiké-Fonts (Sutonny, SutonnyMJ, Sulekha, Moina)-Gi Version Zvi Zg'RwbZ Kvi tb Conversion-Gi ci tkvb tkvb kã ev hÿvñi h\_v\_ñvte Dc~wcz bvl nZ cvti | tmñññ D³ kã ev hÿvñi uU RvZxq wj wctZ mstkvabthvM |

KwαúDUv‡i evsj v gj eY©vj v, msLˆv, wPý I hj³ v¶i ^Zi x  
 KwαúDUv‡i Windows Style QUERTY Keyboard eˆnvi K‡i wbtgr³ frte evsj v gj eY©vj v,  
 msLˆv, wPý I hj³ v¶i ^Zi x Kiv hvq

~↑eY©

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
A	A	H
Av	&v	gh
Av	Av	AltGr h
B	&w	gd
B	B	AltGr d
C	&x	qD
C	C	AltGr D
D	&y	qs
D	D	AltGr s
E	&.	qS
E	E	AltGr S
F	&	qa
F	F	AltGr a
G	&t	q c
G	G	AltGr c
H	&%o	q C
H	H	AltGr C
I	I	AltGr x
I	&l	q x
J	J	AltGr X
v	v	h
w	w	d
x	x	D
!	!	s
.	.	S
:	:	a
‡	‡	c
^	^	C
‡v	‡v	x
Š	Š	A
‡Š	‡Š	X

# eÄbeY©

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
K	K	j
L	L	J
M	M	o
N	N	O
O	O	q
P	P	y
Q	Q	Y
R	R	u
S	S	U
T	T	l
U	U	t
V	V	T
W	W	e
X	X	E
Y	Y	B
Z	Z	k
_	_	K
`	`	l
a	a	L
b	b	b
c	c	r
d	d	R
e	e	f
f	f	F
g	g	m
h	h	w
i	i	v
j	j	V
k	k	M
l	l	N
m	m	n
n	n	i
o	o	p

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
প	প	P
ক	ক	W
র	র	AltGr k
স	স	Q
ত	ত	Z
ঠ	ঠ	z
ড	ড	AltGR j
ঢ	ঢ	AltGr w
ণ	ণ	AltGr v
অ	অ	Shif+AltGr+V
আ	আ	Shif+AltGr+6

we i vg wPy

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
!	!	!
"	"	"
,	,	,
'	'	'
.	.	.
:	:	:
;	;	;
?	?	?
		Shift + G
		Alt Gr + g
-	-	-
—	—	—
০	০	০
”	”	”
০	০	০
০	০	০
&	&	g

## ৳কি ৳য় (Special Characters)

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
0	0	0
GK Avbv	↵	AltGr 1
˘β Avbv	↵	AltGr 2
৳Zb Avbv	↵	AltGr 3
Pvi Avbv		AltGr 5
ev†i v Avbv	h	AltGr 6
UvKv ৳য়	\$	AltGr 4
˘Mz ৳য়	˘	AltGr z
#	#	#
&	&	&
(	(	(
)	)	)
{	{	{
}	}	}
[	[	[
]	]	]
%	%	%
+	+	+
-	-	-

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
/	/	/
\	\	\
<	<	<
>	>	>
@	@	@
=	=	=
*	*	*

### হাৰ্ণিক্সি ৱিক্সি ৱিক্সি

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
K...	K „	j a
°	K & K	j g j
৩৫	K & Z <sup>a</sup>	j g k AltGr v
Kè	K & b	j g b
Kj	K & e	j g f
´	K & g	j g m
K¨	K ¨	j AltGr w
µ	K <sup>a</sup>	j AltGr v
µz	K <sup>a</sup> y	j AltGr v s
K <sub>7</sub>	K & j	j g V
¶	K & l	AltGr j
·	K & m	j g n
৩	K & Z	j g k
¶è	K & l & Y	AltGr j g B
২	K & l & g	AltGr j g m
L„	L „	J a
L¨	L ¨	J AltGr w

\* N.B: AltGr নতুন কী-টেবিলের ওপর অবস্থিত। Alt key | Ab'vb'' Capital letter মগ্ন shift+ default normal Letter Gi mgš†q MWZ | thgb: H→Shift+h, G→Shift+g

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
M <sub>৷</sub>	M ʹ	o a
৓	M y	o s
৔	M & '	o g l
»	M & a	o g L
Mœ	M & b	o g b
MƆ	M & g	o g m
M <sup>ˆ</sup>	M ˆ	o AltGr w
M <sup>ˆ</sup> 0	M <sup>a</sup>	o AltGr v
M—	M & j	o g V
M <sup>ˆ</sup> 0	M <sup>a</sup> y	o AltGr v s
N <sub>৷</sub>	N ʹ	Oa
Nœ	N & b	O g b
N <sup>ˆ</sup> 0	N <sup>a</sup>	O AltGr v
¼	O & K	q g j
•L	O & L	q g J
½	O & M	q g o
•N	O & N	q g O
•g	O & g	q g m
¼«	O & K <sup>a</sup>	q g j AltGr v
•N <sup>ˆ</sup> 0	O & N <sup>a</sup>	q g O AltGr v
•¶	O & K & l	q g AltGr j
P <sup>ˆ</sup>	P ˆ	y AltGr w
"P	P & P	y g y
"Q	P & Q	y g Y
"T	P & T	y g I
"Q <sub>i</sub>	P & Q & e	y g Y g f
"Q«	P & Q <sup>a</sup>	y g Y AltGr v
¾	R R	u g u
À	R & S	u g U
Á	R & T	u g I
R <sub>i</sub>	R & e	u g f



Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
R̂	R "	u AltGr w
R <sup>a</sup>	R <sup>a</sup>	u AltGr v
¾j	R & R & e	u g u g f
Â	T & P	I g y
Ã	T & Q	I g Y
Ä	T & R	I g u
Å	T & S	I g U
Æ	U & U	t g t
Æz	U & U y	t g t s
Uj	U & e	t g f
Uƒ	U & g	t g m
Û	U "	t AltGr w
U <sup>a</sup>	U <sup>a</sup>	t AltGr v
Æ <sup>a</sup>	U & U <sup>a</sup>	t g t AltGr v
V̂	V "	T AltGr w
Ç	W & W	e g e
W <sup>a</sup>	W <sup>a</sup>	e AltGr v
Ŵ	W "	e AltGr w
X̂	X "	E AltGr w
È	Y & U	B g t
É	Y & V	B g T
Û	Y & W	B g e
Yœ	Y & b	B g b
Y^	Y & e	B g f
Ŷ	Y "	B AltGr w
Ê <sup>a</sup>	Y & W <sup>a</sup>	B g e AltGr v
Zl	Z y	k s
Z...	Z „	k a
È	Z & Z	k g k
Ì	Z & _	k g K
Zœ	Z & b	k g b

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
Zı	Z & e	k g f
Zʒ	Z & g	k g m
Z¨	Z ¨	k AltGr w
Ëı	Z & Z & e	k g k g f
İ	Z <sup>a</sup>	k AltGr v
İ"	Z <sup>a</sup> y	k AltGr v s
ı	_ & e	K g f
¨	_ ¨	K AltGr w
ı	_ ¨	l a
~M	` & M	l g o
~N	` & N	l g O
İ	` & `	l g l
×	` & a	l g L
™ç	` & f	l g F
Ø	` & e	l g f
Ù	` & g	l g m
¨	` ¨	l AltGr w
~ & ı	` & M y	l g g o s
™£	` & f <sup>a</sup>	l g F AltGr v
ı	` <sup>a</sup> y	l AltGr v s
ı	` <sup>a</sup> ~	l AltGr v S
aÿ	a & e	L g f
aʒ	a & g	L g m
a¨	a ¨	L AltGr w
a <sup>a</sup>	a <sup>a</sup>	L AltGr v
a <sup>a</sup>	a <sup>a</sup> y	L AltGr v s
aı	a <sup>a</sup> ~	L AltGr v S
bı	b ¨	ba
ıU	b & U	b g t
Û	b & W	bg e
š-	b & Z	bg k

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
Š	b & _	b g K
›`	b &	b g l
Ü	b & a	b g L
bœ	b & b	b g b
Š^	b & e	b g f
bƒ	b & g	b g m
b¨	b ¨	b AltGr w
›U <sup>a</sup>	b & U <sup>a</sup>	b g t AltGr v
Ü <sup>a</sup>	b & W <sup>a</sup>	b g e AltGr v
Šj	b & Z <sup>a</sup>	b g k AltGr v
›Ø	b & ` & e	b g l g f
› <sup>a</sup>	b & ' <sup>a</sup>	b g l AltGr v
Ü«	b & a <sup>a</sup>	b g L AltGr v
c„	c „	r a
c¨	c ¨	r AltGr w
β	c & Z	r g k
Ɔ	c & U	r g t
cċ	c & c	r g r
c—	c & j	r g V
cœ	c & b	r g b
c¨	c ¨	r AltGr w
cŀ	c <sup>a</sup>	r AltGr v
cŀ	c <sup>a</sup> y	r AltGr v s
d«	d <sup>a</sup>	R AltGr v
d-	d & j	R g V
e„	e „	f a
â	e & R	f g u
e—	e & j	f g V
ã	e & `	f g l
ä	e & a	f g L
eÿ	e & e	f g f

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
ে	e	f AltGr w
ে <sup>a</sup>	e <sup>a</sup>	f AltGr v
ে	f	F AltGr w
ে <sup>a</sup>	f <sup>a</sup>	F AltGr v
ে <sup>a</sup>	f <sup>a</sup> y	F AltGr v s
ে <sup>a</sup> f	f <sup>a</sup> ~	F AltGr v S
ে—	f & j	F g V
ে	g & b	m g b
ে <sub>৮</sub>	g <sub>৮</sub>	m a
ে—	g & j	m g V
েউ	g & c	m g r
ে	g & d	m g R
ে <sup>a</sup>	g & e	m g f
ে	g & f	m g F
ে	g & g	m g m
ে	g	m AltGr w
ে <sup>a</sup>	g <sup>a</sup>	m AltGr v
েউ—	g & c & j	m g r g V
ে	g & f <sup>a</sup>	m g F AltGr v
ে	h	w AltGr w
ে	i y	v s
ে <sup>a</sup> f	i ~	v S
ে <sup>a</sup> y	j y	V s
ে	j & K	V g j
ে	j & M	V g o
ে	j & c	V g r
ে	j & d	V g R
ে	j & e	V g f
ে	j & g	V g m
ে	j	V AltGr w
ে—	j & j	V g V

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
î «	j & d <sup>a</sup>	V g R AltGr v
k <sub>„</sub>	k „	M a
ky	k y	M s
k <sup>a</sup>	k <sup>a</sup>	M AltGr v
k—	k & j	M g V
õ	k & P	M g y
kœ	k & b	M g b
k	k & e	M g f
k‡	k & g	M g m
k <sup>ˆ</sup>	k <sup>ˆ</sup>	M AltGr w
kô	k <sup>a</sup> y	M AltGr v s
kð	k <sup>a</sup> ~	M AltGr v S
®ı	l & K	N g j
ó	l & U	N g t
ô	l & V	N g T
®ú	l & c	N g r
õ	l & d	N g R
®Œ	l & K <sup>a</sup>	N g j AltGr v
ó <sup>a</sup>	l & U <sup>a</sup>	N g t AltGr v
ò	l & Y	N g B
®§	l & g	N g m
m <sub>„</sub>	m „	na
m <sup>ˆ</sup>	m <sup>ˆ</sup>	n AltGr w
m <sup>a</sup>	m <sup>a</sup>	n AltGr v
˘ı	m & K	n g j
ö	m & L	n g J
˘—	m & Z	n g k
˘,	m & _	n g K
˘ú	m & c	n g r
ù	m & d	n g R
˘ı	m & Z <sup>a</sup>	n g k AltGr v

Bengali Character	Bengali Button in Keyboard	Key strokes as per QUERTY Keyboard
ñ^	m & e	n g f
ñ§	m & g	n g m
ñ€	m & K ^ a y	n g j AltGr v s
ñú—	m & C & j	n g r g V
ny	n y	i s
n~	n ~	i S
n^	n & Y	i g B
ý	n & b	i g b
ñ€	n & e	i g f
þ	n & g	i g m
n¨	n ¨	i AltGr w
n«	n ^ a	i AltGr v
n^	n & j	i g V

N.B. The ALT GR key is on the right side of the keyboard on some non-U.S. keyboard layouts. ALT GR is equivalent to the CTRL+ ALT key combination, and you can use it with other keys to enter additional characters as shown in the character table.

## Dcmsnvi

KivúDUviti evsjv fvlvi cĕZĕ Ges KivúDUviti e'enviti i Rb" GKwJ gvb" evsjv Kx-teW©cŷqb wQj RwiZi `xNŲ tbi cĒ`vkv| `\*Z cwi eZĕkxj cĕŷi mvt\_ msMwZ ti tL BDwbKwW DcĕhvMx Compliant RvZxq Kx-teW©(evsjv) cŷqb I Dbqtb ht\_ô Kvj tŲcY ntj I tkl chĖ-BDwbKwW DcĕhvMx (UNICODE Compliant) GKwJ RvZxq Kx-teW©(evsjv) mi Kvi KZĖ cĕgZKiY Kiv ntqtQ| mi Kvi KZĖ MwZ GKwJ RvZxq KvguDi mpcwi tki wfwĒtZ 4 t\_+ wekô GB Kx-teW©Di RvZxq gvb nj BDS-1738:2004| evsjv t`k KivúDUvi KivDwŲj, weÁvb Ges Z\_ I thvMvthvM cĕŷi gšŲvj q-Gi D t`vM DbŲ cĕZĕhvMwZvq wbeŲPZ cĕZĕvb tgmvmInformation Engineers & Consultants Bangladesh Ltd. (IECB) ebvbx, XvKv-Gi gva tġ BDwbKwW DcĕhvMx (UNICODE Compliant) RvZxq Kx-teW©(evsjv) Ges BDwbKwW DcĕhvMx (UNICODE Compliant) evsjv dUm RvZxq wj wċ (Jatiyo Lipi) Dbqtb Kiv nq| RvZxq Kx-teW©(evsjv) mċwI q'viti mbvZb Pvi wJ dUm& h\_v 1) Sutonny, 2) Sulekha, 3) Moina I 4) Sutonny MJ t\_ tK BDwbKwW DcĕhvMx (UNICODE Compliant) dUm&RvZxq wj wċ tZ Document Convert Kiv hvq| DbqtbKZ mċwI q'vi wJ eZĕvĕb Windows Ges Linux Operating System-G KivR Kivi DcĕhvMx Kti Dbqtb Kiv ntqtQ| D tġ Ē, G chĕq Macintosh Operating System-G RvZxq Kx-teW©(evsjv)-tZ KivR Kiv mĕe bq| Z tġ cĕeZĕ chĕq Macintosh Operating System-Gi DcĕhvMx Kti Software Dbqtb cwi Kí bv i tqtQ|

mvi v we t k; Z\_ I thvMvthvM cĕŷi DrK t I Ų mvt\_ msMwZ ti tL KivúDUviti evsjv fvlvi e'enviti i Rb" RvZxq Kx-teW©I GZ` msŲvš-mċwI q'vi Dbqtb GKwJ Ųĵi a cĕŲmvgvĀ| DbqtbKZ GB mċwI q'vi e'envi Ki tZ wĵtq hw tKvb Amyeav t` Lv t` q A\_ev tKvb cĕvgk\_ v tK Zv mi v mwi wj wLZfv tġ evsjv t`k KivúDUvi KivDwŲj tK AeinZ Kiv ntj mċwI q'vi wJi cwi gvRĕ Dbqtb mvab Ges cĕeZĕms` i Y I mĕcĕhvi Y mnR n tġ e tġ Avgv t` i wekŲm|