

PalmSecure™



Detailed Technical Specifications

1. Condition of development and target equipment

Item		Condition	Remarks
Hardware	Personal Computer	CPU : Intel Celeron 650MHz(L2 cache: 256KB) or higher Memory : 256MB or more Hard disk : 2MB or more (for sensor driver and authentication library) USB : USB2.0 USB1.1(UHCI) Display : 1024 x 768 pixels or higher	Process speed depends on condition of CPU, L2 and Memory. Process speed can be checked using sample application.
OS (see Note 1)	Windows (Client)	Windows2000 professional (SP4 or later) Windows XP professional (SP2 or later)	
	Windows (Server)	Windows Server 2003	
	Linux (Client/Server)	Red Hat Linux Ver.3 -Kernel:2.4.21-4.EL -Gcc:3.2.3.20030502 (Red Hat Linux3.2.3-20) -Glibc:2.3.2 Red Hat Linux Ver.4 -Kernel:2.6.9-5EL -Gcc:3.4.3.20041212 (Red Hat 3.4.3-9.EL4) -Glibc:2.3.4	
Development Language		C/C++ (Recommendation), Java, VB	

Note 1) This OS is for Authentication library

Note 2) System environment may be different according to the tool. Check the document of each tool.

2. PalmSecure™ Sensor Product specification

No.	Item	Specifications	Remarks
1	Supply voltage	4.4 to 5.4V	Supplied from USB bus power
2	Power consumption	2.5W or less	
3	Interface	USB2.0 : HS USB1.1 : FS	USB 2.0 recommended USB1.1 can use in case of UHCI controller method
4	Electrical withstand voltage	8kV (Indirect, Direct, Contact)	
5	Distance	40 to 60mm	From sensor filter surface to Palm
6	Operating environment	Until 12 hours /day : 60 24 hours /day : 50 In case running from 12 hours to 24 hours 13 hours : average 57 or less 14 hours : average 56 or less 15 hours : average 55 or less 16 hours : average 54 or less 17 hours : average 53 or less 18 hours : average 53 or less 19 hours : average 52 or less 20 hours : average 51 or less 21 hours : average 50 or less 22 hours : average 50 or less 23 hours : average 50 or less 10% to 90%RH	No condensation
7	Storage environment	-20 to 70 degree C 8% to 95%RH	No condensation
8	Operating luminance	Natural light: below 2,000lx Fluorescent light: below 2,000lx Halogen / incandescent lamp: below 500lx	Direct exposure to sunlight must be avoided. Incandescent light and halogen light must be prevented from entering into the sensor.
9	Water proofing	Water proofed on filter (Water must be removed for registration and matching operation)	Compliant with IP41 of IEC60529 IP
10	Outer dimensions	35 (W) x 35(H) x 27(H) mm	
11	Weight	Below 50g	
12	Regulatory	CE marking, UL/CSA, FCC,WEEE, RoHS	See section 2.3 for details
13	Encryption	AES (Key Length higher than 128bit)	
14	Interface	USB connector	

	connector	Series: "mini-B" receptacle (with 5 pins)	
15	Interface cable	max. 4m length USB compliant cable connector must be used.	See Note 1
16	Filter material	Glass	
17	MTBF	830,000 hours	
18	Unit life	5 years	
19	Template data size	approx. 2.4Kbyte for a single hand. (0.8Kbyte in compression mode)	2.4Kbyte or 0.8Kbyte can be defined by software.
20	Number of hand placement for enrollment	2	Selected by command
21	FRR/FAR	FAR: Below 0.00008% at FRR: 0.01%(w/ Retry 1 time)	Calculating along the following standard: Conform to International Standards Organization ISO/IEC 19795 (under discussing at ISO/IEC JTC1/SC37 WG5).
22	Authentication time	<u>1 to 1 authentication (Verification):</u> <Intel ULV Celeron 650MHz/USB2.0> Capturing: 1.0 second Verification: 0.5 second <Intel Pentium4 3.0GHz/USB2.0> Capturing: 0.9 second Verification: 0.1 second <u>1 : N authentication (identification):</u> -Previous mode: N=10people(20hands) <Intel ULV Celeron 650MHz/USB2.0> Capturing: 1.0 second Identification: aver. 3.2 second <Intel Pentium4 3.0GHz/USB2.0> Capturing: 0.9 second Identification: aver. 0.9 second -High-speed mode N=100people(200hands) <Intel ULV Celeron 650MHz/USB2.0> Capturing: 1.0 second Identification: aver. 10.4 second <Intel Pentium4 3.0GHz/USB2.0> Capturing: 0.9 second Identification: aver. 3.0 second	"High-speed mode" function is applied from Authentication library V12.

Note 1) Followings are sample of USB connector suppliers:

-Host side: MA3CT004K0

URL: <http://www.mainsuper.com.tw/index.htm>

-Sensor side: MNC12-5K5210

URL: <http://www.acon.com/wps/wcm/connect/en/home/index.htm>

3 Regulatory

The following regulatory standards have been acquired by Fujitsu Japan.

- Safety: UL60950-1, CSA C22.2No.950-1
CE marking (EN60950-1, EN60825-1 Class 1)
- EMI: FCC Part15 Subpart B Class B
CE marking (EN55022, EN50134-4)
- Environment: WEEE (2002/96/EC), RoHS (2002/95/EC)

