



KEYCORP

PRODUCT NAME: **IDEEA 3**
RELEASE NOTE NO: REVISION : **SP3** DATE: **21-MAY-2002**

This Software Release Note describes release no. 3.00 of IDEEA.

SPECIFICATION COMPLIANCE

- KEF, Keycorp Embedded Framework

HARDWARE COMPATIBILITY

- All Keycorp KEF compliant terminals.

SOFTWARE CHARACTERISTICS

- This is an upgrade to version 3.0 of IDEEA. If you do not have version 3.0 of IDEEA installed, then you must install it before installing this upgrade.
- Examine the individual release notes for each software module for their restrictions, requirements etc.

FILES RELEASED

- Examine individual release notes attached below.

SPECIFICATION CHANGES SINCE LAST VERSION

- Examine the individual release notes for each software module

SOFTWARE CHANGES SINCE LAST VERSION

- Examine the individual release notes for each software module

KNOWN ANOMALIES

- Examine the individual release notes for each software module

LOADING PROCEDURE

- IDEEA **must not** be running when installing this upgrade. Shutdown IDEEA if it is running.
- If you have previous IDEEA v3.0 SP3 beta installed on your machine, uninstall it. Remember to use the ROLL BACK option when uninstalling.
- If you have IDEEA v3.0 SP1 or just IDEEA v3.0, simply install the latest IDEEA v3.0 SP3 over it.
- If you have any IDEEA version older than IDEEA v3.0, you must uninstall IDEEA first, install IDEEA v3.0 then install the latest SP3.
- Run the V3SP3.EXE file.
- Follow the instructions on the screen after running the install pack

SOFTWARE COMPATIBILITY

- KEF, Keycorp Embedded Framework

GENERAL NOTES

If you have not installed any service pack for IDEEA 3 (i.e. SP1) read on.

There has been extra functionality added to the simulated Magnetic Card Reader (MCR).

Unfortunately cards details stored in the Magnetic Card library using previous releases of IDEEA will no longer be compatible with the simulated MCR. The card details can be modified to be compatible with this release using the following procedure:

If you are not confident modifying the Windows™ registry settings, create new cards and re-enter the details.

Otherwise, modify each card's entry in the MCLibrary registry using a program like Regedit™.

Go to HKEY_CLASSES_ROOT-> IDEEA -> MCLibrary and for each card listed, add track4 and track5. This is done by right clicking on the card, select New String value then name the string TRACK4. Right click again on the card and add a new string value called TRACK5. There is no need to add to the data field. Repeat for each card in the library.



KEYCORP

PRODUCT NAME: **APPLICATION MANAGER (APPMAN)**

RELEASE NOTE NO: **GEN-RN-0012** REVISION : **2.14** DATE: **16-MAY-2002**

This Software Release Note describes release no. 2.14 of IDEEA **3**

SPECIFICATION COMPLIANCE

- GEN-SP-0029 Application Manager Interface Specification, Version 1.3
- GEN-MA-0016 Application Manager - Developers Guide, Version 1.0

HARDWARE COMPATIBILITY

- *AppMan can be used on all Keycorp KEF-compliant terminals.*

SOFTWARE CHARACTERISTICS

- *AppMan will require a heap size of at least 25kB to be allocated if compressed Hex file downloading is to be used.*
- *Terminals with IAR compiled software will not allow compressed file downloads.*

FILES RELEASED¹

Library Files :

Description	IAR	GCC	PC
AppMan Library	<i>Appman.r20</i>	<i>Appman.a</i>	<i>Appman.dll</i>
AppMan Trap Interface Library	<i>Apm_usr.lib</i>	<i>Apm_usr.a</i>	<i>Apm_tif.lib</i>
AppMan Header Library	<i>ApmHdr10.r20</i>	<i>ApmHdr10.a</i> <i>ApmHdr40.a</i>	<i>ApmHdr.lib</i>
AppMan Startup Library	<i>ApmnStrt.v2</i>	<i>ApmnStrt.o</i>	N/A
AppMan Hib Stubs Library	<i>HibStubs.r20</i>	<i>HibStubs.a</i>	<i>HibStubs.lib</i>
HIB Libraries Trap Interface Library	<i>Hib_usr.r20</i>	<i>Hib_usr.a</i>	N/A
C Libraries Trap Interface Library	<i>Clib_usr.lib</i>	<i>Clib_usr.a</i>	N/A
AppMan Segment Extents Library	<i>Extents.lib</i>	N/A	N/A

Interface Header Files :

- *Apm_usr.h*
- *ApmHdr.h*
- *App_ids.h*
- *AppEntry.h*
- *PcTif.h*

¹ Files which have been modified since the last release are in *italics*.

Other Files :

- *AppMan.exe* : Appman executable for IDEEA

Notes :

Refer to GEN-SC-0055 "AppMan - Template Application for Idea v3.0+" for using these libraries.

SPECIFICATION CHANGES SINCE LAST VERSION

- *None.*

SOFTWARE CHANGES SINCE LAST VERSION

- *Added ApmRelocateTempFile.*
- *Allow non-destructive downloading.*
- *Added Triple DES, OCBC and MAC generating functions to Hib_usr.*
- *Added Hib combined Date & Time functions to Hib_usr library.*
- *Add ApplicationDataStart & ApplicationDataEnd to extents.r20 & ApmHdr.*
- *Appman interprets Backlight & Power-off environment variables as BCD values.*
- *Changing backlight & power-off timeouts updates their environment variables, if they exist.*
- *Moved all IAR specific include files to Libraries/IarInc directory.*
- *User must now declare Hib registration Table.*
- *Added compressed file loader.*
- *Allow file download at 19200 or 38400 baud, automatically detecting baud.*
- *Sleep period when idling changed to 1 second (in line with ENQ timeout).*
- *Smartcard insertion event is mutually exclusive of other user events.*
- *Allow upgrade of applets regardless of version number.*
- *Bug fix: begin app search from Appman code end address, not from flash start address.*

KNOWN ANOMALIES

- *AppMan only interprets string values of environment variables for IDEEA simulation.*

LOADING PROCEDURE

- *Loading is performed through the Bootloader of any KEF compliant terminal.*

SOFTWARE COMPATIBILITY

- *The software is compatible with all applications built as applets.*

GENERAL NOTES

- *None.*



KEYCORP

PRODUCT NAME: **PRINTER DRIVER(DRVPRN)**

RELEASE NOTE NO: **GEN-RN-0026** REVISION : **1.01** DATE: **8-FEB-2002**

This Software Release Note describes release no. 1.01 of IDEEA **3**

SPECIFICATION COMPLIANCE

- GEN-SP-0056 DrvPrn Interface Specification, Version 1.1

HARDWARE COMPATIBILITY

- *None.*

SOFTWARE CHARACTERISTICS

- *None*

FILES RELEASED

- *DrvPrn.h*
- *K76prn.a, K76prn_.a, K76prn.lib, K76rn_.lib*
- *K78aps.a, K78aps_.a, K78aps.lib, K78aps_.lib*
- *K78shtl.a, K78shtl_.a, K78shtl.lib, K78shtl_.lib*
- *K76_025.r20, K76_025_.r20, K76_025.lib, K76_025_.lib*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None.*

SOFTWARE CHANGES SINCE LAST VERSION

- *First release.*

KNOWN ANOMALIES

- *None.*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *None.*

GENERAL NOTES

- *None.*



KEYCORP

PRODUCT NAME: **PRINTER SERVICES(SRVPRN)**
RELEASE NOTE NO: **GEN-RN-0025** REVISION : **1.12** DATE: **8-FEB-2002**

This Software Release Note describes release no. 1.12 of IDEEA **3**

SPECIFICATION COMPLIANCE

- KEF-SP-0052 SrvPrn Product Requirements Specification, Version 1.0
- GEN-SP-0056 SrvPrn Interface Specification, Version 1.2

HARDWARE COMPATIBILITY

- *None.*

SOFTWARE CHARACTERISTICS

- *None*

FILES RELEASED

- *SrvPrn.h*
- *SrvPrn.a, SrvPrn_.a, SrvPrn.r20, SrvPrn_r20, SrvPrn.lib, SrvPrn_.lib*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None.*

SOFTWARE CHANGES SINCE LAST VERSION

- *First release.*

KNOWN ANOMALIES

- *None.*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *Requires K78aps or K76prn to be present.*

GENERAL NOTES

- *None.*



KEYCORP

PRODUCT NAME: **GRAPHIC DRIVER LIBRARY (GEN-MM-0019)**
RELEASE NOTE NO: **GEN-RN-0015** REVISION : **1.32** DATE: **14-MAY-2002**

This Software Release Note describes release no. 1.32 of IDEEA **3**

SPECIFICATION COMPLIANCE

- Graphic Driver Interface Specification [GEN-SP-0021]
- Graphic Driver Developers guide [GEN-MA-0011]

HARDWARE COMPATIBILITY

- *Graphic capable display is required*

SOFTWARE CHARACTERISTICS

- *KeyCorp HIB is required*

FILES RELEASED

- *DrvGfx.a, DrvGfx.r20, DrvGfx.lib, DrvGfx_.lib, DrvGfx.h*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None*

SOFTWARE CHANGES SINCE LAST VERSION

- *Creation of new versions of DrvGfxCharPutText() and DrvGfxPixelPutText() functions which run on PC under IDEEA.*
- *Modification of DrvGfxCharPutText() function which runs on embedded system in order to increase the speed of execution.*
- *Following modifications to Graphic Driver Test Harness revision 1.01 (KEF-MM-0080): Introduction of function measuring the time spent on displaying text or graphic on LCD in Test Harness project, Making Test project work on K71 terminal, Removal of few minor errors*

KNOWN ANOMALIES

- *Reverse fond on K71i-679 is overlapping with system fond area. It seems to be BIOS related issue for this particular terminal.*

LOADING PROCEDURE

- *None*

SOFTWARE COMPATIBILITY

- *Compatible with any software residing on the terminal.*



KEYCORP

PRODUCT NAME: **DRVDEBUG**

RELEASE NOTE NO: **GEN-RN-0030** REVISION : **1.03** DATE: **26-SEP-2001**

This Software Release Note describes release no. 1.03 of IDEEA **3**

SPECIFICATION COMPLIANCE

- GEN-SP-0028 Interface Specification, Version 1.03

HARDWARE COMPATIBILITY

- *Smart Media debugging only on terminals with appropriate support.*

SOFTWARE CHARACTERISTICS

- *None relevant.*

FILES RELEASED

- *DebugDrv.h*
- *DebugDrv.a, DebugDrv.r20, DebugDrv.lib*

SPECIFICATION CHANGES SINCE LAST VERSION

- *Debugging to Smart Media now supported.*

SOFTWARE CHANGES SINCE LAST VERSION

- *Debugging to Smart Media now supported.*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None*

SOFTWARE COMPATIBILITY

- *No restrictions.*

GENERAL NOTES

- *Debugging to Smart Media is intended for Keycorp internal use due to the complexity of operation.*



KEYCORP

PRODUCT NAME: **DRVSCT**
RELEASE NOTE NO: **GEN-RN-0006** REVISION : **1.70** DATE: **20-SEP-2001**

This Software Release Note describes release no. 1.47 of IDEEA **3**

SPECIFICATION COMPLIANCE

- ISO/IEC 7816-3, [1997-12-15], Second Edition
- EMV2000, December 2000
- Smartcard Driver Interface Specification, KEF-SP-0018, v1.7

HARDWARE COMPATIBILITY

- *Only for terminals supporting KEF architecture.*
- *On terminals with SAMs in a remote unit, use the cDrvSct and DrvSctDp libraries together instead of the DrvSct library.*

SOFTWARE CHARACTERISTICS

- *The following limitations exist:*

<i>PARAMETER</i>	<i>VALUE</i>
<i>Number of APDU options that may be set</i>	<i>10</i>
<i>Number of channels supported by IAR libraries</i>	<i>6</i>
<i>Number of channels supported by GCC libraries</i>	<i>16</i>

FILES RELEASED

- *Naming Convention: DrvSct remains the name of the traditional smartcard driver libraries. cDrvSct refers to libraries with all of the public functions in the API prefixed by the letters "Core". DrvSctDp is a separate module used for dispatching smartcard functions to a remote reader. Whenever a library name is suffixed by an underscore character '_', it is a debug version of the library.*
- *Header Files:
Drvscct.h, cDrvSct.h*
- *Library Files*

	<i>DRVSCCT</i>	<i>Core DrvSct</i>	<i>DrvSct Dispatcher</i>
<i>IAR</i>	<i>DrvSct.r20</i>	<i>cDrvSct.r20</i>	<i>DrvSctDp.r20</i>
	<i>DrvSct_.r20</i>	<i>cDrvSct_.r20</i>	
<i>GCC</i>	<i>DrvSct.a</i>	<i>cDrvSct.a</i>	<i>DrvSctDp.a</i>
	<i>DrvSct_.a</i>	<i>cDrvSct_.a</i>	
<i>MSVC</i>	<i>see note 1</i>	<i>see note 1</i>	<i>DrvSctDp.lib</i>
- *Note 1: due to a change in the way that DrvSct is simulated in IDEEA, the PC libraries are no longer released as part of this package. For IDEEA v3.0 Service Pack 2 and later, it is necessary to use DrvSct.lib and cDrvSct.lib that are released as part of the IDEEA project.*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None*

SOFTWARE CHANGES SINCE LAST VERSION

- *Operation of DrvSctUtilGetTlvDataList modified to support padding, see Keycorp external document E00561.*
- *The operation of the driver is now consistent with EMV2000 Level 1 requirements.*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None*

SOFTWARE COMPATIBILITY

- *No compatibility issues known.*

GENERAL NOTES

- *None.*



PRODUCT NAME: SRVNET **SOFTWARE VERSION:** 3.23
DOCUMENT NUMBER: GEN-RN-0005 **DOC VERSION:** 3.23
DATE: 17 JULY, 2003
SPEC CHANGE **CPR RESOLUTION** **INITIAL RELEASE**

This Software Release Note describes the v1.11 release of SrvNet.

SPECIFICATION COMPLIANCE

- GEN-SP-0034 and KEF-MA-0009

HARDWARE COMPATIBILITY

- All KEF compliant Keycorp Terminals

FILES RELEASED AND VERSION NUMBERS

This release is comprised of the following individual libraries.

Description:	Header Files:			
SrvNet header file	Srvnet.h			
SrvNet structures header file	Netcfg.h			
	GCC Libraries:	IAR Libraries:	PC Libraries:	Version:
Srvnet Library	Srvnet.a	Srvnet.r20	Srvnet_pc.lib	2.15
SrvNet configuration library	Srvcfgs.a	Srvcfgs.r20	Srvcfgs_pc.lib	2.15
SrvNet Hdlc library	Srvhdlc.a	Srvhdlc.r20	Srvhdlc_pc.lib	2.11
SrvNet Host library	Srvhost.a	Srvhost.r20	Srvhost_pc.lib	2.11
SrvNet Irda library	Srvirda.a	Srvirda.r20	Srvirda_pc.lib	2.11
SrvNet Lan library	Srvlan.a	Srvlan.r20	Srvlan_pc.lib	2.11
SrvNet Modem library	Srvmdm.a	Srvmdm.r20	Srvmodem_pc.lib	2.11
SrvNet Sync library	Srvsync.a	Srvsync.r20	Srvsync_pc.lib	2.11
SrvNet Uart library	Srvuart.a	Srvuart.r20	Srvuart_pc.lib	2.11
SrvNet X28 library	Srvx28.a	Srvx28.r20	Srvx28_pc.lib	2.11
SrvNet Xmodem library	Srvxmdem.a	Srvxmdem.r20	Srvxmodem_pc.lib	2.11
SrvNet Bsif library	Srvbsif.a	Srvbsif.r20	Srvbsif_pc.lib	1.22
SrvNet Bsmdm library	Srvbsmdm.a	Srvbsmdm.r20	Srvbsmdm_pc.lib	1.55
SrvNet Bsprn library	Srvbsprn.a	Srvbsprn.r20	Srvbsprn_pc.lib	1.44
SrvNet Kyap library	Srvkyap.a	Srvkyap.r20	Srvkyap_pc.lib	1.43
SrvNet Tend library	Srvtend.a	Srvtend.r20	Srvtend_pc.lib	1.40
SrvNet Ppp library	Srvppp.a	Srvppp.r20	Srvppp_pc.lib	1.42
SrvNet Tpdu library	Srvtpdu.a	Srvtpdu.r20	Srvtpdu_pc.lib	1.21
SrvNet Bsurt library	Srvbsurt.a	Srvbsurt.r20	Srvbsurt_pc.lib	1.36
SrvNet BsSct library	Srvbsst.a	Srvbsst.r20	Srvbsst_pc.lib	1.31

SrvNet BsRes	Srvbsres.a	Srvbsres.r20	Srvbsres_pc.lib	1.00
SrvNet Zntk library	SrvZntk.a	SrvZntk.r20	SrvZntk_pc.lib	1.12
SrvNet CDPD	SrvCDPD.a	SrvCDPD.r20	SrvCDPD_pc.lib	2.00
SrvNet I2C78	SrvI2c78.a	SrvI2c78.r20	SrvI2c78_pc.lib	1.00
SrvNet I2400	SrvI2400.a	SrvI2400.r20	SrvI2400_pc.lib	1.00
SrvNet RAP	SrvRap.a	SrvRap.a	SrvRap_pc.lib	1.05
SrvNet Motnt	SrvMotnt.a	SrvMotnt.r20	SrvMotnt_pc.lib	1.00
SrvNet Stubs library	Srvstubs.a	Srvstubs.r20	Srvstubs.lib	1.00

SPECIFICATION CHANGES SINCE LAST VERSION

-

CPR'S CLOSED SINCE LAST VERSION

-

KNOWN ANOMALIES (CPR NUMBERS)

- CPR 167

NOTES

Usage of SrvStubs, as described in Release 3.00, is found to cause problems. It is now fixed on target devices. So with new IDEEA 3.1 and higher releases there is no need to use any SrvNet stub libraries for target devices. Any unused protocol library in the project will be appended as a stub automatically during link time. The problem still exists for simulation on PC though, so the users should manually add PC versions of the unused libraries as stubs.

Most of the libraries in this version are unchanged with regard to previous release. The main changes have been as follows:

SrvNet	2.15	SrvNetGetConfig function added to interface functions
SrvCfgs	2.15	Modifications for the addition of new libraries (Accommodates the new EFT Structures and offset tables)
SrvPpp	1.42	Error reporting enhanced.
SrvBsUrt	1.36	User allowed to ask for less data than available in the Rx buffer
SrvBsSct	1.31	Better handling of large data reception from the SmartCard
SrvZntk	1.12	Faulty packet number resetting due to incomplete packets and hence disconnection due to mismatch in consecutive packets fixed
SrvRap	1.05	new release
SrvI2400	1.00	new release
SrvI2C78	1.00	new release
SrvMotnt	1.00	new release
SrvCDPD	2.00	new release



KEYCORP

PRODUCT NAME: SRVZLIB **SOFTWARE VERSION:** 1.00
DOCUMENT NUMBER: GEN-RN-0022 **DOC VERSION:** 1.00
DATE: 17 JULY, 2003 **PREVVERSION:** N/A
SPEC CHANGE **CPR RESOLUTION**

This Software Release Note describes the v1.11 release of **DRVZTM (ZONTALK)**.

SPECIFICATION COMPLIANCE

GEN-SP-0059

VERIFICATION

This version has been in use during development and testing of the US Netcomm K23 application. See Lab book 455 for more details

HARDWARE COMPATIBILITY

- All KEF Compliant Keycorp Terminals

FILES RELEASED AND VERSION NUMBERS

Description:	Source Files	GCC Library	PC Library	IAR Library	Version:
SrvZlib Library File		SrvZlib.a	SrvZlib.lib	-	1.1.3
SrvZlib Header File	zlib.h zconf.h	-	-	-	1.1.3

SPECIFICATION CHANGES SINCE LAST VERSION

None

CPR'S CLOSED SINCE LAST VERSION

KNOWN ANOMALIES (CPR NUMBERS)

- None

ADDITIONAL NOTES

Initial Release. Currently used with DrvZtm, Appman and Hexpress.

LICENSE

/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.1.3, July 9th, 1998

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DIFFERENCES BETWEEN THE INTERNET FREEWARE VERSION ZLIB AND SRVZLIB

- Calloc is replaced by malloc, i.e. `calloc(item, size)` → `malloc(item*size)` and the allocated memory is then initialized to 0.
- The default value for **windowBits** is changed from 15 to 12.
- The interface functions are stripped of the "OF" define to be able to automatically create the trap interface file.



KEYCORP

PRODUCT NAME: KEYCORP FILE MANAGEMENT SYSTEM
DOCUMENT NUMBER: GEN-RN-0011 **VERSION :** 1.80
DATE: 25/09/01
SPEC CHANGE **CPR RESOLUTION**

This Software Release Note describes the v1.06 release.

SPECIFICATION COMPLIANCE

- GEN-SP-0047 I/F Spec v1.3
- GEN-SP-0046 SRS v1.0
- 902-SP-0488 PRS v1.0

HARDWARE COMPATIBILITY

- Only for KEF terminals supporting GCC compiler

SOFTWARE CHARACTERISTICS

- Only 4MB Smart Media disks are supported. The performance of Smart Media is poor relative to the other storage devices.
- Only the following sector sizes are supported by the storage devices:

Device	Sector Sizes
Smart Media	512 bytes
Flash	256, 512 bytes
NVRAM	256, 512 bytes
RAM	512 bytes

- The following limits exist on the operational parameters

Maximum number of files open concurrently	16
Maximum number of search handles open concurrently	16
Maximum number of entries in the root directory	15
Maximum path length specifying a file or directory	60 bytes

- The flash device driver can use at most 254 flash sectors. These sectors must be contiguous and the same size.
- Power failure recovery has been implemented for all devices. Note that the process of detection [and correction if required] can be relatively slow. Also, power failure recovery cannot guarantee full recovery of data. The data loss is typically limited to that data which had been written to disk but not committed using either a file close or file flush operation.

FILES RELEASED

- SrvKfms.h

- DevMgr.h
- DrvKfDk.a, DrvKfDk_.a
- DrvKfNv.a, DrvKfNv_.a, DrvKfNv.lib, DrvKfNv_.lib
- DrvKfRm.a, DrvKfRm_.a, DrvKfRm.lib, DrvKfRm_.lib
- DrvKfFl.a, DrvKfFl_.a, DrvKfFl.lib, DrvKfFl_.lib
- DrvKfSt.a, DrvKfSt_.a, DrvKfSt.lib, DrvKfSt_.lib
- SrvKfms.a, SrvKfms_.a, SrvKfms.lib, SrvKfms_.lib

SPECIFICATION CHANGES SINCE LAST VERSION

- None

CPRs CLOSED SINCE LAST VERSION

- SrvKfms-00047 and SrvKfms-00049 in SrvKfms Issues database.

KNOWN ANOMALIES (CPR NUMBERS)

- Only one instance of each storage device can be created.
- Bad sectors are not detected and avoided.
- The Smart Media driver doesn't detect the removal of one Smart Media disk and the subsequent insertion of a different disk. If this is done, subsequent accesses to the disk are likely to cause corruption.
- The file system does not support shared files. If a single file has concurrent multiple handles to it (even if only one of them is used for writing), the file will become corrupted. Similarly, if an open file is deleted or moved before it is closed, the file system may become corrupted.

GENERAL NOTES

- When using FlashPath to transfer files on Smart Media between the terminal and a PC, there is a problem deleting directories on the Smart Media when using a PC running Windows 95. This problem does not arise with PCs running Windows NT.
- When using the FlashPath to transfer files on Smart Media between the terminal and a PC, the Smart Media must have originally been formatted by a Keycorp terminal. Also, it is very important not to change *anything* in the root directory of the Smart Media. This includes, creating new files/directories or even accessing files in the root for reading (since this updates the time-last-accessed). All data transfer should be done using files in the subdirectories.



KEYCORP

PRODUCT NAME: **TRANSACTION FLOW SRVSCHEDULER** RELEASE NOTE
DOCUMENT NUMBER: GEN-RN-0020 1.00
DATE: 27TH SEPTEMBER 2000

This Release Note describes the release of source code GEN-SC-0064 which builds library pack GEN-MM-0059

SPECIFICATION COMPLIANCE

- Interface Specification GEN-SP-0054
- Developers Guide GEN-MA-0034

CHANGES FROM PREVIOUS VERSION

- None – initial version

HARDWARE COMPATIBILITY – V1.00

- No specific hardware dependency

SOFTWARE COMPATIBILITY – V1.00

- This version built with IDEEA V3 SP1

KNOWN ANOMALIES V1.00

- None



KEYCORP

PRODUCT NAME: ACTIVE TRANSACTION DATA STORE (ATDS)
DOCUMENT NUMBER: KEF-RN-0006 **VERSION :** 1.03
DATE: 17-JUL-2003
SPEC CHANGE **CPR RESOLUTION**

This Software Release Note describes the v1.03 release.

SPECIFICATION COMPLIANCE

- KEF-SP-0048 I/F SRS v1.30

HARDWARE COMPATIBILITY

- Only for KEF terminals supporting GCC compiler

SOFTWARE CHARACTERISTICS

- Maximum field size is 512 bytes.
- Maximum number of fields is 80.
- Snapshot feature added.

FILES RELEASED

- SrvAtds.h
- SrvAtds.a, SrvAtds.lib

SPECIFICATION CHANGES SINCE LAST VERSION

CPRs CLOSED SINCE LAST VERSION

KNOWN ANOMALIES (CPR NUMBERS)

- None.

GENERAL NOTES



KEYCORP

PRODUCT NAME: **SRVCDS.**

RELEASE NOTE NO: **KEF-RN-0005** REVISION : **1.01** DATE: **2-MAY-2002**

This Software Release Note describes release no. 1.28 of IDEEA **3**

SPECIFICATION COMPLIANCE

- See general notes. Complete redesign of internal workings of SrvCds

HARDWARE COMPATIBILITY

- *The embedded operation is intended to be with H8S based terminals*

SOFTWARE CHARACTERISTICS

- *Embedded H8S assembler within the 'C' source code*

FILES RELEASED

- *SrvCds.h*
- *SrvCds.a, SrvCds.Lib*

SPECIFICATION CHANGES SINCE LAST VERSION

- *Change to SrvCdsSaveField - new parameter added.*
- *Removal of all usage of SrvReg and SrvKfms*

SOFTWARE CHANGES SINCE LAST VERSION

- *Complete internal rewrite*

KNOWN ANOMALIES

- *None"*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *none required*

GENERAL NOTES

- *The software has been completely rewritten from the first released version. This has been to dramatically improve the efficiency of operation. A large amount of testing has been done using the Linkpoint software in the K78. Specific CDS testing has been kept to a minimum, rather overall performance testing has been performed within a working terminal environment.*
- *The compilation of the software for embedded usage relies on the use of the GCC compiler with the target being an H8S processor. This is due to the embedding of some fast assembler code within the 'c' source to improve the efficiency of operation.*



KEYCORP

PRODUCT NAME: **TRANSACTION MANAGER (SRVTRN)**

RELEASE NOTE NO: **KEF-RN-0009** REVISION : **1.04** DATE: **14-SEP-2001**

This Software Release Note describes release no. 1.04 of IDEEA **3**

SPECIFICATION COMPLIANCE

- KEF-SP-0050 SrvTrn Product Requirements Specification, Version 1.0
- KEF-SP-0051 SrvTrn Software Requirements Specification, Version 1.1
- GEN-SP-0060 SrvTrn Interface Specification, Version 1.5

HARDWARE COMPATIBILITY

- *None.*

SOFTWARE CHARACTERISTICS

- *Memory requirements depends upon the number of transactions managed.*

FILES RELEASED

- *SrvTrn.h*
- *SrvTrn.a, SrvTrn_.a, SrvTrn.lib, SrvTrn_.lib*

SPECIFICATION CHANGES SINCE LAST VERSION

- *Added notes for SrvTrnQuery() function in SrvTrn Interface Specification (Doc. no. GEN-SP-0060).*

SOFTWARE CHANGES SINCE LAST VERSION

- *Fixed bugs:.*

- 1. When using SrvTrnSetBatchConfig in the Linkpoint project, an access violation occurs when calling SrvTrnSetBatchConfig.*
- 2. Calls to SrvTrnGetBatchName() are dangerous. The implementation does not carefully discriminate between the length of SrvTrn batchnames (7 chars) and the length of SrvKfms filenames (8 + 1 + 3). This leads to potential buffer overflows*
- 3. When SrvTrn initialises, it allocates memory from the heap using calloc(). The calloc() function is not well-supported by the BIOS/appman. The function malloc() should be used, and then memset() to clear the memory.*
- 4. Even with wNumCriteria = 1, meaning only one criteria, SrvTrnQuery return Bad_Arguments if the eSearchOperator is not set to a correct value.*
- 5. Enabled wNumCriteria=0, which means retrieve all eprefs stored ignoring any criteria. If application function is not supplied, all eprefs are retrieved from the list stored in the RAM, which substantially improves time response.*

- *Enabled wNumCriteria=0, which means retrieve all eprefs stored ignoring any criteria. If application function is not supplied, all eprefs are retrieved from the list stored in the RAM, which substantially improves time response.*

KNOWN ANOMALIES

- *None.*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *Requires SrvKfms and SrvAtds to be present.*

GENERAL NOTES

- *None.*



KEYCORP

DOCUMENT NUMBER: **GEN-RN-0029**
PRODUCT NAME: **SRVMSTSS LIBRARY (GEN-MM-0070)**
VERSION: **V3.0**
DATE: **17 SEPTEMBER, 2001**

Overview

This release notes describes the Master Session PIN encryption services V3.00 release.

Change History

First release of the software

Software Compliance

The software is compliant to the following documents –

- ANSI X9.8 - Personal Identification Number Management and Security.
Part 1: PIN Protection Principles and Techniques;
Part 2: Approved Algorithms for PIN Encipherment.
- FDC Omaha Platform ETC “Plus” Specification Version 9: April 2000 (Retail Only)

Hardware Compliance

This release is for both the embedded target (GCC compiler) and for running IDEEA with Visual C++ .

Build Environment

IDEA V3.0 SP2 and VisualC++ V6.0

Software Releases

- Master/Session Applet/Libraries (Source code). GEN-SC-0078
- Master/Session Libraries (Release library pack). GEN-MM-0070



KEYCORP

PRODUCT NAME: **SRVUTIL**

RELEASE NOTE NO: **GEN-MM-0061** REVISION : **1.1** DATE: **7-FEB-2002**

This Software Release Note describes release no. 1.1 of IDEEA **3**

SPECIFICATION COMPLIANCE

- GEN-SP-0053 SrvUtil Interface Specification v1.5

HARDWARE COMPATIBILITY

- *None*

SOFTWARE CHARACTERISTICS

- *None*

FILES RELEASED

- *SrvUtil.h, SrvUtil.a, SrvUtil.lib, SrvUtil_.lib, SrvUtil.r20.*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None*

SOFTWARE CHANGES SINCE LAST VERSION

- *File SrvUtil.h updated. SrvUtilReadIPAddress modified.*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None*

SOFTWARE COMPATIBILITY

- *Requires DrvGfx in order to be used*

GENERAL NOTES

-



PRODUCT NAME: DRVZTM (ZONTALK) **SOFTWARE VERSION:** 1.11
DOCUMENT NUMBER: GEN-RN-0017 **DOC VERSION:** 1.11
DATE: 17 JULY, 2003 **PREVVERSION:** 1.10
SPEC CHANGE **CPR RESOLUTION**

This Software Release Note describes the v1.11 release of **DRVZTM (ZONTALK)**.

SPECIFICATION COMPLIANCE

- GEN-MA-0030 [1.10]
- GEN-SP-0043 [1.10]
- GEN-SP-0041 [1.00]

HARDWARE COMPATIBILITY

- All KEF Compliant Keycorp Terminals

SOFTWARE COMPATIBILITY

- Application Manager (Appman v2.13 or higher)

FILES RELEASED AND VERSION NUMBERS

Description:	Source Files	GCC Library	PC Library	IAR Library	Version:
Library File		DrvZtm.a	DrvZtm.lib	DrvZtm.r20	1.11
DrvZtm Header File	DrvZtm.h	-	-	-	1.11
DrvZtm Applet Example source files	Mainmod.c Appentry.c	-	-	-	1.11

SPECIFICATION CHANGES SINCE LAST VERSION

It uses the new version of SrvCDS where the CDS data is no longer stored on FLASH but RAM.



KEYCORP

PRODUCT NAME: **SRVDUKPT LIBRARIES.**

RELEASE NOTE NO: **KEF-RN-0016** REVISION : **2.03** DATE: **7-MAY-2002**

This Software Release Note describes release no. 2.03 of SrvDukpt Libraries.

SPECIFICATION COMPLIANCE

- SrvDukpt Interface Specification [GEN-SP-0045]
- SrvDukpt Developers' Guide [GEN-MA-0025]
- Point of Sale Equipment Requirements – PIN Processing and Data Authentication,. Version 1.0, Aug, 1988, Visa International [Keycorp External Document No. E000500]
- Pin Pad Qualification Automated Tool Reference Document, Version 1.0, April 1994, Visa International [Keycorp External Document No. E000499]
- MKIXOR Version 3.0 Key Insertion Module Reference Manual, Verifone Software Solutions

HARDWARE COMPATIBILITY

- *The SrvDukpt service layer contains no hardware dependencies (although the debug version and test code for the Visa Automated tool assume an eight line display).*

SOFTWARE CHARACTERISTICS

- *Keycorp HIB is required.*
- *For compatability with MKIXOR, the UART channel for key injection must be opened at 19200 baud, 7 data bits, even parity, 1 stop bit.*

FILES RELEASED

- *SrvDukpt.h*
- *SrvDukpt.a*
- *SrvDukptD.a*
- *SrvDukpt.lib*
- *SrvDukptD.lib*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None.*

SOFTWARE CHANGES SINCE LAST VERSION

- *Ordering of certain variables in non-volatile memory changed to allow persistence over software upgrades.*

KNOWN ANOMALIES

- *MKIXOR is very sensitive to the timing of messages but the details of the message response times required by MKIXOR cannot be determined. Hence, SrvDukpt cannot be guaranteed to operate correctly with MKIXOR on all PCs.*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *N/A.*

GENERAL NOTES

- *N/A.*

Base Stations Release Status:

Model	Version	Known Problems	Comments
K23-702	1.31 11/04/01	1. Unexpected line printed in bold (46 out of 75 tests) 2. Unexpected line feed (41 out of 75 tests) 3. Occasionally goes offline (12 out of 75 tests)	None of the problems occurred during a print only test - this is more representative of field use. Used by BII Indonesia 1. Fix problem with Aux port where flow control stopped transmit permanently. 2. Receive character error not cleared on Aux port 3. Smartcard reset had a 30 Ms odd interrupt disable. 4. Change the keypad timeout so that the long key press is 9 seconds rather than 2.5 seconds. 5. Sync transmit fix 6. fix interrupt priority problem with smartcard interrupts. 7. 12 ETU operation now correct – was defaulting to 11 ETU 8. incorporate manual training with the v22bis. 9. Incorporate Yen, Pound and Cent characters. 10. Resolve problem with DTMF dialling. 11. Country code selection incorporated. 12. V42 included. 13. Smartcard timeout problem fixed.
K23B-777	1.26 3/11/00	1. 4th stop bit cannot be ignored on async 2. Max size sync transmission fault	US customers 1. Incorporate manual training for V22bis in order to resolve Zilog datapumps firmware problems during auto-training.
K76-025	1.14 8/05/01	non	Chep 1. Fix problem with flow control to host device 2. Fix print stepping problem so that squashed lines no longer appear and print is smoother 3. Improve temperature management so that printing can continue cleanly even after a very large amount of printing. 4. Incorporate ability to print graphics. 5. Correct maximum scaling with 16x24 font. 6. Bring firmware build method more into line with rest of basestation family. 7. Increase size of print buffer to 4K
K76-802	1.27 6/02/01	non	NAB, Bankwest, Slovakia (does not currently meet DTMF levels) 1. small errors in printing 2. initial inclusion of graphics capability 3. fix interrupt problem in printer timer interrupts 4. fix small synchronous data transmission error 5. Improvement to V22 fast connect for NZ usage 6. Manual training method included for V22bis Extend keypress timer to enter debug modes
K76-804	1.20 24/11/00	Need leased line support	1. Fix problem with low level synchronous transmission whereby large messages could not be correctly transmitted. This was found in the CBA

		testing with latest firmware	testing when certain types of software checks were done after logon 2. Fix problem with printing whereby an extra character occasionally became inserted. Related to occasional squashed line of print.
K76-806	1.13 8/9/00		Initial release
K76-806	1.16 24/10/00		1. Smartcard modules upgraded to resolve Mondex issue . 2. Missing from MDP for K23-505
K76-806	1.18 24/11/00		Synchronous transmissions of more than 250 bytes resulted in low level buffer overflow situation. Print timer interrupt register corruption problem causing comms and print errors now fixed
K76-806	1.24 12/01/01	non	<ol style="list-style-type: none"> 1. small errors in printing 2. initial inclusion of graphics capability 3. fix interrupt problem in printer timer interrupts 4. fix small synchronous data transmission error 5. fix sam operation at 12 ETU. 6. Leased line operation introduced 7. Fix problem with asynchronous stop bit compression
K76-806	1.26 8/3/01		<ol style="list-style-type: none"> 1. Fix problem with Aux port where flow control stopped transmit permanently. 2. Receive character error not cleared on Aux port 3. Smartcard reset had incorrect 30 Ms odd interrupt disable. 4. Fix problem on APS printer where motor stays on during a load. 5. Change the keypad timeout so that the long key press is 9 seconds rather than 2.5 seconds
K76-806	1.29 13/2/02		<ol style="list-style-type: none"> 1. Incorporate configuration output system 2. Speed change system for pinpad interface 3. Downloadable font and graphics system 4. Pulse dial periods now country dependant 5. No-Answer error reporting changed to No-Comms on call training failure. 6. Dynamic print system incorporated to save code space – part of downloadable font system. 7. Variable intercharacter spacing now available with some fonts. 8. Higher speeds now possible on main interface port <p>compatible with SrvNet 3.21 and higher</p>
K76-816	1.14 9/8/01	non	v1.14 includes a chinese font
K76-816	1.16 25/10/01		<ol style="list-style-type: none"> 1. Change to printer solenoid hold time to fix blown solenoid fault from GUT 2. Includes Thai font

BIOS Release Notes

Official Release



KEYCORP

PRODUCT NAME: K22-BIOS - SOURCE CODE

RELEASE NOTE NO: 902-RN-0013 REVISION : 1.12 DATE: 21-NOV-2001

This Software Release Note describes release no. 3.12 of IDEEA **3**

SPECIFICATION COMPLIANCE

- KEF Compliant

HARDWARE COMPATIBILITY

- *This Bios code is built for the K22.*

SOFTWARE CHARACTERISTICS

- *N/A*

FILES RELEASED

- *All source file used to build K22 BIOS.*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None*

SOFTWARE CHANGES SINCE LAST VERSION

- *Read and write date and time in one command to fix roll over problem*
- *Add new functions for RTC*
- *Add HibLcdSetBacklightControl*
- *HibSMed stubs added.*
- *Permit use of flash chips that are not known.*
- *HibPmSetDeviceTimers stub added.*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None*

SOFTWARE COMPATIBILITY

- *Compatible with application codes conforming to the KEF standard and built with the IAR compiler for K22.*

GENERAL NOTES

- *None*



KEYCORP

PRODUCT NAME: - **K23 BIOS LIBRARY SOURCE CODE**

RELEASE NOTE NO: **902-RN-0015** REVISION : **3.11** DATE: **24-APR-2002**

This Software Release Note describes release no. 3.11 of IDEEA **3**

SPECIFICATION COMPLIANCE

- *KEF compliant*

HARDWARE COMPATIBILITY

- *This Bios library is built for all variants of the K23p (except 777) EFTPOS Terminal.*

SOFTWARE CHARACTERISTICS

- *None.*

FILES RELEASED

- *K23.a and all source code.*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None.*

SOFTWARE CHANGES SINCE LAST VERSION

- *Allow timer task to be killed from within a timer task.*
- *Fix RTS and CTS.*
- *Add triple DES, OCBC and MAC generating functions.*
- *Speed up DES*
- *Fix bug in generating random number.*
- *Limiting flash access according to config.*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *This BIOS library is to be used with the K23 Boot loader.*

GENERAL NOTES

- *None.*



KEYCORP

PRODUCT NAME: **- K23-777 BIOS LIBRARY SOURCE CODE**

RELEASE NOTE NO: **902-RN-0019** REVISION : **1.14** DATE: **29-APR-2002**

This Software Release Note describes release no. 1.14 of IDEEA **3**

SPECIFICATION COMPLIANCE

- KEF Compliant

HARDWARE COMPATIBILITY

- *This Bios library is built for the K23p-777 EFTPOS Terminal.*

SOFTWARE CHARACTERISTICS

- *None.*

FILES RELEASED

- *K23-777.a and all source code.*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None.*

SOFTWARE CHANGES SINCE LAST VERSION

- *Speed up flash get string.*
- *Uses KEF O/S.*
- *HibLcdGetBitmap checks for width and height.*
- *Add more stubs for HibSmed.*
- *HibMcrGetStatus only return swipe done if track is enabled.*
- *Protect uart Isr_Tx_Data from interrupt (This is not really necessary for the current interrupt level setting but is added for completeness).*
- *Add new RTC functions (also add new I2C and sequencer).*
- *Shutdown speaker after sound play.*
- *Allows chaining of sound.*
- *Add triple DES.*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None.*

SOFTWARE COMPATIBILITY

- *This BIOS library is to be used with the K23-777 Boot loader.*

GENERAL NOTES

- *None.*



KEYCORP

PRODUCT NAME: **K71I-BIOS - SOURCE CODE**

RELEASE NOTE NO: **902-RN-0012** REVISION : **1.33** DATE: **12-NOV-2001**

This Software Release Note describes release no. 2.23 of IDEEA **3**

SPECIFICATION COMPLIANCE

- KEF Compliant

HARDWARE COMPATIBILITY

- *This Bios code is built for the K71I, K21I, K71r and K80.*

SOFTWARE CHARACTERISTICS

- *N/A*

FILES RELEASED

- *All source file used to build K21i, K71i, K71r, K80 BIOS.*

SPECIFICATION CHANGES SINCE LAST VERSION

- *None*

SOFTWARE CHANGES SINCE LAST VERSION

- *Read and write date and time in one command to fix roll over problem*
- *Add new functions for RTC*

KNOWN ANOMALIES

- *None*

LOADING PROCEDURE

- *None*

SOFTWARE COMPATIBILITY

- *Compatible with application codes conforming to the KEF standard and built with the IAR compiler for K21i, K71i, K71r and K80 EFTPOS terminals.*

GENERAL NOTES

- *None*



KEYCORP

PRODUCT NAME: **K71V BIOS – SOURCE CODE**

DOCUMENT NUMBER: **902-RN-0016** **2.44**

DATE: **19 FEBRUARY 2001**

This Release Note describes the K71v Bios software release.

SPECIFICATION COMPLIANCE

- KEF Compliant

CHANGES SINCE LAST VERSION

- Fixed system monitoring.
- Speed up flash get string.
- Fix SctTxInProgress flag in 11 etu mode.
- Reset Bios Timer after changing Sct parameters.

HARDWARE COMPATIBILITY

- This Bios code is built for the K71v-887 Terminal.

TYPE APPROVAL & TESTING

- The Bios library was tested with R&D test code against the KEF specs listed above.

KNOWN ANOMALIES

- The newly developed test code reveal that various functions return wrong KEF error codes, but as these codes are unchanged from the previous versions, they will be fixed up at the later date.



KEYCORP

PRODUCT NAME: K78 BIOS LIBRARY – SOURCE CODE

DOCUMENT NUMBER: 902-RN-0010 2.03

DATE: 10 APRIL 2002

This Release Note describes the K78 Bios Library software V3.13 release.

SPECIFICATION COMPLIANCE

- KEF Compliant

CHANGES SINCE LAST VERSION

- HibLcdGetBitmap checks for width and height.
- Protect uart Isr_Tx_Data from interrupt (This is not really necessary for the current interrupt level setting but is added for completeness).
- HibMcrGetStatus only return swipe done if track is enabled.
- MCR trk3 defaults to output high.
- New secure key scanning algorithm and non-secure keyscan removed.
- Allow timer task to be killed from within a timer task.
- Speed up DES
- Add new functions for RTC and use HibI2c functions
- Turn off Address Strobe and SCT clock to reduce RF noise
- Allow ATR within 42000 clock cycles for EMV2000.
- Fixes to improve accuracy of SCT Async reset.
- Stop Bios Timer when ATR received & put RST high when timer expires in reset.
- HdbSctStartResetTimer takes input parameter.
- Bug fixes to HdbSctSyncusDelay.
- Disable async CLK when using sync cards.
- Interrupts enabled in Application Power Fail handler.
- Fix problem with sleep interrupt priority.
- Added sequencer for I2C and One Wire bus.
- Allow wake up from sleep by UART Rx
- Use sleep mode instead of s/w standby (ie. timer ISR continues to run)
- Suspend key scanning instead of disabling when sleeping.
- Add code to detect battery type to extend top up charge time

SOFTWARE COMPATIBILITY

- This Bios library is to be used with K78 Bootloader.

HARDWARE COMPATIBILITY

- This Bios library is built for all variants of the K78 Handheld GSM EFTPOS Terminal.

TYPE APPROVAL & TESTING

- The changes to the Bios Library software were tested as described in Lab Books 410 and 239.
- The KEF HIB Interface Test Harness (KEF-SC-0022) was used to verify function error responses matched input conditions.

KNOWN ANOMALIES

- none