

**RFB RELEASE NOTES FOR TRR**

**RFB 1.6.1**

**Release Name:**

RFB 1.6.1

**Build Date:**

29 Jan 1999

**Release Date:**

05 Feb 1999

**Build Tag:**

RFB\_1.6.1

**Release Description:**

This release is functionally identical to RFB\_1.5.6 with the following improvements:

**New Features and Enhancements - RFB 1.6.1 (Summary Form)**

- AMGfw25511-BIW trace capability extended to dump Hex values
- AMGfw25007-Support for FLEX Protocol on RFB and RFO
- AMGfw23934-No alarm indication of Baton loss of ac or dc power
- AMGfw17059-Inactive SW Flash Bank Version
- AMGfw16719-Replace FIPS specific function for GPS with a generic functions
- AMGfw03475-dip switches not tied to input port -- double dip not possible

**DDTS's Fixed - 1.6.0: (Summary Form)**

- AMGfw25937-Plug 'n' Play Errors with 3 Reflex Channels followed by AM payload
- AMGfw25898-Watch Dog Reset on RFB with Trimble GPS
- AMGfw25847-RFB\_REQ line goes down extra time during boot
- AMGfw25822-pSOS SNMP agents
- AMGfw25657-RF-B! logs two <E\_PAGING\_IS\_DISABLED> when TX OK is dropped
- AMGfw25595-Consistency and spelling errors in user interface
- AMGfw25519-Error log actions do not match actual actions

AMGfw25510-Fix DRT1 4 trace dump  
AMGfw25476-Transmitter would not recover from Check\_Command\_Key\_Fail  
AMGfw25473-<E\_DUPLICATE\_MDP\_FRAMES>  
AMGfw25232-No error logged for retry sequence  
AMGfw25230-E\_SWITCH\_DEFAULT Error in SNMP AGENT Module  
AMGfw25215- <E\_BUFFER\_LENGTH\_EXCEEDED> alarm  
AMGfw24896-Configurations are not maintained between software release  
AMGfw24691-Need IP address/ GW address match to avoid use of PROBE  
AMGfw20917-Preserving NVM parms during software upgrades  
AMGfw13396-Parameters supporting unused code  
AMGfw04280-Fragmented ICMP requests not handled by pNA

**New Features and Enhancements - 1.6.1: (Detail Form)**

St=I, Sv=3-Minor, Bug id = AMGfw25511, Vers = Unknown, Defect in RFB  
Desc: Need BIW trace capability extended to dump Hex values  
Assig Engr = gestes0, Found: 981120,  
*Impact on RFB: Extends debug capability*

St=I, Sv=2-Major, Bug id = AMGfw25007, Vers = R3.0.0, Defect in RFB  
Desc: Support for FLEX Protocol on RFB and RFO  
Assig Engr = tanderso, Found: 981023,  
*Impact on RFB: Adds FLEX capability to RFO Transmitters*

St=I, Sv=2-Major, Bug id = AMGfw23934, Vers = Unknown, Defect in RFB  
Desc: No alarm indication of Baton loss of ac or dc power.  
Assig Engr = titchevs, Found: 980908,  
*Impact on RFB: Error log enhanced by new error*

St=I, Sv=2-Major, Bug id = AMGfw17059, Vers = Unknown, Defect in RFB  
Desc: Inactive SW Flash Bank Version

Assig Engr = anandy, Found: 980202,  
Impact on RFB: Communicates to the user in positive text format when a 'r 152' command results in reading an invalid/blank dormant bank.

St=I, Sv=3-Minor, Bug id = AMGfw16719, Vers = Other, Defect in RFB  
Desc: Replace FIPS specific function for GPS with a generic function  
Assig Engr = tanderso, Found: 980130,  
Impact on RFB: Transparant to user, more efficient/reusable code.

St=I, Sv=3-Minor, Bug id = AMGfw03475, Vers = Unknown, Defect in RFB  
Desc: dip switches not tied to input port -- double dip not possible  
Assig Engr = titchevs, Found: 970122,  
*Impact on RFB: Double dip logic implemented via the FIPS 'a 117' reset command. See attached FIPS commands for details of the command.*

### **DDTS's Fixed - 1.6.1: (Detail Form)**

*St=I, Sv=2-Major, Bug id = AMGfw25937, Vers = TBD, Defect in RFB  
Desc: Plug 'n' Play Errors with 3 Reflex Channels followed by InFLEXion  
Assig Engr = anandy, Found: 981216,  
Impact on RFB: The 'Training' parameter on the RFC can be set back to 14 increments (max) and no PnP errors generated on RFO resulting from this error. That is, some PnP error still exist from other errors.*

*St=G, Sv=2-Major, Bug id = AMGfw25898, Vers = R2.1.0, Defect in RFB  
Desc: Watch Dog Reset on RFB with Trimble GPS  
Assig Engr = blong, Found: 981215,  
Impact on RFB: No more RFB resets when operating with a Trimble GPS. Never any effect on Motorola GPS.*

*St=I, Sv=3-Minor, Bug id = AMGfw25847, Vers = Unknown, Defect in RFB  
Desc: RFB\_REQ line goes down extra time during boot*

*Assig Engr = gestes0, Found: 981211,*

*Impact on RFB: Boot code LED sequencing, which reflects state of boot code (where it is in its execution) will miss the fourth LED from the left. This LED is electrically attached to the RFB\_REQ line.*

*St=I, Sv=2-Major, Bug id = AMGfw25822, Vers = D03.00.00b WMG3.3.3 RFC3.7.0 RFCIII.5.0b RFO1.2.2 NIU1\_16 NUC4.110, Defect in RFB*

*Desc: pSOS SNMP agents*

*Assig Engr = titchavs, Found: 981204,*

*Impact on RFB: The product ID string is changed from 'Epilogue Technology' to 'Motorola' for all SNMP 'get' commands from the Choreographer.*

*St=I, Sv=3-Minor, Bug id = AMGfw25657, Vers = Other, Defect in RFB*

*Desc: RF-B! logs two <E\_PAGING\_IS\_DISABLED> when TX OK is dropped.*

*Assig Engr = titchavs, Found: 981202,*

*Impact on RFB: E\_PAGING\_IS\_DISABLED is no longer logged twice for every TX\_OK down.*

*St=G, Sv=3-Minor, Bug id = AMGfw25595, Vers = Unknown, Defect in RFB*

*Desc: Consistency and spelling errors in user interface*

*Assig Engr = stripp, Found: 981125,*

*Impact on RFB: Better grammatical user interface*

*St=I, Sv=3-Minor, Bug id = AMGfw25519, Vers = R02.01.00, Defect in RFB*

*Desc: Error log actions do not match actual actions*

*Assig Engr = gestes0, Found: 981117,*

*Impact on RFB: All 'STATION\_RESET' error logs are changed to STATION\_ERROR & all pSOS related errors are moved to the Station log (a 104) from the Sware log (a 110) so the number of occurrences can be logged as well.*

*St=G, Sv=3-Minor, Bug id = AMGfw25510, Vers = Unknown, Defect in RFB*

*Desc: Fix DRT1 4 trace dump*

*Assig Engr = stripp, Found: 981120,*

*Impact on RFB: Turning off any DRTX trace will not dump the PnP header trace, which is DRTX 4.*

*St=I, Sv=1-Critical, Bug id = AMGfw25476, Vers = R2.0.0, Defect in RFB  
Desc: Transmitter would not recover from Check\_Command\_Key\_Fail  
Assig Engr = gestes0, Found: 981117,  
Impact on RFB: Transmitter now recovers from a check command key fail.*

*St=I, Sv=3-Minor, Bug id = AMGfw25473, Vers = Unknown, Defect in RFB  
Desc: <E\_DUPLICATE\_MDP\_FRAMES>  
Assig Engr = gestes0, Found: 981118,  
Impact on RFB: Valid duplicate MDP frames (any frame) are logged.*

*St=I, Sv=3-Minor, Bug id = AMGfw25232, Vers = Unknown, Defect in RFB  
Desc: No error logged for retry sequence  
Assig Engr = anandy, Found: 981105,  
Impact on RFB: None - updated SRS*

*St=I, Sv=3-Minor, Bug id = AMGfw25230, Vers = TBD, Defect in RFB  
Desc: E\_SWITCH\_DEFAULT Error in SNMP AGENT Module  
Assig Engr = titchevs, Found: 981104,  
Impact on RFB: Logic causing false error logging fixed.*

*St=I, Sv=3-Minor, Bug id = AMGfw25215, Vers = Unknown, Defect in RFB  
Desc: <E\_BUFFER\_LENGTH\_EXCEEDED> alarm  
Assig Engr = gestes0, Found: 981104,  
Impact on RFB: Error log entry removed. This 'error' will happen, but customer can not effect the condition and as importantly, a retry sequence will correct the miscommunication.*

*St=I, Sv=2-Major, Bug id = AMGfw24896, Vers = R02.01.00 WMG3.3.3 RFC3.7.0e C!1.4.0 B!1.5.2 RFA2.8.0 RFO1.2.2, Defect in RFB  
Desc: Configurations are not maintained between software releases  
Assig Engr = titchevs, Found: 981014,  
Impact on RFB: To prevent the customer from making a site visit to 'double dip' the RFB when the software is upgraded, the user can now use a soft double dip via FIPS. Double Dip ('a 117 o' simulates hw dip1 and dip2 on):*

*St=I, Sv=3-Minor, Bug id = AMGfw24691, Vers = B1.0.0, Defect in RFB*

*Desc: Need IP address/ GW address match to avoid use of PROBE*

*Assig Engr = anandy, Found: 970117,*

*Impact on RFB: Prevents the user from mis-aligning the RFB's IP with respect to it's Gateway IP. The user is notified when trying to modify parameter 705 or 708 of the problem.*

*St=I, Sv=3-Minor, Bug id = AMGfw20917, Vers = Unknown, Defect in RFB*

*Desc: Preserving NVM parms during software upgrades*

*Assig Engr = titchevs, Found: 980529,*

*Impact on RFB: Faster re-boot is the DIP switches are active (either via hard setting, or soft setting).*

*Parameter DB enhancements for subsequent SW releases will not be as adversely effected by new/changing parameters.*

*St=I, Sv=3-Minor, Bug id = AMGfw13396, Vers = Unknown, Defect in RFB*

*Desc: Parameters supporting unused code*

*Assig Engr = titchevs, Found: 971007,*

*Impact on RFB: Unused code removed.*

*St=I, Sv=3-Minor, Bug id = AMGfw04280, Vers = R1.0.0, Defect in RFB*

*Desc: Fragmented ICMP requests not handled by pNA*

*Assig Engr = titchevs, Found: 970209,*

*Impact on RFB: Ping requests larger than 1480 bytes will not lock up the RFB anymore. However, there is no response to the large Ping either.*

### **Existing DDTs's in 1.6.1 (Limitations/Problems):**

This section is a summary of all open DDTs issues under DDTs Class **AMSD\_DEV**, Project **RFB\_Dev**, change\_type **Bug/Defect**, and subsystem **RFB** as of 02/03/99.

Table 1: Known Defects

Defect Severity	Number of Defects	Defect Identifiers
Severity 1 - Critical	1	(see below)
Severity 2-Major	5	(see below)
Severity 3-Minor	15	(see below)

**DDTS Key**

- St- State (N-New, B-Feasibility, A-Analysis, R-Approve, I-Implementation, G-Integration, U-Unresolved, P-Postpone)

**Critical DDTS - RFB 1.6.1**

St=B, Sv=1-Critical, Bug id = AMGfw22880, Vers = Unknown, Defect in RFB

Desc: Station ID on Data Baton

Assig Engr = tanderso, Found: 980710,

**Major DDTS - RFB 1.6.1**

St=B, Sv=2-Major, Bug id = AMGfw26413, Vers = D03.00.00a WMG3.3.3 RFC3.7.0 RFCII1.5.0b RFO1.2.2 NIU1\_16 NUC4.110 ,  
Defect in RFB

Desc: Device MIB values need to be compliant with Device internal representaoon

Assig Engr = titchavs, Found: 990120,

St=B, Sv=2-Major, Bug id = AMGfw26074, Vers = Unknown, Defect in RFB

Desc: PnP Timing Issues

Assig Engr = tanderso, Found: 981220,



St=R, Sv=2-Major, Bug id = AMGfw25532, Vers = R2.1.0, Defect in RFB

Desc: RFB does not maintain counts for resets

Assig Engr = titchevs, Found: 981117,

St=B, Sv=2-Major, Bug id = AMGfw25525, Vers = R2.1.0, Defect in RFB

Desc: Time to transmit is very lengthy after RFB reset

Assig Engr = anandy, Found: 981117,

St=B, Sv=2-Major, Bug id = AMGfw22849, Vers = Unknown, Defect in RFB

Desc: Improve Efficiency of Host-DSP Interface

Assig Engr = ehinojos, Found: 980731,

### Minor Bugs - RFB 1.6.1

St=B, Sv=3-Minor, Bug id = AMGfw26090, Vers = Unknown, Defect in RFB

Desc: 1st Attempt to Download SW to RFO fails

Assig Engr = anandy, Found: 990105,

St=A, Sv=3-Minor, Bug id = AMGfw25661, Vers = Other, Defect in RFB

Desc: Multiple <E\_LATE\_LAUNCH\_TIME> and <E\_PLACE\_BATCH\_ON\_PAGING\_QUEUE> report

Assig Engr = tanderso, Found: 981202,

St=I, Sv=3-Minor, Bug id = AMGfw25636, Vers = R03.00.00, Defect in RFB

Desc: No MIB or NECA support for Multicast configuration

Assig Engr = titchevs, Found: 981123,

St=D, Sv=3-Minor, Bug id = AMGfw25629, Vers = R02.01.00, Defect in RFB

Desc: Can not configure RFB Multicast IP from NECA.

Assig Engr = titchevs, Found: 981123,

t=B, Sv=3-Minor, Bug id = AMGfw25392, Vers = R2.1.0, Defect in RFB

Desc: RFB is not returning FIPS responses

Assig Engr = ehinojos, Found: 981026,

St=B, Sv=3-Minor, Bug id = AMGfw25318, Vers = Unknown, Defect in RFB  
Desc: Need a 'SRS' of all UAR's reported to the outside world  
Assig Engr = anandy, Found: 981110,

St=B, Sv=3-Minor, Bug id = AMGfw25026, Vers = Other, Defect in RFB  
Desc: Clean up remaining warnings  
Assig Engr = ehinojos, Found: 981026,

St=B, Sv=3-Minor, Bug id = AMGfw24947, Vers = TBD, Defect in RFB  
Desc: General RF-B! Maintenance Path Enhancements  
Assig Engr = anandy, Found: 981021,

St=R, Sv=3-Minor, Bug id = AMGfw24719, Vers = R2.0.0, Defect in RFB  
Desc: Xilinx type in EEPROM set to bad value  
Assig Engr = ehinojos, Found: 981013,

St=B, Sv=3-Minor, Bug id = AMGfw24156, Vers = R2.0.0, Defect in RFB  
Desc: FIPS errors when reading GPS parameters  
Assig Engr = anandy, Found: 980922,

St=B, Sv=3-Minor, Bug id = AMGfw23801, Vers = Unknown, Defect in RFB  
Desc: Clarify Behavior of PnP Interface For Transmitter De-Key Recovery  
Assig Engr = anandy, Found: 980909,

St=R, Sv=3-Minor, Bug id = AMGfw23539, Vers = Unknown, Defect in RFB  
Desc: No error checking on B! MIB sets  
Assig Engr = titchavs, Found: 980501,

St=R, Sv=3-Minor, Bug id = AMGfw23466, Vers = Unknown, Defect in RFB  
Desc: Support generic FIPS command through MIB via NECA interface  
Assig Engr = titchavs, Found: 980826,

St=A, Sv=3-Minor, Bug id = AMGfw23107, Vers = Other, Defect in RFB  
Desc: RFB-Concert:leading 00 in number converted incorrectly  
Assig Engr = titchevs, Found: 980812,

St=R, Sv=3-Minor, Bug id = AMGfw10990, Vers = R1.0.0, Defect in RFB  
Desc: RFO SNMP alarms not tagged properly  
Assig Engr = titchevs, Found: 970715,

### **Special Download Procedures for RFB 1.6.1:**

Due to a boot kernel change in **RFB 1.6.1**, the new version ***MUST be installed in Flash Bank 'A'*** of the dual Flash SIMM module. Note that this is the first boot kernel change to the RFB since it's inception, and this procedure is not anticipated in future releases unless absolutely necessary. An Field Service Bulliten (FSB) will be released to the customer to cover the following procedure.

#### **Steps to Ensure RFB 1.6.1 is Installed in Flash Bank 'A':**

1. Determine which Flash bank the present software is executing out of by typing from FIPS - 'r 901'
- 2a. If 'r 901' = one (1), you are executing out of bank A and **MUST** cutover to bank B before starting the RFB 1.6.1 download, proceed to Step #3 - *Determine Bank B Status*.
- 2b. If 'r 901' = two (2), you are executing out of bank B and can therefore start the RFB 1.6.1 download now, proceed to step 10 - *Execution out of Bank B*.

#### **Determine Bank B Status:**

3. Determine if there is a valid software image in Bank B by typeing from FIPS - ' r 152'
- 4a. If 'r 152' returns with a string representing a valid RFB software image, such as '1.5.6', then it is OK to cutover to bank B, proceed to step 8 - *Cutover to Bank B*.
- 4b. If 'r 152' returns only the FIPS prompt, or the string 'INVLDBK' you must download a non-RFB 1.6.1 software file to bank B before you can cutover to it, proceed to step 5 - *Downloading to Bank B*.

**Downloading to Bank B:**

5. This step must be executed if the following conditions apply:

5a) 'r 901' = 1

5b) 'r 152' = 'INVLDBK' or is blank (nothing but the FIPS prompt)

Pick a file to download that is *NOT* the RFB 1.6.1 file. Any version of 1.5.X or 1.4.X will do for this purpose. RFB 1.5.6 is recommended since it is the most recent software, but again, is not absolutely required.

6. Download the non-RFB 1.6.1 software file to the RFB. You can use the standard FIPS 3XX series command or use the Choreographer to execute the download/cutover.

7. Proceed to Step #8, *Cutover to Bank B*.

**Cutover to Bank B:**

8. Using the FIPS 'a 312' command, or the Choreographer, cutover to Bank B.

9. Go to Step 1 to verify execution out of Bank B.

**Execution out of Bank B:**

10. Use this step if the following conditions apply:

10a) 'r 901' = 2

10b) 'r 148' = 1.5.X or 1.4.X (where 'X' is any point release)

Download the RFB 1.6.1 software file to the RFB and cutover to the dormant bank (Bank A) when file transfer & burning is completed. You can use the standard FIPS 3XX series command or use the Choreographer to execute the download/cutover. Proceed to Step #11 - *Execution out of Bank A*:

**Execution out of Bank A:**

11. Verify that RFB 1.6.1 is executing out of bank A by verifying the following parameters:

11a) 'r 901' = 1

11b) 'r 148' = 1.6.1

12. Note that the dormant bank (Bank B) contains either the original Bank B version found in step #1, or the downloaded version done in step #6.

This completes the download procedure for RFB 1.6.1 ...

**Hardware Software Compatibility and Requirements**

**RFB 1.6.1 Hardware Compatibility**

- Requires RFB board version P5 or later
- Requires 29F040 Flash SIMM
- Requires 8MB of DRAM
- If using Trimble GPS, requires Trimble GPS model #23632-20 w Software version 5.02 or later.
- If using Motorola GPS, requires Motorola GPS OncoreVP.

**Table 2: RF-B! Hardware Compatability Matrix**

Software Version	BCM board version	Flash SIMM	DRAM size	Trimble GPS	Trimble Software	Motorola GPS
1.4.4	P5	29F040	8MB	23532-20	5.02+	OncoreVP

**Table 2: RF-B! Hardware Compatability Matrix**

Software Version	BCM board version	Flash SIMM	DRAM size	Trimble GPS	Trimble Software	Motorola GPS
1.5.2	P5	29F040	8MB	23532-20	5.02+	OncoreVP
1.5.5	P5	29F040	8MB	23532-20	5.02+	OncoreVP
1.5.6	P5	29F040	8MB	23532-20	5.02+	OncoreVP
1.6.1	P5	29F040	8MB	23532-20	5.02+	OncoreVP

Note: Only one GPS receiver required.

**Table 3: RF-B!/RF-O! Software Compatability Matrix**

RF-B! Software Version	RF-O! Software Version
1.3.0+	1.0.4+
1.5.2	1.2.2
1.5.5	1.2.3+
1.5.6	1.2.5
1.6.1	1.3.0

**Table 4: RF-C!/RF-B! OPP Version Compatibility**

RF-B! Software Version	RF-B! supported OPP	RF-C! Software Version	RF-C! supported OPP
1.2.0	v0.5	2.4.2	v0.5
1.4.4+	v0.5 and v0.6	3.5.2+	v0.6
1.6.1	v0.6 and v0.6	3.5.2+	v0.6

**Features Not Yet Supported**

- Remote FIPS
- PPP
- POCSAG
- C-NET II

**MIB Compatibility****Table 5: MIB Compatibility**

RFB Version	RFB MIB Version
1.0.0	1
1.0.1+	2
1.4.4	3
1.5.0+	4
1.6.1	4

The RF-B! MIB files are located at:

MIB Version 1 is at /vobs/hornet/host/common\_360/snmp\_lib/rfb.mib@@/main/int\_beta/3

MIB Version 2 is at /vobs/horent/host/common\_360/snmp\_lib/rfb.mib@@/main/int\_beta/5

MIB Version 3 is at /vobs/CSC\_dev/rfb/code/host/rfb\_360/snmp\_lib/rfb.mib@@/main/1

MIB Version 4 is at /vobs/CSC\_dev/rfb/code/host/rfb\_360/snmp\_lib/rfb.mib@@/main/3

**New Parameter Database ID's**

**The following parameter database ID's have been *added* to 1.6.1**

**899:** Stores the equivalent of the A 117 argument.

**The following parameter database ID's have been *removed* from 1.6.1:**

**50:** P\_REMOTE\_FIPS\_PORT\_NUMBER

**170:** P\_STATION\_TYPE

**171:** P\_STATION\_STATUS\_MSG\_TYPE



## New FIPS Commands

**a 117:** Reset RFB with arguments. Possible arguments are as follows:

a 117 [<reset mode>]

selections:

n - Normal Reboot, No Change to Params

c - Normal Reboot, Error/Software Logs Cleared, No Change to Params

d - Software Single Dip2 Reboot, Preserve Site Dependent/Factory Preset Params

o - Software Double Dip2 Reboot, Preserve Factory Preset Params

**a 122:** DUMP\_PARM\_DB Example: a 122 UINT8 -> list all UINT8 parameters info + current values .

RFB FIPS: a 122 UINT8

RFB FIPS:

Parameter: P\_CURRENT\_CUTOVER\_HOST

Id: 497

Index: 45

Type: UINT8

Min: 0

Max: 2

Default: 0

Value: 0

Operator: Check Range/

**123:** PARM\_DB\_HELP Example: a 123 UINT8 -> list all UINT8 parameter names + ids

RFB FIPS: a 123 UINT8

RFB FIPS:

135 P\_PSTN\_PASSWORD\_VERIFY

139 P\_GPS\_BAUD\_RATE

140 P\_FPSP\_BAUD\_RATE

185 P\_PEND\_CUSTOMER\_WARP

191 P\_GPS\_MASK\_ANGLE\_DEGREES

213 P\_MPIF\_BAUD\_RATE

**New Alarm/Error Codes for 1.6.1:**

New to the STATION log (a 104):

**E\_MAIN\_POWER\_FAILURE:** Indicates the DC/DC power supply is off line due to an AC power or DC power failure.

**SPECIAL NOTE:**

**ALL <PSOS> ERRORS ARE MOVED FROM THE SWARE LOG (A 110) TO THE STATION LOG (A 104)  
SO THE COUNT FEATURE CAN BE INCORPORATED. ALL OTHER SWARE LOGS REMAIN.**

See /vobs/CSC\_dev/rfb/docs/release/rfb\_errors.fm for complete descriptions of currently supported alarms and error codes.

**Software Metrics**

**Table 6: RFB 1.5.6 Release Metrics**

Release	Release Date	Code Lines	AENCSL	Total Lines	Comment Ratio	Total Files	Delta LOC	Estimated Elapsed Dev Time (months)	Actual Elapsed Dev Time (months)	Estimated Effort (staff-months)	Actual Effort (staff-months)
<b>RFB 1.6.1</b>	<b>02/05/99</b>	<b>150901</b>	<b>328775</b>	<b>240021</b>	<b>0.44</b>	<b>730</b>	<b>3571</b>	<b>3.0</b>	<b>3.0</b>	<b>15</b>	<b>14</b>
RFB_1.5.6	11/16/98	147330	319857	232958	0.44	724	19387	0.25	0.25	0.30	0.30
RFB_1.5.5	11/02/98	149336	324872	237061	0.44	729	20000	1.0	1.0	5.0	5.0
RFB_1.5.2	09/30/98	129385	323462	215100	0.49	701	8500	2.5	2.5	13	13
RFB_1.4.4	07/16/98	129989	319016	212632	0.47	706	63	1.0	1.0	1.0	1.0
RFB_1.4.3	06/12/98	129967	318995	212605	0.47	706	0	.5	.5	1	1
RFB_1.4.1	03/13/98	127851	319627	210406	0.48	694	2000	.5	.5	1.5	1.5
RFB_1.4.0	03/05/98	129098	320245	210652	0.48	694	7500		5		
RFB_1.3.0	10/02/97	120597	295670	200757	0.49	694	900	2	1.50	3.0	3.5
RFB_1.2.4	08/15/97	120075	294365	199503	0.49	696			.25		.01
RFB_1.2.3	08/11/97	120069	294350	199510	0.49	696			1.20		90
RFB_1.2.2	07/01/97	120075	294365	199467	0.49	696					.56

AENCSL-Assembly Equivalent Non-Commented Source Lines  
 Total Files - Total source code/header files used in the build to create the executable product.dl file.  
 Approx. Effort - Amt off staff hours needed to complete the changes (incl. investigation, design, coding, testing,documentation, etc..)  
 Elapsed Time - Total days since previous release (cycle time).  
 Delta LOC - Number of lines of code added, deleted, or changed.

**Testing Summary**

The following testing has been completed on RFB 1.5.6:

**Table 7: Testing Summary**

Test	Tester	Test Time (hrs)	Date	Num Probs Found	Problem Description or Notes
1. Pendulum Lock	G. Estes	.20	02/01/99	0	
7. GPS Tests	T. Itchevska T. Anderson	3.5	02/01/99	0	Test 7.16 needs to be modified or removed.
8. Test Modes	T. Itchevska	2.0	02/01/99	0	Must use AM canned data (type #2) for test modes
9. Watch Dog Timer	G. Estes	.20	02/01/99	0	
13. ADPCM Training	A. Nandy	2.0	02/01/99	0	Procedure needs to be modified.
10. Paging Tests	IT	24.0	02/01/99	0	
2. FIPS Software Download to BCM	T. Itchevska	1.5	02/01/99	0	
GW/ IP parameter verification	A. Nandy	.25	02/01/99	0	
Copyright Verification	G. Estes	.10	02/01/99	0	
GPS parameters with MIB browser	T. Itchevska & IT	1.0	02/01/99	0	
Total		34.75		0	

## Archive Directory/Files

The RFB 1.6.1 release is archived in the Clearcase CASE tool in the CSC\_dev VOB. To access the source files related to RFB 1.6.1, set your Clearcase configuration specification file to:

**element \* RFB\_1.6.1**

The release notes book the RFB are located in /vobs/CSC\_dev/rfb/docs/release/rfb\_release\_notes\_161.fm. The release notes book consist of the release notes (this document), the FIPS document, and the error log document. The release documentation is archived in the Clearcase CASE tool in the CSC\_dev VOB. For a specific build version of the release notes, FIPS document, or error log document use Clearcase Vtree to determine the proper archived file.

The following pertinent files for this release have been archived in /vobs/CSC\_dev/rfb/archive/RFB\_1.6.1\_012999:

- product.dl - Unix-formatted S-Record file
- RFB\_161.s19 - DOS version of the “.dl” file.
- bootkernel.dl - Unix formatted bootkernel file
- ax.x - Unix formatted Xray build
- product.map - Memory map for product build file for this release.
- bootkernel.map - Memory map for bootkernel file for this release.
- ax.map - Memory map for xray build file for this release.
- product.linkfile - Linker command file for product build
- bootkernel.linkfile - Linker command file for bootkernel build

- ax.linkfile - Linker command file for xray build.
- config.spec - Clearcase configuration spec used during CM merge/build process. Shows config spec needed to re-create this build.