EVO, DASH 9 & AC LOCOMOTIVES

Project No: AUASFU69

COMMISSIONING - EVO, DASH 9 & AC - Software Deployment TCR

|  |  |
| --- | --- |
| Locomotive: | %LOCONAME% |
|  |  |
| Date Issued: | %REPORTDATE% |
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| Baseline: | %Table 21.C2.R1%  Version: %Table 21.C3.R1%  Container: %Table 21.C4.R1% |

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# Introduction

## Overview

Rio Tinto Iron Ore (RTIO) operates a heavy-haul railway in the Pilbara region of Western Australia designed to move iron ore from mines located 300 to 500 km inland to ports for shipping overseas.

The AutoHaul® Project is concerned with the introduction of an Automated Train Operation (ATO) system to automatically drive trains on the mainline. This includes train-borne, control centre and wayside systems to control and monitor locomotives and ensure the safe movement of driverless trains.

## Purpose

The purpose of this document is to provide the template for the Test Configuration Record (TCR) from which the AutoHaul project application can generate RTIO locomotive software configuration records upon request through the AutoHaul Reports Web Portal.

All AutoHaul production (SPC) or test (TRR) locomotive software configuration records shall be maintained within the application. Project approved software updates on-board can be performed either conventionally by on-site personnel or executed remotely by designated stakeholders.

It is a requirement that each software update must be both independently verified and validated against current project approved baselines prior to certified operational use within the RTIO network.

The software configuration records captured against any specified production locomotive may have respective validations against multiple production baseline revisions. Absolute validation compliance to any one project baseline has no bearing on a locomotives approval for operational use. The operational approval of software configurations is specified within other project released documentation. The intent of this document is to merely record the install and verified status of the current on-board software records, while the validity and certification of the on-board software configuration is managed elsewhere.

There shall also be a designated baseline denoted by the Commissioning Engineer captured at the end of this document. The designated baseline may be either for test (TRR) or production (SPC) purposes. The purpose of the production baseline is to provide the project configuration management systems with an indicative baseline reference which has been derived as a result of the locomotives uppermost full software compliance in reference to the respective production baseline revisions.

## Interim Requirements

The initial revision of this document shall include engineer validation fields against all configuration items included herein as an interim solution. The omission of this requirement shall be granted when the transition from the pre-existing validation methodology to the new software validation tool has been completed. Additionally, the final engineer and project validation sign offs will be accommodated and classed as integral to locomotive certification as per current requirements until the new validation processes have been integrated and approved by the project.

# LCS

| **Table 1: LCS** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **LCS – Generic Components**  **3000:SW:0** | | | | | | | |
| LCS Release  1049:SW:0 | N/A |  | N/A | N/A |  |  | Verify LCS release ID by confirming the LCS configuration items against the release package detailed within the TRR/SPC |
| TMC – ATS (Slot 1)  1050:SW:0 | DA.TMC.S2 |  | N/A |  |  |  |  |
| DLC-P Database  1051:SW:0 | DLC.DNIU-C1 |  | N/A |  |  |  | Update the DLC-P database if the ATS version has been updated |
| CDU  1052:SW:0 | ECP.CDU-S1 |  | N/A |  |  |  |  |
| CDU Leader Application  1053:SW:0 | ECP.CDU-S2 |  | N/A |  |  |  | Update CDU compact flash card manually if the LEADER version is NOT the current version. i.e. Do not use the NIU Client if an older version of DA LEADER |
| DLC – NIU  1059:SW:0 | DLC .DNIU-S1 |  | N/A |  |  |  |  |
| TMC – IOC Module  1062:SW:0 | DA .TMC-S3 |  | N/A |  |  |  |  |
| TMC – RSM Module  1063:SW:0 | DA .TMC-S4 |  | N/A |  |  |  |  |
| TMC – DIO Module  1064:SW:0 | DA .TMC-S5 |  | N/A |  |  |  |  |
| TIM  1061:SW:0 | DLC.TIM-S1 |  | N/A |  |  |  |  |
| EPIC – BCU  1057:SW:0 | EPIC-S1 |  | N/A |  |  |  | DASH-9 series only |
| EPIC – CCU  1058:SW:0 | EPIC-S2 |  | N/A |  |  |  | DASH-9 series only |
| FASTBRAKE Release  1054:SW:0 | FBRK-S1 |  | N/A | N/A |  |  | EVO series only. Verify FB release ID by confirming the FB configuration items against the release package detailed within the TRR/SPC |
| FASTBRAKE – ABM  1055:SW:0 | FBRK-S2 |  | N/A |  |  |  | EVO series only |
| FASTBRAKE – CAN  1056:SW:0 | FBRK-S3 |  | N/A |  |  |  | EVO series only |
| Event Recorder (PTC)  1060:SW:0 | LCS .ERCD-S1 |  | N/A |  |  |  |  |

# LCS – NIU II

| **Table 24: LCS - NIU II** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **LCS (NIU2) – Generic Components**  3036:SW:0 | | | | | | | |
| NIU II IO Board  1097:SW:0 | .DLC .DNIU-S1 |  | N/A |  |  |  |  |
| NIU II RF Board  1098:SW:0 | .DLC .DNIU-S1 |  | N/A |  |  |  |  |
| NIU II Image  1099:SW:0 | .DLC .DNIU-S1 |  | N/A |  |  |  |  |
| EIU Atmel  1100:SW:0 | .ECP .EIU-S2 |  | N/A |  |  |  |  |
| EIU Neuron  1101:SW:0 | .ECP .EIU-S2 |  | N/A |  |  |  |  |
| PSC Atmel  1102:SW:0 | .ECP .LID-S2 |  | N/A |  |  |  |  |
| PSC Neuron  1103:SW:0 | .ECP .LID-S2 |  | N/A |  |  |  |  |
| TAP Atmel  1104:SW:0 | .ECP .TAP-S1 |  | N/A |  |  |  |  |
| TAP Neuron  1105:SW:0 | .ECP .TAP-S2 |  | N/A |  |  |  |  |

# L15000 ATP

| **Table 22: L15000 ATP** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **L15000 ATP – Generic Components**  **3034:SW:0** | | | | | | | |
| Application Data  1094:SW:0 | ATP.VCU-C1 |  | N/A |  |  |  | CRC for version 2 |

# DIVA ATP

| **Table 2: DIVA ATP** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **DIVA ATP – Generic Components**  **3001:SW:0** | | | | | | | |
| DIVA Release ID  1027:SW:0 | DIVA-S1 |  | N/A | N/A |  |  | Verify DIVA release ID by confirming the DIVA configuration items against the release package detailed within the TRR/SPC, else DIVA definition note |
| CCTE1 FPGA Firmware  1041:SW:1 | N/A |  | N/A |  |  |  |  |
| CCTE2 FPGA Firmware  1041:SW:2 | N/A |  | N/A |  |  |  |  |
| CCTE3 FPGA Firmware  1041:SW:3 | N/A |  | N/A |  |  |  |  |
| CBOP1 – ccte1\_c1b11  1031:SW:1 | N/A |  | N/A |  |  |  |  |
| CBOP1 – Imtora1\_c1b15  1032:SW:1 | N/A |  | N/A |  |  |  |  |
| CBOP2 – ccte2\_c2b11  1033:SW:2 | N/A |  | N/A |  |  |  |  |
| CBOP2 – ccte3\_c1b21  1034:SW:3 | N/A |  | N/A |  |  |  |  |
| CBOP2 – Imtorb1\_c2b15  1035:SW:2 | N/A |  | N/A |  |  |  |  |
| MTOR – A  1036:SW:1 | N/A |  | N/A |  |  |  |  |
| MTOR – B  1036:SW:2 | N/A |  | N/A |  |  |  |  |
| CCTE1 – LCAP (AP Block)  1040:SW:1 | N/A |  | N/A |  |  |  |  |
| CCTE1 – LCPL (CPL Block)  1037:SW:1 | N/A |  | N/A |  |  |  |  |
| CCTE1 – LCME (ME Block)  1038:SW:1 | N/A |  | N/A |  |  |  |  |
| CCTE1 – LCVO (VO Block)  1039:SW:1 | N/A |  | N/A |  |  |  |  |
| CCTE2 – LCAP (AP Block)  1040:SW:2 | N/A |  | N/A |  |  |  |  |
| CCTE2 – LCPL (CPL Block)  1037:SW:2 | N/A |  | N/A |  |  |  |  |
| CCTE2 – LCME (ME Block)  1038:SW:2 | N/A |  | N/A |  |  |  |  |
| CCTE2 – LCVO (VO Block)  1039:SW:2 | N/A |  | N/A |  |  |  |  |
| CCTE3 – LCAP (AP Block)  1040:SW:3 | N/A |  | N/A |  |  |  |  |
| CCTE3 – LCME (ME Block)  1038:SW:3 | N/A |  | N/A |  |  |  |  |
| BTM-N Software  1009:SW:1 | N/A |  | N/A |  |  |  | Software 08.03= Checksum F48FA24E A868A376 |
| BTM-N Configuration  1010:SW:1 | N/A |  | N/A |  |  |  | Config ConfSB1500\_P2\_M01 = Checksum: 605AB885 260A2875 |
| BTM-R Software  1009:SW:2 | N/A |  | N/A |  |  |  | Software 08.03 = Checksum F48FA24E A868A376 |
| BTM-R Configuration  1010:SW:2 | N/A |  | N/A |  |  |  | Config ConfSB1500\_P2\_M01 = Checksum: 605AB885 260A2875 |
| **DIVA ATP – Loco Specific Components**  **3002:SW:0** | | | | | | | |
| DIVA JD release ID – BAT1  1029:SW:1 | DIVA.BAT1-C1 |  | N/A |  |  |  | Installer to confirm what version of DIVA-JD config files they have uploaded  Verifier to observe this during data upload.. |
| DIVA JD release ID – BAT2  1029:SW:2 | DIVA.BAT2-C1 |  | N/A |  |  |  | Installer to confirm what version of DIVA-JD config files they have uploaded  Verifier to observe this during data upload.. |
| PCSAM  1028:SW:0 | N/A |  | N/A |  |  |  | The compatible PCSAM version must be used to program the JD files.  Verifier to observe this during data upload. |
| BAT 1 – JDE (Original CRC)  1042:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 1 – JDE (Indice)  2000:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDE (Original CRC)  1042:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDE (Indice)  2000:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 1 – JDT (Original CRC)  1043:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 1 – JDT (Indice)  2001:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDT (Original CRC)  1043:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDT (Indice)  2001:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 1 – JDR (Original CRC)  1044:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 1 – JDR (Indice)  2002:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDR (Original CRC)  1044:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDR (Indice)  2002:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |

# DIVA ATP - JDO

| **Table 3: DIVA ATP - JDO** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **Non Compulsory Section – Wheel Measurements.**  **In the event whereby a wheel re-measurement is not required to be completed (as advised by the commissioning engineer), a JDO readback is to be performed and compared against current configuration records for validity.** | | | | | | | |
| **Wheel measurements**  **3003:SW:0** | | | | | | | |
| Calibrated Wheel measuring tool  2003:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_1 to enter values |
| Loco ID  2004:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_1 to enter values |
| Wheel 1  2005:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_1 to enter values |
| Wheel 2  2006:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_1 to enter values |
| Calibrated Wheel measuring tool  2007:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_2 to enter values |
| Loco ID  2008:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_2 to enter values |
| Wheel 1  2009:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_2 to enter values |
| Wheel 2  2010:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_2 to enter values |
| **Confirmed Wheel Sizes**  **3004:SW:0** | | | | | | | |
| Wheel 1  2011:SW:0 | N/A | N/A |  |  | N/A | N/A | Engineer\_1 to enters Valid wheel values |
| Wheel 2  2012:SW:0 | N/A | N/A |  |  | N/A | N/A | Engineer\_1 to enters Valid wheel values |
| Wheel Validation  2013:SW:0 | N/A | N/A |  |  | N/A | N/A | Engineer\_1 confirms Wheel Validation as “Valid” or “Authorised” |
| **Non Compulsory Section – JDO creation**  **In the event whereby a wheel re-measurement is not required and the JDO is correctly correlated against current configuration records, the pre-existing prepared JDO file can be re-issued to onboard testers for programming. In all other circumstances, this section is Compulsory and must be re-completed.** | | | | | | | |
| **JDO Creation**  **3005:SW:0** | | | | | | | |
| JDO Update  2014:SW:0 | N/A | N/A | N/A |  | N/A | N/A | Engineer\_2 confirms JDO update to Valid wheel sizes |
| PCSAM version  2015:SW:0 | N/A |  | N/A |  | N/A |  | Engineer\_2 confirms PCSSAM version used |
| **Compulsory Section – JDO Installation**  **The remaining section below must be re-completed entirely in all circumstances where there is a JDO re-programmed on-board.** | | | | | | | |
| **JDO Installation**  **3006:SW:0** | | | | | | | |
| Correct JDO file  2016:SW:0 | N/A | N/A | N/A |  | N/A | N/A | Lead\_Tester confirms correct JDO file received for installation on Loco |
| Loco ID  2017:SW:0 | N/A | N/A |  |  |  | N/A | Lead\_Tester and Tester\_1 confirms correct Loco for installation |
| JDR readback  2018:SW:0 | N/A | N/A |  |  | N/A | N/A | Tester\_1 confirms correct JDR – presented to Engineer (required for Validation) |
| PMC2 IP address  2019:SW:0 | N/A | N/A |  |  | N/A |  | Tester\_1 confirms correct PMC2 IP address |
| DIVA JDO release ID – BAT1  1030:SW:1 | N/A |  | N/A |  |  |  | Installer to confirm what version of DIVA-JD config files they have uploaded Verifier to observe this during data upload. |
| DIVA JDO release ID – BAT2  1030:SW:2 | N/A |  | N/A |  |  |  | Installer to confirm what version of DIVA-JD config files they have uploaded Verifier to observe this during data upload. |
| PCSAM  2020:SW:0 | N/A |  | N/A |  |  |  | The compatible PCSAM version must be used to program the JD files. Verifier to observe this during data upload. |
| BAT 1 – JDO (Original CRC)  2021:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 1 – JDO (Indice)  2022:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDO (Original CRC)  2021:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| BAT 2 – JDO (Indice)  2022:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| Wheel 1 Diameter (mm) – JDO Figure  2023:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| Wheel 1 Uncertainty (mm) – JDO Figure  2024:SW:1 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| Wheel 2 Diameter (mm) – JDO Figure  2023:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| Wheel 2 Uncertainty (mm) – JDO Figure  2024:SW:2 | N/A | N/A |  |  |  |  | From the Intervention Report produced |
| **DIVA Function**  **3007:SW:0** | | | | | | | |
| DIVA JDO update complete  2025:SW:0 | N/A | N/A | N/A |  | N/A | N/A | Lead\_Tester confirm DIVA updated to current SPC/ TRR |
| Boot Up  2026:SW:0 | N/A | N/A | N/A |  | N/A | N/A | Lead\_Tester confirm DIVA boots up with no error message |
| VSS Validation  2027:SW:0 | N/A | N/A | N/A |  | N/A | N/A | Lead\_Tester confirm DIVA train sheet is validated with the VSS and EoJ is completed |

# ATO-C

| **Table 4: ATO-C** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **ATO-C – Generic Components**  3008:SW:0 | | | | | | | |
| N – Application  1007:SW:1 | ATOC.ATON-C1 |  | N/A |  |  |  |  |
| N – Base  1008:SW:1 | ATOC.ATON-S1 |  | N/A |  |  |  |  |
| R – Application  1007:SW:2 | ATOC.ATOR-C1 | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |
| R – Base  1008:SW:2 | ATOC.ATOR-S1 | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |
| **ATO-C – Loco Specific Components**  **3009:SW:0** | | | | | | | |
| N - ATOC\_ApplicationSoftware.zip  1006:SW:1 | N/A | N/A |  |  |  |  | MD5 File checksum to be created for software install & verification |
| R - ATOC\_ApplicationSoftware.zip  1006:SW:2 | N/A | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |

# DSE

| **Table 5: DSE** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **DSE – Generic Components**  **3010:SW:0** | | | | | | | |
| N – Application  1045:SW:1 | ATOC.DSEN-S1 |  | N/A |  |  |  |  |
| N – Base  1047:SW:1 | ATOC.DSEN-S2 |  | N/A |  |  |  |  |
| N – Profiler  1046:SW:1 | ATOC.DSEN-C1 |  | N/A |  |  |  |  |
| R – Application  1045:SW:2 | ATOC.DSER-S1 | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |
| R – Base  1047:SW:2 | ATOC.DSER-S2 | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |
| R – Profiler  1046:SW:2 | ATOC.DSER-C1 | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |
| **DSE – Loco Specific Components**  **3011:SW:0** | | | | | | | |
| N - Profiler Configuration  1048:SW:1 | N/A | N/A |  |  |  |  | MD5 File checksum to be created for software install & verification |
| R - Profiler Configuration  1048:SW:2 | N/A | N/A | N/A | N/A | N/A | N/A | Reserve side not commissioned yet |

# NVR

| **Table 6: NVR** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **NVR – Generic Components**  **3012:SW:0** | | | | | | | |
| NVR Terminal firmware  1080:SW:0 | COMM.NVRS-S1 |  | N/A |  |  |  |  |
| NVR Configuration  1081:SW:0 | N/A |  | N/A |  |  |  |  |

# Internal MOXA

| **Table 7: Internal MOXA** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **Internal MOXA – Generic Components**  **3013:SW:0** | | | | | | | |
| Internal Moxa A  1079:SW:1 | N/A |  | N/A |  |  |  |  |
| Internal Moxa B  1079:SW:2 | N/A |  | N/A |  |  |  |  |

# External MOXA

| **Table 8: External MOXA** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **External MOXA – Generic Components**  **3014:SW:0** | | | | | | | |
| Firmware Switch A  1089:SW:1 | COMM.MOXA-S1 |  | N/A |  |  |  |  |
| Configuration Switch A  1088:SW:1 | COMM.MOXA-C1 |  | N/A |  |  |  |  |
| Firmware Switch B  1089:SW:2 | COMM.MOXB-S1 |  | N/A |  |  |  |  |
| Configuration Switch B  1088:SW:2 | COMM.MOXB-C1 |  | N/A |  |  |  |  |

# Gemini Data Radio

| **Table 9: Gemini Data Radio** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **Gemini Data Radio – Generic Components**  **3015:SW:0** | | | | | | | |
| Gemini G3 Firmware  1082:SW:0 | COMM.DRAD-S1 |  | N/A |  |  |  |  |
| Gemini G3 Configuration  1083:SW:0 | COMM.DRAD-C1 |  | N/A |  |  |  |  |
| **Gemini Data Radio – Loco Specific Components**  **3016:SW:0** | | | | | | | |
| Gemini G3 Configuration  1084:SW:0 | N/A | N/A |  |  |  |  | Site Verification = Loco ID // Remote Verification = MD5 checksum |

# Satellite

| **Table 10: Satellite** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **Satellite – Generic Components**  **3017:SW:0** | | | | | | | |
| Terminal Firmware  1086:SW:0 | COMM.SATT-S1 |  | N/A |  |  |  |  |
| Handset Firmware  1085:SW:0 | COMM.SATH-S1 |  | N/A |  |  |  |  |
| Phone Number List  1087:SW:0 | COMM.SATH-C1 |  | N/A |  |  |  |  |

# WiMAX

| **Table 11: WiMAX** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **WiMAX – Generic Components**  **3018:SW:0** | | | | | | | |
| WiMax Firmware  1090:SW:0 | COMM.WMAX-S1 |  | N/A |  |  |  |  |
| WiMax Configuration  1092:SW:0 | COMM.WMAX-C1 |  | N/A |  |  |  |  |
| **WiMAX – Loco Specific Components**  **3019:SW:0** | | | | | | | |
| WiMax Configuration  1091:SW:0 | N/A | N/A |  |  |  |  | Site Verification = Loco ID // Remote Verification = MD5 checksum |

# ATG (DASH 9)

| **Table 12: ATG (DASH 9)** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **ATG – Generic Components**  **3020:SW:0** | | | | | | | |
| ATG Release  1000:SW:0 | N/A |  | N/A | N/A |  |  | Verify ATG release ID by confirming the ATG configuration items against the release package detailed within the TRR/SPC |
| ATG Main Application  1001:SW:0 | ATG-S3 |  | N/A |  |  |  |  |
| ATG Hardware Reader  1002:SW:0 | ATG-S2 |  | N/A |  |  |  |  |
| ATG Base Image  1003:SW:0 | ATG-S1 |  | N/A |  |  |  |  |
| ATG Configuration  1004:SW:0 | ATG-C1 |  | N/A |  |  |  |  |
| **ATG – Loco Specific Components**  **3021:SW:0** | | | | | | | |
| ATG Configuration  1005:SW:0 | N/A | N/A |  |  |  |  | MD5 File checksum to be created for software install & verification |

# CDS

| **Table 13: CDS** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **CDS – Generic Components**  **3022:SW:0** | | | | | | | |
| CDP-L Software Image  1017:SW:1 | CDSS.PROL.S1 |  | N/A |  |  |  |  |
| CDP-L Configuration  1016:SW:1 | CDSS.PROL-C1 |  | N/A |  |  |  |  |
| CDP-R Software Image  1017:SW:2 | CDSS.PROR-S1 |  | N/A |  |  |  |  |
| CDP-R Configuration  1016:SW:2 | CDSS.PROR-C1 |  | N/A |  |  |  |  |
| CDP Force Washer Configuration  1106:SW:0 | N/A |  | N/A |  |  |  |  |
| CDS NDL Software  1109:SW:0 | N/A |  | N/A |  |  |  |  |
| **CDS – Loco Specific Components**  **3023:SW:0** | | | | | | | |
| CDP-L Configuration  1018:SW:1 | N/A | N/A |  |  |  |  | Site Verification = Loco ID // Remote Verification = MD5 checksum |
| CDP-R Configuration  1018:SW:2 | N/A | N/A |  |  |  |  | Site Verification = Loco ID // Remote Verification = MD5 checksum |
| **CDS Utilities**  **3024:SW:0** | | | | | | | |
| CDS Deployment Utility  1015:SW:0 | N/A |  | N/A |  |  |  | CDSDU used to deploy the processor images |
| CDP-L Characterisation Utility  1011:SW:1 | N/A |  | N/A |  |  |  | Must be compatible with the CDP version |
| CDP-R Characterisation Utility  1011:SW:2 | N/A |  | N/A |  |  |  | Must be compatible with the CDP version |

# VICS

| **Table 14: VICS** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **VICS – Generic Components**  **3025:SW:0** | | | | | | | |
| VICS Release Package  1067:SW:0 | N/A |  | N/A | N/A |  |  | Verify VICS release ID by confirming the VICS configuration items against the release package detailed within the TRR/SPC, else VICS Release Notes |
| MDR Image  1068:SW:0 | VICS.DVR-S1 |  | N/A |  |  |  |  |
| MDR Firmware  1069:SW:0 | N/A |  | N/A |  |  |  |  |
| DVSS Server  1070:SW:0 | N/A |  | N/A |  |  |  | Navigate to: Camera\DVSS\_Client.exe – Right click – Properties - details |
| DVSS Server Video Server  1071:SW:0 | N/A |  | N/A |  |  |  | Navigate to: Camera\DVSS\_Server\_VideoServer\DVSS\_Server\_VideoServer.exe – right click – properties - details |
| FLTSettings\_MDR5R.ini  1072:SW:0 | VICS.DVR-C1 |  | N/A |  |  |  |  |
| VEHSettings\_MDR5R  1073:SW:0 | VICS.DVR-C2 |  | N/A |  |  |  |  |
| Speed to Collision Settings  1074:SW:0 | VICS.DVR-C3 |  | N/A |  |  |  |  |
| Camera Driver Firmware  1078:SW:1 | VICS.CAMD-S1 |  | N/A |  |  |  |  |
| Camera Driver Configuration  1077:SW:1 | VICS.CAMD-C1 |  | N/A |  |  |  |  |
| Camera Driver IP Configuration  1076:SW:1 | N/A |  | N/A |  |  |  | MD5 File checksum to be created for software install & verification |
| Camera Observer Firmware  1078:SW:2 | VICS.CAMO-S1 |  | N/A |  |  |  |  |
| Camera Observer Configuration  1077:SW:2 | VICS.CAMO-C1 |  | N/A |  |  |  |  |
| Camera Observer IP Configuration  1076:SW:2 | N/A |  | N/A |  |  |  | MD5 File checksum to be created for software install & verification |
| **VICS – Loco Specific Components**  **3026:SW:0** | | | | | | | |
| VICS MDR5R  1075:SW:0 | N/A | N/A |  |  |  |  | Site Verification = Loco ID |

# Data Logger

| **Table 15: Data Logger** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **Data Logger – Generic Components**  **3027:SW:0** | | | | | | | |
| Data Logger Software  1025:SW:0 | DLOG-S1 |  | N/A |  |  |  |  |
| **Data Logger – Loco Specific Components**  **3028:SW:0** | | | | | | | |
| Data Logger Config  1026:SW:0 | DLOG-C1 | N/A |  |  |  |  | Site Verification = Loco ID;  Hyperterminal into the datalogger and check the loco ID is correct & confirm you can WinSCP into the DL using the IP on the NVIP plan. |

# ATO Alerter

| **Table 23: ATO Alerter** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **Alerter – Generic Components**  3035:SW:0 | | | | | | | |
| Firmware  1095:SW:0 | N/A |  | N/A |  |  |  | Refer to 90000876.E02.EN |
| Configuration  1096:SW:0 | N/A |  | N/A |  |  |  | Refer to 90000876.E02.EN |

# NDL

| **Table 16: NDL** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **NDL – Generic Components**  **3029:SW:0** | | | | | | | |
| Application  1093:SW:0 | .ATOC.DSER-S3 |  | N/A |  |  |  |  |

# CMU

| **Table 17: CMU** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **CMU – Generic Components**  **3030:SW:0** | | | | | | | |
| Application  1021:SW:0 | CMU-S1 |  | N/A |  |  |  | Install & Verify may be transferred from auditing the UGL Software Certificate. |
| Configuration (Dash9)  1023:SW:0 | CMU-C1 |  | N/A |  |  |  | Install & Verify may be transferred from auditing the UGL Software Certificate. |
| CAB Configuration (Dash9)  1024:SW:0 | N/A |  | N/A |  |  |  | Install & Verify may be transferred from auditing the UGL Software Certificate. |
| **CMU – Loco Specific Components**  **3031:SW:0** | | | | | | | |
| Configuration (EVO)  1022:SW:0 | CMU-C1 | N/A |  |  |  |  | Install & Verify may be transferred from auditing the UGL Software Certificate. |

# GoLINC (NIU II AC)

| **Table 25: GoLINC (NIU II AC)** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **GoLINC – Generic Components**  3037:SW:0 | | | | | | | |
| Application  1107:SW:0 | CMU-C1 |  | N/A | N/A | N/A |  | Controlled & Installed by GE  Version confirmed via GE release notes |

# Miscellaneous

| **Table 18: Miscellaneous** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Configuration Item** | **AIMS Reference** | **Software Generic Version** | **Software Loco Specific Data** | **Installed by** | **Verified by** | **Validated by** | **Note** |
|  |  | EditableCombobox | Text | UserSignature | UserSignature | UserSignature |  |
| **LHI – Current Sensors**  **3032:SW:0** | | | | | | | |
| Current Sensor Settings  1065:SW:0 | N/A |  | N/A |  |  | N/A |  |
| **ADAM – RTD**  **3033:SW:0** | | | | | | | |
| Software  1066:SW:0 | N/A |  | N/A |  |  | N/A |  |

# Software Baseline

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table 21: Software Baseline (Software Product Configuration or Test Readiness Review)** | | | | | | |
| **Item** | **Baseline Document Title** | **Baseline Document ID**  **(TeamCentre ID)** | **Baseline Document Revision** | **Software Container**  **(TeamCentre ID)** | **Engineer Validation** | **IMT Validation & HOSDI Update** |
|  | EditableCombobox | EditableCombobox | Text | Text | UserSignature | UserSignature |
| Baseline  0200:SW:0 |  |  |  |  |  | N/A |

| EVO, DASH 9 & AC – Software DEPLOYMENT TCR - Signatures | | | |
| --- | --- | --- | --- |
| **Name** | **Date** | **Comments** | **Signature** |
| %USERS.NAME% |  |  |  |