SAF85XX FW RELEASE CODE DROP 0.1.0

INTERNAL SLIDES

RFE SW Team
Artur Burchard
02-APRIL-2021
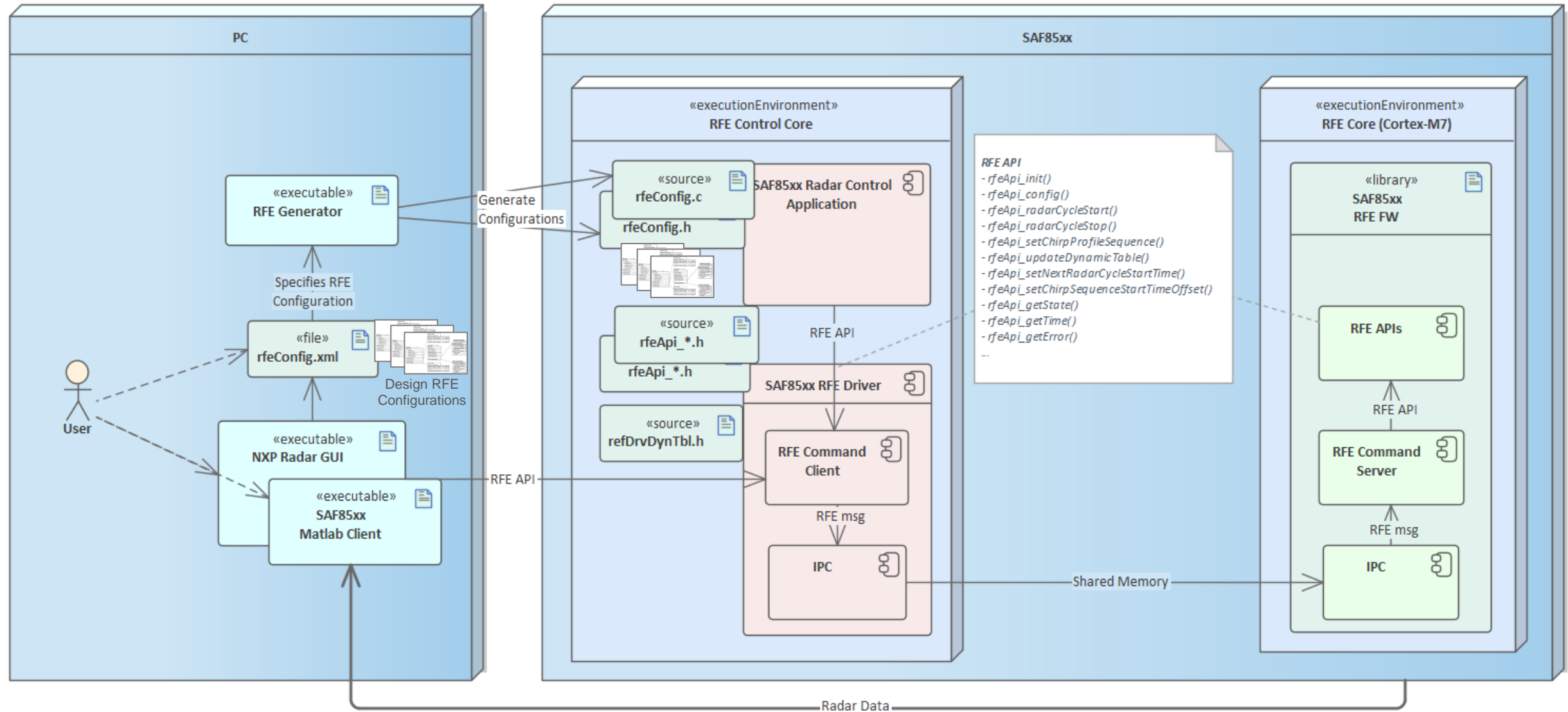
NXP

SECURE CONNECTIONS FOR A SMARTER WORLD

SAF85XX RFE FW (CODE DROP) RELEASE 0.1.0 (DEMO)

- Internal Release via Bitbucket:
  - SAF85xx_RFE_FW_0.1.0.zip + SAF85xxRelease_v0.1.0.pptx
    - https://bitbucket.sw.nxp.com/projects/STRX/repos/rfe/browse/docs/Releases/Internal/SAF85xx_RFE_FW_0.1.0

- External Release to Denso via Sharepoint:
  - SAF85xx_RFE_FW_0.1.0.zip
    - https://nxp1.sharepoint.com/teams/ext775?e=1%3Aede4b6e733374838919d342f93f56d83

  - Archived in:
    - https://bitbucket.sw.nxp.com/projects/STRX/repos/rfe/browse/docs/Releases/External/SAF85xx_RFE_FW_0.1.0

- Bitbucket Tags
  - SAF85xx_RFE_FW_Code_Drop_0.1.0
  - Internal:
    https://bitbucket.sw.nxp.com/projects/STRX/repos/rfe/browse/docs/Releases/Internal/SAF85xx_RFE_FW_0.1.0?at=refs%2Ftags%2FSAF85xx_RFE_FW_Code_Drop_0.1.0
  - External
    https://bitbucket.sw.nxp.com/projects/STRX/repos/rfe/browse/docs/Releases/External/SAF85xx_RFE_FW_0.1.0?at=refs%2Ftags%2FSAF85xx_RFE_FW_Code_Drop_0.1.0

deployment SAF85xx RFE FW 0.1.0

PC

SAF85xx

«executionEnvironment»
RFE Control Core

«executionEnvironment»
RFE Core (Cortex-M7)

«executable»
RFE Generator

«source»
rfeConfig.c

rfeConfig.h

SAF85xx Radar Control Application

Generate Configurations

Specifies RFE Configuration

«file»
rfeConfig.xml

Design RFE Configurations

«source»
rfeApi_*.h

rfeApi_*.h

«source»
refDrvDynTbl.h

User

«executable»
NXP Radar GUI

«executable»
SAF85xx Matlab Client

RFE API

SAF85xx RFE Driver

RFE API

RFE Command Client

RFE msg

IPC

RFE API
- *rfeApi_init()*
- *rfeApi_config()*
- *rfeApi_radarCycleStart()*
- *rfeApi_radarCycleStop()*
- *rfeApi_setChirpProfileSequence()*
- *rfeApi_updateDynamicTable()*
- *rfeApi_setNextRadarCycleStartTime()*
- *rfeApi_setChirpSequenceStartTimeOffset()*
- *rfeApi_getState()*
- *rfeApi_getTime()*
- *rfeApi_getError()*
- ...

«library»
SAF85xx RFE FW

RFE APIs

RFE API

RFE Command Server

RFE msg
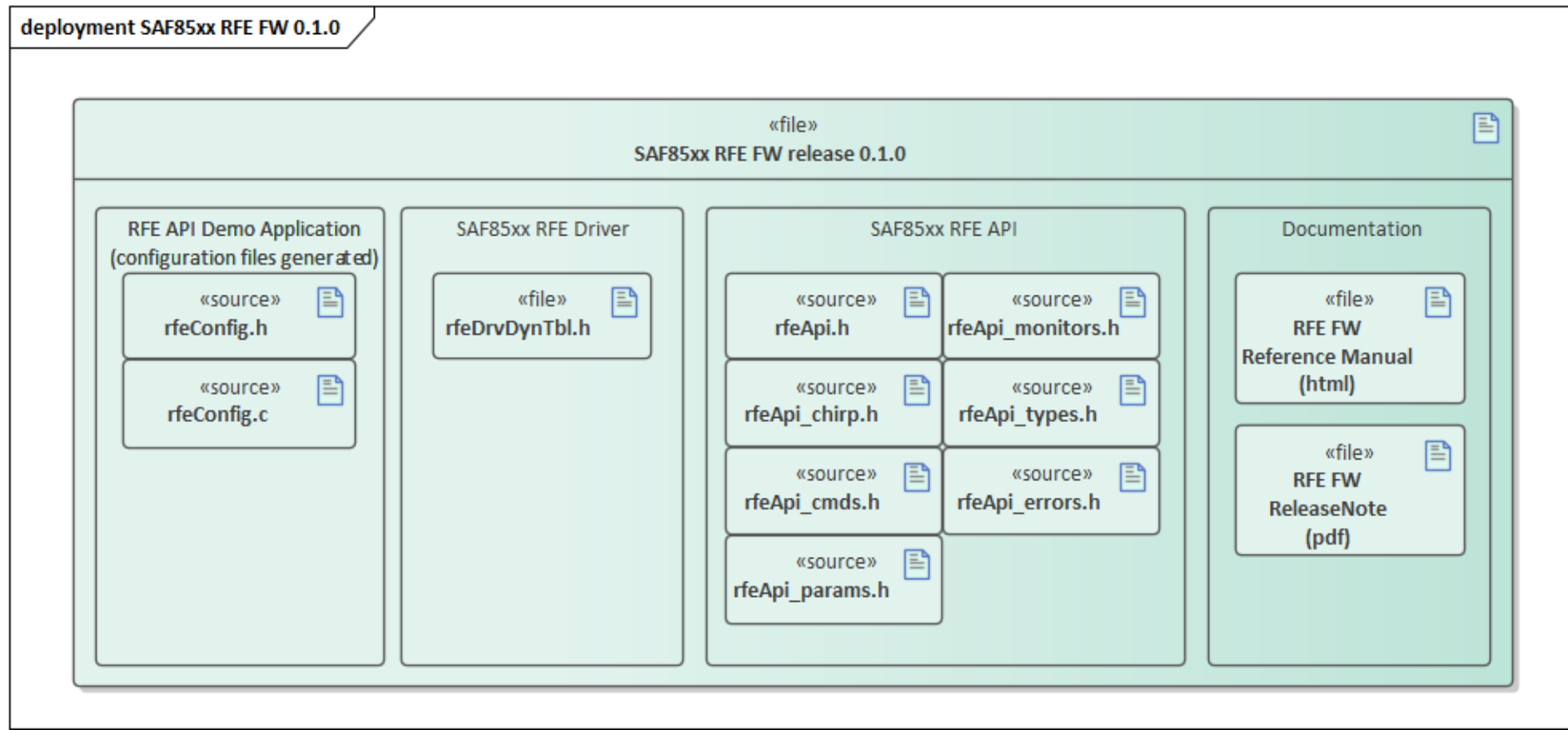
IPC

Shared Memory

Radar Data

PURPOSE OF THE RELEASE

- External
  - Enable Denso to start development towards STRX RFE control, as agreed in RfQ
  - Release initial SAF85xx RFE API covering Denso use case
  - Get early feedback from Denso

- Internal
  - Pipe clean the release process
  - Release initial SAF85xx RFE API for
    - GUI development
    - Validation Development
  - For other teams to familiarize with top level SAF85xx RFE API

RELEASE CONTENT

- <u>Initial</u> Top Level SAF85xx RFE API
  - Radar Cycle, Radar Frame, Parameters Updates, Commands (e.g. CW)
  - Dynamic (MIMO) Table
  - Example (Denso) RFE Configuration
  - Documentation

RELEASE CONTENT

Table 1. Release contents

Item	Version
Documentation	
• SAF85xx_RFE_FW_ReleaseNotes.pdf	0.1
• SAF85xx_RFE_FW_ReferenceManual	0.1.0
RFE Firmware (RFE-M7)	
• Not released	
RFE Software (A53)	0.1.0
• RFE API	
o RFE API Header files	
• RFE Driver	
o RFE Dynamic Tables Header File	
• RFE Control Demo App	
o RFE Configuration files	

```
\SAF85xx_RFE_FW_0.1.0
.....\doc
..........SAF85xx_RFE_FW_ReleaseNotes.pdf
..........\SAF85xx_RFE_FW_Reference_Manual
...............\*.* (html)
.....\rfeApi
..........\inc
...............rfeApi.h
...............rfeApi_chirp.h
...............rfeApi_cmds.h
...............rfeApi_params.h
...............rfeApi_monitors.h
...............rfeApi_errors.h
...............rfeApi_types.h
.....\rfeCtrlDemoApp
..........\inc
...............rfeConfig.h
..........\src
...............rfeConfig.c
.....\rfeDrv
..........\inc
...............rfeDrvDynTbl.h
```

- Release Ticket
  - https://jira.sw.nxp.com/browse/STRX-1840

- Code and Reference Manual review
  - https://crucible1.sw.nxp.com/cru/R-STRX-351

- Release Notes review
  - https://crucible1.sw.nxp.com/cru/R-STRX-350

- (this) Release Slides review
  - https://crucible1.sw.nxp.com/cru/R-STRX-352