

Run#3-16,10,11,3



You are a requirements engineer working on the project named 'standard firmware.' Your task is to predict links between the system requirements (SYSRS) and software requirements (SWRS).

For each SYSRS, perform the following steps:

Deduce the Triggers: Identify the conditions or events that initiate the requirement.

Deduce the Actions: Specify what needs to be done when the triggers occur.

Deduce the Outputs: Identify the results or deliverables of the actions.

Search for SWRS with matching or related triggers, actions, and outputs. Create links only if there is a match, and ensure that the scenarios (e.g., unicast vs. broadcast or other context-specific conditions) are consistent between the SYSRS and SWRS. No link of any type should be created if they mismatch.

Important:

Verify that the operational context (e.g., unicast vs. broadcast) aligns fully before classifying as "Fully Linked."

If there is any inversion or mismatch in context, triggers, actions, or outputs, classify the SYSRS as "Partially Linked" or "Unlinked," as appropriate.

Clearly describe any mismatches or inversions in the justification.

For each SYSRS, classify the match into one of the following categories:

Fully Linked: The SWRS completely aligns with the SYSRS in context, triggers, actions, and outputs.

Partially Linked: The SWRS addresses some aspects of the SYSRS (e.g., actions) but misses significant elements (e.g., context or specific outputs). Specify what is missing.

Unlinked: No SWRS sufficiently aligns with the SYSRS due to missing key elements, incompatible context, or scenarios.

If a match exists (fully or partially), provide a justification explaining how the SWRS satisfies the SYSRS and note any missing elements for partial links. If no match exists, explicitly state that the SYSRS is Unlinked, along with a justification. Wait for me to give sysrs and swrs list.



Understood! Once you provide the list of system requirements (SYSRS) and software requirements (SWRS), I will analyze them based on the triggers, actions, outputs, and operational context. I'll classify the match for each SYSRS as **Fully Linked**, **Partially Linked**, or **Unlinked**, and provide justifications accordingly. Let me know when you're ready with the lists!



System Requirement

SYSRS 001: The Sensor IC shall digitize the Transducer Input Signal at the IC Pins with sampling frequency of (CALIB_samplingFreq plus YPX_samplingFreqOffset).

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"SYSRS 003: BEFORE Sending CRM_RCC After Reception of the CRM_FCC,
THEN
the Sensor IC shall
set CRM_RSP Parameter CrmStatus = Status Value.
"

SYSRS 021: Diagnostic - Retry configuration: The firmware shall allow configurability to select the
retry for open and short faults independently
"SYSRS 012: BEFORE Leaving the Discovery Mode
AND IF the effective value of the parameter DSI3_physicalAddress is NOT equal to the default value
of the Parameter DSI3_physicalAddress
THEN
the Sensor IC shall
set Error: err_discPhysAddrMismatch = 0x1 ("error detected").
"

"SYSRS 014: IF the Event_MAX is generated,
THEN
the Sensor IC shall
measure the time of the occurrence of the event condition relative to the start of the measurement
and provide PDCM_RSP P12, P13 Parameter EventTimeStamp<i> for the <i>th Event transmitted in a
DSI3 packet."
"SYSRS 009: If Performing Memory Access in Broadcast
AND IF the state if the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea for the
operation as determined by CRM_CMD 0x8 Operation Flag is in the state Locked,
THEN
the Sensor IC shall
respond with PDCM_RSP P0: Report CRM_RSP Information containing CRM_RSP 0x8: Report Lock
Status and CRM_RSP 0x8 Flag KeyRequest = 0b1 ("key requested").
"

"SYSRS 018: - Unlocked, If No Key Is Set
If Performing Memory Access
AND If the Key is NOT set
THEN
the Sensor IC shall
set the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea to the state
Memory Area State: Unlocked."
"SYSRS 006: If Performing Memory Access in Unicast
AND IF the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea for the
operation as determined by CRM_CMD 0x8 Operation Flag is in the state Locked,
THEN
the Sensor IC shall
respond with CRM_RSP 0x8: Report Lock Status and CRM_RSP 0x8 Flag KeyRequest = 0b1 ("key
requested").
"

"SYSRS 019: If Performing Memory Access in Unicast
AND AFTER reception of the CRM_FCC_CMD,
AND If Addressed with the Broadcast Command
THEN
the Sensor IC shall
set the parameter Status Value = 0x2 ("invalid")."
"SYSRS 020: If Performing Memory Access in Broadcast

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AND AFTER reception of the CRM_FCC_CMD,
 AND If Addressed with the Unicast Command
 THEN
 the Sensor IC shall
 set the parameter Status Value = 0x2 (""invalid"").
 "SYSRS 007: If Performing Memory Access
 AND If the Key is Set
 AND If Read Operation is Requested
 AND If Memory Area Is Set Read Accessible
 THEN
 the Sensor IC shall
 set the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea to the state
 Locked.
 "
 "SYSRS 015: Increment KAC
 AFTER Sending PDCM Packet After Reception of the BRC
 THEN
 the Sensor IC shall
 increment the PDCM_RSP Parameter KAC by 1; the counter is reset to 0 at overflow"
 "SYSRS 010: If Performing Memory Area Modification
 AND AFTER reception of CRM_CMD 0x9: Take Data or Send Data
 THEN
 the Sensor IC shall
 cache the CRM_CMD 0x9 Parameter Data to the Data Cache.
 "
 "SYSRS 013: The Sensor IC shall amplify the Transducer Input Signal at the IC Pins with the three
 amplification factors (Parameter CALIB_analogGain plus Parameter SPX_dynGainStartValue plus
 CRM_CMD 0x4 Parameter CalibrationGain plus Parameter YPX_calibrationGainOffset).
 "SYSRS 016: After Reception of the Valid CRM_FCC_CMD,
 THEN
 the Sensor IC shall
 set the PDCM_RSP Parameter KAC = 0x0."
 "SYSRS 017: If Performing the Standard Path Measurement
 AND IF performing Stop Ongoing Measurement (Blocked)
 AND IF the functionality in US-Transducer Control (Non-Modulated Sine Burst) has NOT been fully
 performed,
 THEN
 the Sensor IC shall
 set Error: err_burstGenerationStopped = 0x1 (""error"")."
 "SYSRS 004: If performing Erase Backup
 AND If Addressed with the Unicast Command
 THEN
 the Sensor IC shall
 respond with CRM_RSP 0x0: Report Acknowledgement."
 SYSRS 002: The Sensor IC FW shall have a watchdog to detect FW or HW malfunction by resetting
 the WDG time in appropriate time within the FTTI.
 "SYSRS 005: IF the Sensor IC generates more information than possible to store in Event Buffer or
 Time Series Data Buffer

THEN
the Sensor IC shall forget the according information."
"SYSRS 008: If Performing Memory Access With Set Key
AND If Write Operation is Requested
AND If Memory Area Is Set Write Accessible
THEN
the Sensor IC shall
set the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea to the state Locked."
"
SYSRS 011: If Performing Memory Area Modification
AND AFTER reception of CRM_CMD 0x9: Take Data or Send Data
THEN
the Sensor IC shall
increment the CRM_CMD 0x8 Parameter StartAddress by 1 word address."



Thank you for providing the detailed list of system requirements (SYSRS). Please provide the corresponding **software requirements (SWRS)** list so I can proceed with identifying potential links, analyzing the triggers, actions, outputs, and operational contexts, and classifying the matches into Fully Linked, Partially Linked, or Unlinked categories.



Software Requirement
"SWRS 017: Increment KAC
AFTER Sending PDCM Packet After Reception of the BRC
THEN
the Software shall
increment the PDCM_RSP Parameter KAC by 1; "
"SWRS 010: If Performing Memory Access in Broadcast
AND IF the state if the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea for the operation as determined by CRM_CMD 0x8 Operation Flag is in the state Locked,
THEN
the Software shall prepare to
respond with PDCM_RSP P0: Report CRM_RSP Information containing CRM_RSP 0x8: Report Lock Status and CRM_RSP 0x8 Flag KeyRequest = 0b1 ("key requested").
"
SWRS 016: The software shall send the MAX events with the measured time of the occurrence of the event, condition relative to the start of the measurement, and provide the PDCM_RSP P12,P13 Parameter EventTimeStamp<i> for the <i>th Event transmitted in a PDCM frame.

SWRS 002: The software shall enable a watchdog to detect software or hardware malfunction AND IF a malfunction is present, perform a reset in an appropriate time within the Fault Tolerant Time Interval of 20ms
"SWRS 012 : BEFORE Leaving the Discovery Mode
AND IF the effective value of the Parameter DSI3_physicalAddress (RAM) is NOT equal to the default value of the Parameter DSI3_physicalAddress (NVM)
THEN

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the Software shall
set Error: err_discPhysAddrMismatch = 0x1 (""error detected"").
OTHERWISE
the Software shall
set Error: err_discPhysAddrMismatch = 0x0 (""no error"").
"

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"SWRS 005: - The software shall store information for up to 5 Echo Events.

SWRS 006: - The software shall hold at least the information for up to 100 time series data samples (time stamp and value)
 IF NOT possible regarding memory constraints could be reduced up to 50 time series data samples.
 "

SWRS 008: If Performing Memory Access AND If the Key is Set AND If Read Operation is Requested
 AND If Memory Area Is Set Read Accessible THEN the Software shall set the state of the Memory
 Area identified by CRM_CMD 0x8 Parameter MemoryArea to the state Locked.
 "SWRS 013: Analog Amplification: AFTER reception of the command CRM_CMD 0x4: Start Calibration
 Measurement the software shall set the register the register ASP_CFG.g_ana to Parameter
 CALIB_analogGain .
 "

"SWRS 009: If Performing Memory Access
 AND If the Key is Set
 AND If Write Operation is Requested
 AND If Memory Area Is Set Write Accessible
 THEN
 the Software shall
 set the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea to the state
 Locked.
 "

"SWRS 004: If performing Erase Backup
 AND If Addressed with the Unicast Command
 THEN
 the Software shall prepare to
 respond with CRM_RSP 0x0: Report Acknowledgement."

"SWRS 020: - Unlocked, If No Key Is Set
 ELA0938-15904 - If Performing Memory Access
 AND ELA0938-17453 - If the Key is NOT set
 THEN
 the Software shall
 set the state of the Memory Area identified by ELA0938-9158 - CRM_CMD 0x8 Parameter
 MemoryArea to the state ELA0938-16683 - Memory Area State: Unlocked."

"SWRS 021: If Performing Memory Access in Unicast
 AND AFTER reception of the CRM_FCC_CMD,
 AND If Addressed with the Broadcast Command
 THEN
 the Software shall
 set the parameter Status Value = 0x2 (""invalid"")."

"SWRS 023: Open/Short retry: IF the software detects an open or short error AND retry is configured
 as enabled in the DEFAULT OPEN SHORT RETRY value in the COMPILE TIME CONFIGURATION data,
 the affected channel shall be re-enabled for one TIMESLICE with the following setup at least every
 200 milliseconds

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SWRS 024: Diagnostic configuration items : DEFAULT OPEN SHORT RETRY"
"SWRS 022: If Performing Memory Access in Broadcast
AND AFTER reception of the CRM_FCC_CMD,
AND If Addressed with the Unicast Command
THEN
the Software shall
set the parameter Status Value = 0x2 ("invalid")."

"SWRS 007: If Performing Memory Access in Unicast
AND IF the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea for the
operation as determined by CRM_CMD 0x8 Operation Flag is in the state Locked,
THEN
the Software shall prepare to
respond with CRM_RSP 0x8: Report Lock Status and CRM_RSP 0x8 Flag KeyRequest = 0b1 ("key
requested")."
"

"SWRS 019: IF in Main-Measurement
AND IF Break Burst Generation occurs
THEN
the software shall set
Error: err_burstGenerationStopped = 0x1 ("error")."
"SWRS 001: AFTER reception of the command CRM_CMD 0x1: Start Standard Measurement
AND
BEFORE the start of the Measurement the software shall set the register BRG.FS.f_s to
(CALIB_samplingFreq plus YPX_samplingFreqOffset). "
"

SWRS 014: Digital Amplification: AFTER reception of the command CRM_CMD 0x4: Start Calibration
Measurement the software shall set the register ENVP_AMPD_CFG.g_dig to Parameter
SPX_dynGainStartValue .
"
"

SWRS 015: Calibration Gain: AFTER reception of the command CRM_CMD 0x4: Start Calibration
Measurement
the software shall set the register ENVP_GCAL.g_cal to ( CRM_CMD 0x4 Parameter CalibrationGain +
Parameter YPX_calibrationGainOffset)."
```



I will now analyze the system requirements (SYSRS) against the software requirements (SWRS), identifying links based on triggers, actions, outputs, and operational contexts, as well as classify each SYSRS as Fully Linked, Partially Linked, or Unlinked with justifications. Below is the detailed mapping:

SYSRS 001

Trigger: Digitizing transducer input signal.

Action: Sample signal with specified frequency.

Output: Signal sampled at `CALIB_samplingFreq + YPX_samplingFreqOffset`.

Matched SWRS:

- **SWRS 001:** Matches on trigger, action, and output; explicitly describes sampling frequency alignment.

Classification: Fully Linked.

Justification: SWRS 001 fully describes the action of setting the sampling frequency based on the defined parameters.

SYSRS 003

Trigger: Reception of CRM_FCC.

Action: Set `CRM_RSP` parameter `CrmStatus` to Status Value.

Output: CRM_RCC sent with the updated status.

Matched SWRS:

No SWRS explicitly aligns with the described trigger, action, and output.

Classification: Unlinked.

Justification: No SWRS provides details on setting `CrmStatus` based on CRM_FCC reception.

SYSRS 021

Trigger: Configurability for retry on open/short faults.

Action: Allow independent retry configuration.

Output: Fault handling configuration.

Matched SWRS:

- **SWRS 023:** Describes retry configuration for open/short faults based on compile-time defaults.
- **SWRS 024:** Specifies configuration items related to diagnostic retries.

Classification: Fully Linked.

Justification: SWRS 023 and SWRS 024 collectively align with the diagnostic retry configurability requirement.

SYSRS 012

Trigger: Before leaving Discovery Mode; DSI3 physical address check.

Action: Set error `err_discPhysAddrMismatch` if mismatch occurs.

Output: Error flag set to 0x1.

Matched SWRS:

- **SWRS 012:** Matches the condition and action, including error flagging behavior.

Classification: Fully Linked.

Justification: SWRS 012 explicitly handles the mismatch scenario and defines the error flag behavior.

SYSRS 014

Trigger: Event_MAX generated.

Action: Measure event time relative to measurement start.

Output: Provide `EventTimeStamp<i>` for each event.

Matched SWRS:

- **SWRS 016:** Describes sending MAX events with measured occurrence time.

Classification: Fully Linked.

Justification: SWRS 016 directly addresses event timestamping requirements.

SYSRS 009

Trigger: Memory access in broadcast; MemoryArea locked.

Action: Respond with `CRM_RSP` report and `KeyRequest`.

Output: Provide lock status and key request.

Matched SWRS:

- **SWRS 010:** Matches on triggers, actions, and outputs for locked memory in broadcast mode.

Classification: Fully Linked.

Justification: SWRS 010 aligns with memory access and lock reporting in broadcast mode.

SYSRS 018

Trigger: Memory access; Key not set.

Action: Set MemoryArea state to "Unlocked".

Output: Unlocked memory state.

Matched SWRS:

- **SWRS 020:** Describes memory state transition to unlocked when no key is set.

Classification: Fully Linked.

Justification: SWRS 020 provides complete alignment with memory unlock conditions.

SYSRS 006

Trigger: Memory access in unicast; MemoryArea locked.

Action: Respond with `CRM_RSP` report and `KeyRequest`.

Output: Provide lock status and key request.

Matched SWRS:

- **SWRS 007:** Matches on unicast memory access triggers, actions, and outputs.

Classification: Fully Linked.

Justification: SWRS 007 aligns completely with memory access and lock reporting in unicast mode.

SYSRS 019

Trigger: Memory access in unicast after CRM_FCC_CMD; addressed with broadcast command.

Action: Set `Status Value = 0x2`.

Output: Status parameter updated.

Matched SWRS:

- **SWRS 021:** Matches unicast conditions, triggers, and actions.

Classification: Fully Linked.

Justification: SWRS 021 aligns with the described memory access and status update scenario.

SYSRS 020

Trigger: Memory access in broadcast after CRM_FCC_CMD; addressed with unicast command.

Action: Set `Status Value` = 0x2`.

Output: Status parameter updated.

Matched SWRS:

- **SWRS 022:** Matches broadcast conditions, triggers, and actions.

Classification: Fully Linked.

Justification: SWRS 022 fully satisfies the memory access and status update requirement for broadcast mode.

SYSRS 007

Trigger: Memory access; Key set; Read requested; MemoryArea readable.

Action: Set MemoryArea state to "Locked".

Output: Locked memory state.

Matched SWRS:

- **SWRS 008:** Matches the triggers, actions, and outputs for this scenario.

Classification: Fully Linked.

Justification: SWRS 008 aligns with the conditions for setting MemoryArea to locked.

SYSRS 015

Trigger: After sending PDCM packet and BRC reception.

Action: Increment `KAC` by 1.

Output: Updated counter.

Matched SWRS:

- **SWRS 017:** Matches the conditions, actions, and outputs for incrementing `KAC`.

Classification: Fully Linked.

Justification: SWRS 017 describes the required `KAC` increment logic.

SYSRS 013

Trigger: Amplify transducer input signal.

Action: Use specified amplification factors.

Output: Amplified signal.

Matched SWRS:

- **SWRS 013, SWRS 014, SWRS 015:** Match on amplification parameters and corresponding actions.

Classification: Fully Linked.

Justification: The combination of SWRS 013, SWRS 014, and SWRS 015 satisfies the amplification requirement.

SYSRS 016

Trigger: Valid CRM_FCC_CMD received.

Action: Set `KAC = 0x0`.

Output: Reset counter.

Matched SWRS:

No SWRS explicitly matches this requirement.

Classification: Unlinked.

Justification: No SWRS describes the action of resetting `KAC` upon CRM_FCC_CMD reception.

For other SYSRS, let me know if specific attention is needed.



can you give me the complete analysis in a table form with sort in ascending order



Here's the complete analysis organized in a table format and sorted in ascending order by the SYSRS identifier:

SYSRS ID	Trigger	Action	Output	Matched SWRS	Classification	Justification
SYSRS 001	Digitizing transducer input signal.	Sample signal with specified frequency.	Signal sampled at `CALIB_samplingFreq + YPX_samplingFreqOffset`.	SWRS 001	Fully Linked	SWRS 001 fully describes the action of setting the sampling frequency based on the defined parameters.



you can remove 2 3 4th column



Here's the table with only the SYSRS ID, Matched SWRS, Classification, and Justification:

SYSRS ID	Matched SWRS	Classification	Justification
SYSRS 001	SWRS 001	Fully Linked	SWRS 001 fully describes the action of setting the sampling frequency based on the defined parameters.
SYSRS 003	None	Unlinked	No SWRS provides details on setting `CrmStatus` based on CRM_FCC reception.
SYSRS 006	SWRS 007	Fully Linked	SWRS 007 aligns completely with memory access and lock reporting in unicast mode.
SYSRS 007	SWRS 008	Fully Linked	SWRS 008 aligns with the conditions for setting MemoryArea to locked.
SYSRS 009	SWRS 010	Fully Linked	SWRS 010 aligns with memory access and lock reporting in broadcast mode.
SYSRS 012	SWRS 012	Fully Linked	SWRS 012 explicitly handles the mismatch scenario and defines the error flag behavior.
SYSRS 013	SWRS 013, SWRS 014, SWRS 015	Fully Linked	The combination of SWRS 013, SWRS 014, and SWRS 015 satisfies the amplification requirement.
SYSRS 014	SWRS 016	Fully Linked	SWRS 016 directly addresses event timestamping requirements.
SYSRS 015	SWRS 017	Fully Linked	SWRS 017 describes the required `KAC` increment logic.
SYSRS 016	None	Unlinked	No SWRS describes the action of resetting `KAC` upon CRM_FCC_CMD reception.
SYSRS 018	SWRS 020	Fully Linked	SWRS 020 provides complete alignment with memory unlock conditions.
SYSRS 019	SWRS 021	Fully Linked	SWRS 021 aligns with the described memory access and status update scenario.
SYSRS 020	SWRS 022	Fully Linked	SWRS 022 fully satisfies the memory access and status update requirement for broadcast mode.
SYSRS 021	SWRS 023, SWRS 024	Fully Linked	SWRS 023 and SWRS 024 collectively align with the diagnostic retry configurability requirement.

Let me know if additional details or adjustments are needed!



did you address all sysrs?



Let me recheck to ensure all **SYSRS** are addressed. Here's a summary:

SYSRS Addressed:

1. **SYSRS 001**: Fully Linked (SWRS 001)
2. **SYSRS 003**: Unlinked

3. **SYSRS 006:** Fully Linked (SWRS 007)
4. **SYSRS 007:** Fully Linked (SWRS 008)
5. **SYSRS 009:** Fully Linked (SWRS 010)
6. **SYSRS 012:** Fully Linked (SWRS 012)
7. **SYSRS 013:** Fully Linked (SWRS 013, SWRS 014, SWRS 015)
8. **SYSRS 014:** Fully Linked (SWRS 016)
9. **SYSRS 015:** Fully Linked (SWRS 017)
10. **SYSRS 016:** Unlinked
11. **SYSRS 018:** Fully Linked (SWRS 020)
12. **SYSRS 019:** Fully Linked (SWRS 021)
13. **SYSRS 020:** Fully Linked (SWRS 022)
14. **SYSRS 021:** Fully Linked (SWRS 023, SWRS 024)

SYSRS Not Addressed:

I missed reviewing these requirements. Let me address them now:

- **SYSRS 002:** The Sensor IC FW shall have a watchdog to detect FW or HW malfunction by resetting the WDG time in appropriate time within the FTTI.
- **SYSRS 004:** If performing Erase Backup AND If Addressed with the Unicast Command THEN the Sensor IC shall respond with `CRM_RSP 0x0: Report Acknowledgement``.
- **SYSRS 005:** IF the Sensor IC generates more information than possible to store in Event Buffer or Time Series Data Buffer THEN the Sensor IC shall forget the according information.
- **SYSRS 008:** If Performing Memory Access With Set Key AND If Write Operation is Requested AND If Memory Area Is Set Write Accessible THEN the Sensor IC shall set the state of the Memory Area identified by CRM_CMD 0x8 Parameter MemoryArea to the state Locked.
- **SYSRS 010:** If Performing Memory Area Modification AND AFTER reception of CRM_CMD 0x9: Take Data or Send Data THEN the Sensor IC shall cache the CRM_CMD 0x9 Parameter Data to the Data Cache.
- **SYSRS 011:** If Performing Memory Area Modification AND AFTER reception of CRM_CMD 0x9: Take Data or Send Data THEN the Sensor IC shall increment the CRM_CMD 0x8 Parameter StartAddress by 1 word address.
- **SYSRS 017:** If Performing the Standard Path Measurement AND IF performing Stop Ongoing Measurement (Blocked) AND IF the functionality in US-Transducer Control (Non-Modulated Sine Burst) has NOT been fully performed, THEN the Sensor IC shall set `Error: err_burstGenerationStopped = 0x1 ("error")``.

I'll analyze these now and include them in the final table.

Here's the updated analysis table, now addressing all SYSRS:

SYSRS ID	Matched SWRS	Classification	Justification
SYSRS 001	SWRS 001	Fully Linked	SWRS 001 fully describes the action of setting the sampling frequency based on the defined parameters.
SYSRS 002	SWRS 002	Fully Linked	SWRS 002 explicitly describes watchdog functionality for malfunction detection and reset within the FTTI.
SYSRS 003	None	Unlinked	No SWRS provides details on setting <code>CrmStatus`</code> based on CRM_FCC reception.
SYSRS 004	SWRS 004	Fully Linked	SWRS 004 fully aligns with the unicast command and acknowledgement reporting requirements.

SYSRS ID	Matched SWRS	Classification	Justification
SYSRS 005	SWRS 005, SWRS 006	Partially Linked	SWRS 005 and SWRS 006 address event and time-series storage but lack explicit instructions for forgetting overflow data.
SYSRS 006	SWRS 007	Fully Linked	SWRS 007 aligns completely with memory access and lock reporting in unicast mode.
SYSRS 007	SWRS 008	Fully Linked	SWRS 008 aligns with the conditions for setting MemoryArea to locked.
SYSRS 008	SWRS 009	Fully Linked	SWRS 009 describes setting the MemoryArea to locked during write operation with key access.
SYSRS 009	SWRS 010	Fully Linked	SWRS 010 aligns with memory access and lock reporting in broadcast mode.
SYSRS 010	None	Unlinked	No SWRS describes caching the CRM_CMD 0x9 Parameter Data to the Data Cache.
SYSRS 011	None	Unlinked	No SWRS describes incrementing the CRM_CMD 0x8 Parameter StartAddress by 1 word address.
SYSRS 012	SWRS 012	Fully Linked	SWRS 012 explicitly handles the mismatch scenario and defines the error flag behavior.
SYSRS 013	SWRS 013, SWRS 014, SWRS 015	Fully Linked	The combination of SWRS 013, SWRS 014, and SWRS 015 satisfies the amplification requirement.
SYSRS 014	SWRS 016	Fully Linked	SWRS 016 directly addresses event timestamping requirements.
SYSRS 015	SWRS 017	Fully Linked	SWRS 017 describes the required `KAC` increment logic.
SYSRS 016	None	Unlinked	No SWRS describes the action of resetting `KAC` upon CRM_FCC_CMD reception.
SYSRS 017	SWRS 019	Fully Linked	SWRS 019 matches on burst generation error detection during a blocked standard path measurement.
SYSRS 018	SWRS 020	Fully Linked	SWRS 020 provides complete alignment with memory unlock conditions.
SYSRS 019	SWRS 021	Fully Linked	SWRS 021 aligns with the described memory access and status update scenario.
SYSRS 020	SWRS 022	Fully Linked	SWRS 022 fully satisfies the memory access and status update requirement for broadcast mode.
SYSRS 021	SWRS 023, SWRS 024	Fully Linked	SWRS 023 and SWRS 024 collectively align with the diagnostic retry configurability requirement.

Summary of Analysis:

- **Fully Linked:** 15 SYSRS
- **Partially Linked:** 1 SYSRS
- **Unlinked:** 4 SYSRS

Let me know if you'd like further clarification or adjustments!



perfect!



Great! I'm glad it aligns with your expectations. Feel free to reach out if you need further assistance or refinements. 🚀 😊