MMWAVE RadarSS Release Notes

1. RadarSS Firmware

RadarSS firmware is responsible for configuring RF/analog and digital front-end in real-time. It also schedules temperature based calibrations. This enables the mm-Wave front-end to be autonomous and capable of adapting itself to handle temperature and ageing effects, and to enable significant ease-of-use.

Version	Type
2.0.0.15	**Binary**

Note: This is a pre-production release and has undergone limited validation under nominal conditions for nominal device process

1.1 Features and enhancements

- Fix for frame trigger delay with hardware sync in option
- Fix for inter-TX phase jumps when autonomous calibrations are triggered
- Fix for slow synthesizer settling when inter-chirp time is less than 10 µs
- Fix for autonomous periodic calibrations not getting triggered
- Fix for RX signal and image band monitoring
- Fix for random phase jumps in TX loopback monitors across different trials

1.2 Changes in this release (with respect to DFP release 00.09.01.00)

Item type	Key	Description
Bug	AUTORADAR-1403	Fix for jumps in inter-TX phase mismatch due to independent run time TX power calibrations
Bug	AUTORADAR-1400	Fix for TX loopback monitor phase jumps across different trials
Bug	AUTORADAR-1395	Fix for frame trigger delay with hardware sync in option
Bug	AUTORADAR-1448	Update PD LNA gain for different TX backoffs

Bug	AUTORADAR-1351	Fix for slow synthesizer settling if inter-chirp time is less than 10 µs
Bug	AUTORADAR-1349	Fix for autonomous periodic calibrations not triggered due to autonomous calibrations of APLL and synth
Bug	AUTORADAR-1347	Fix for RX signal and image band monitor
Feature	AUTORADAR_REQ-944	Add an option in device configuration API to support other CRC types for async events
Bug	AUTORADAR_REQ-939	Improvement in TX power monitor errors for larger back offs (> 20 dB)

1.3 Known issues

Key	Description
AUTORADAR-906	Chirps from different frequency bands 76-77 GHz and 77-81 GHz should not be mixed in the same frame. This can lead to errors in ADC data capture
MMWAVESYS-25	TX output power beyond 15 dB back off is not very accurate. Error can be as high as 6-8 dB