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(D)AARC5XX Release Package 2023 – Summary

Host FW:		DAARC500 **11030-04-E**	AARC510 **11031-03-E**	AARC52 **11122-03-E**	DAS52 **11164-01-C**
1	Increased (2X) the number of waveforms that may be monitored in real-time through the graphic display function. Waveforms can now be paired in each of four recording areas – overlapping traces are very useful, for example, to compare compensated and uncompensated signals. [Sec. 3.4.5]	●	●	●	●
2	Added NanoRadar's NRA24 radar altimeter to the list of ancillary sensors supported as 'custom devices' for enhanced real-time monitoring. [Sec. L.5 (510, 52), O (DAARC)]	●	●	●	●
3	Newly introduced *magnetometer quality measures* qualify the overall soundness of raw total-field signals. When monitored on the numerical display, color coding readily alerts the operator of signal loss or excessive noise levels. [Table 3.3]	●	●	●	●
4	The firmware now includes an embedded mechanism to automatically install a customized version of one of the Front-End transfer functions available to target specific aircraft characteristics/ requirements ('Custom1'). [Application Note DAARC5XX-032]	●	●	●	●
5	Receive buffers used for acquisition of streaming TCP/IP data have been extended (~2X) to accommodate the timing and packet size of recently introduced ancillary sensors of interest.	●	●	●	●
6	Parameters for the 'Custom2' Front-End transfer function are now included in the log file.	●	●	●	●
7	A pulse-train output is now available at J30 (AARC510 HW Rev. ≥ 2.20, AARC52/DAS52 HW Rev. ≥ 3.20). Allows synchronization of external equipment to the system's timing. User-defined frequency, as a submultiple of the *host sampling rate*. [Sec. 2.3.9 (52), 2.3.11 (510), 3.4.1.1]		●	●	●
8	Retain correct frequency-axis scaling for PSD, after 80- or 160-Hz Test Mode.	●			
9	Automatically enable/disable link to MAD dialog.			●	

		DAARC500 11030-04-E	AARC510 11031-03-E	AARC52 11122-03-E	DAS52 11164-01-C
10	Minor/cosmetic: Maximum index for host sampling rate in AARC52 and DAS52, in PFC functions, is now 4 (i.e., 160 Hz).			•	•
11	Minor/cosmetic: The monitoring of GPS data and the custom device are allowed at access level 0.	•	•	•	•

Front End FW:

RMS1877-05-C

a. Replaced the '3.2-Hz' transfer function with an improved version. It has essentially the same –3dB bandwidth (3.2 Hz), but much better attenuation in the stop-band and in particular at critical frequencies (e.g., 50, 60 Hz). Ideal for Front-End sampling rates F_S = 640 or 1280 Hz, but also scales well for F_S = 800 Hz. It has a 344-ms length (compared to 200-ms of the original version).
[Sec. 4.3]

(D)AARC5XX Support Software – Oct/2023

ExportDAARC

v3.8 – *ExportEth* and *ExportSerial*: Support protocols/interpretation for NRA24 radar altimeter.

SeeInDAARC

v2.40 – Adds NRA24 Radar to custom device parameters (DAARC500, AARC510, AARC52).
– Supports up to 8 traces for graphic display.
– Supports pulse-train output (SYNC0) in AARC510, AARC52.
– Supports Mag Signal Quality Measures (DAARC500, AARC510, AARC52).

Console-Mode Programs

ExportMag
v3.0 – Unchanged.

ExportAnalog
v1.6 – Unchanged.

ExportSerial
v2.9 – Unchanged.

ExportEth
v1.0 – Unchanged.

MergeDAARC
v2.0 – Unchanged.

ExportLog
v1.3 – Unchanged.