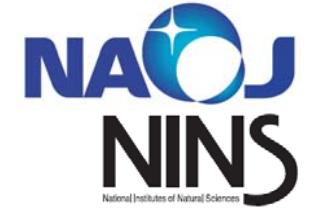




ACA Correlator CDR



Operation and Maintenance of ACA Correlator

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1. Definition of LRU



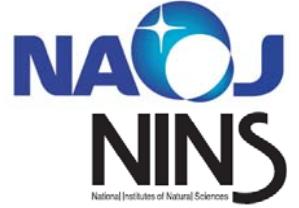
Latest ALMA Operation Plan (ALMA-00.00.00.00-002-B-PLA) clearly define that...

An LRU is any assembly (or possible subassembly) that can be exchanged with a spare at the AOS.

=> In case of ACA Correlator, **modules** are **LRU** and cards are NOT **LRU**, although they are the unit to be exchanged in OSF with a spare. *We will correct the document.*



2. Statistical minimum number of spare (simple estimation)



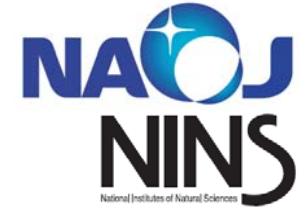
Unit	Worksite	N ^{op}	Estimated MTBF/ One unit (Hours)	MTTR (Hours)	Spares Minimum	Spares Recommended (see Table 6-1 in [AD01-Version A3])
DFP module	OSF	32	50485	1080(*1)	0.68	2
CIP module	OSF	16	62799	1080(*1)	0.28	1
FFT card	NA/EU/JA	256	486452	4320(*2)	2.3	7
DTS-R card	NA/EU/JA	64	757174	4320(*2)	0.37	1
CIP card	NA/EU/JA	128	609645	4320(*2)	0.91	3

(*1) 45 day = 1.5 month

(*2) 4320 hours = 6 month for remote repair



3. Tools for testing and maintenance



Planned maintenance tools delivered to ALMA
(operation & maintenance plan section 4.3.2
and maintenance manual section 4.2);

- **one PC installed diagnosis and maintenance programs**
- **LAN and serial cables**
- **(spare modules)**