

General Update

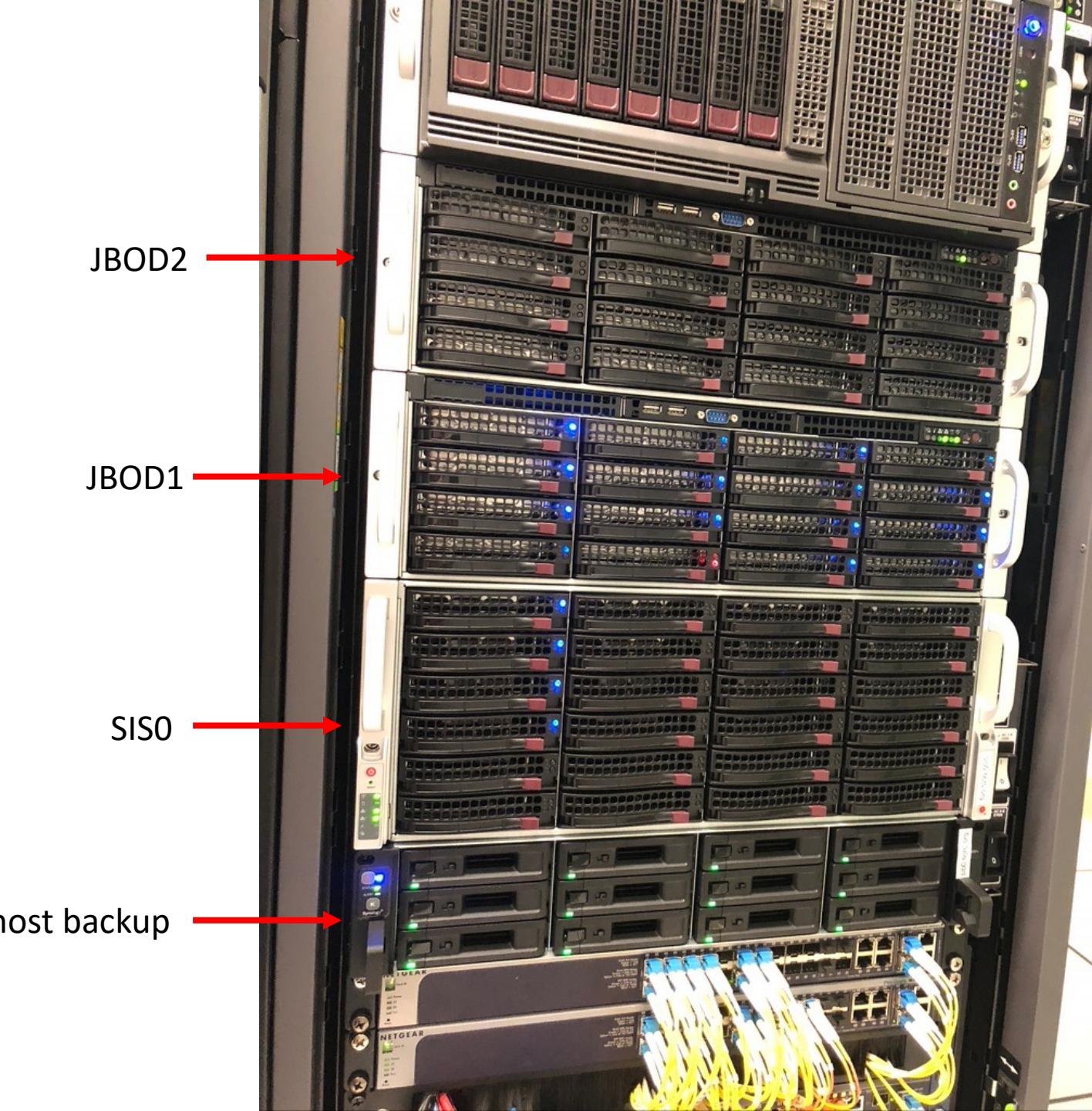
- SPR
 - AC replacement week of 16th of August
 - New Storage JBODs installed in rack
- Antonio Feed
 - PY-018 and PY-001 for repair at Minex
 - Update on open POs from Minex
- Other
 - Antenna control box retrofit
 - Attemplifier modules construction
 - Wire harness construction for Antonio Feeds
- Weather Station PSU and monitor design
- Documentation:
 - Uploaded memos to GitHub
 - In process of writing up Attemplifier and RFSOC design

JBOD extension:

- Installed 2 JBODs with 16x 16 TB drives
- Existing storage server has 36x 16TB drives
- Current configuration on SISO:
 - 2x 200TB RAID6 with 2 hot spare each
- Planned configuration:
 - 1x 435TB RAID6 (32 disks JBOD)
 - 1x 464TB RAID6 (34 disks SISO)
 - 2x Global Hot Spare

Planned tests before implementation:

- How does RAID controller behaves if one or both JBOD are powered down



AC Replacement:

- Preparation for removal of old AC



Attemplifier:

- 16 modules in production



- Antonio Feed Overview
 - 21 Antennas fully operational
 - 17 / 19 Antonio Feeds

Antonio Feed:

- Minex outstanding POs overview:

6	Each	Pyramid Assembly, solder up machined parts
24	Each	Arm Assembly, single arm (4 required per pyramid)

3	Each	Fabric Cover for Glass Dome
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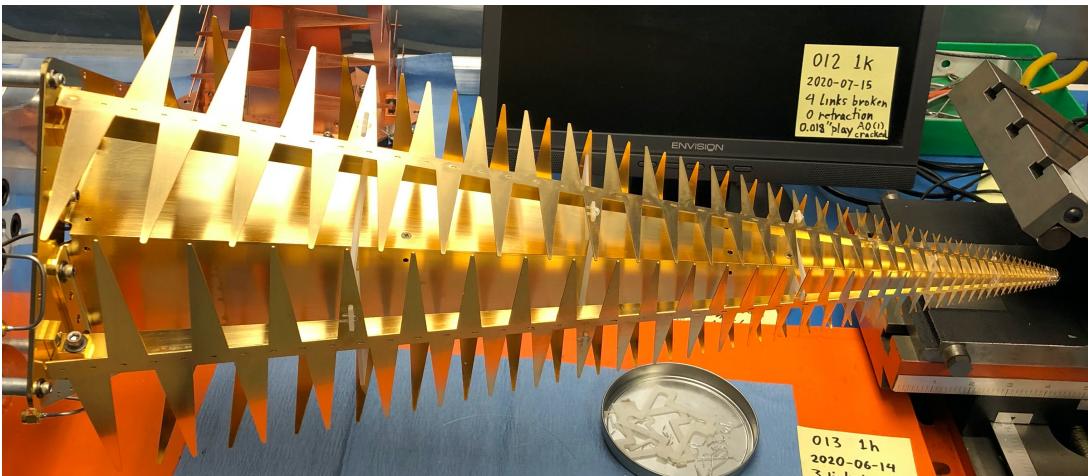
20	Each	Machine flat on cryo-cooler for temp. sensor mount
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1	Each	Repair feed pyramid 018 and (001)
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Antonio Feed:

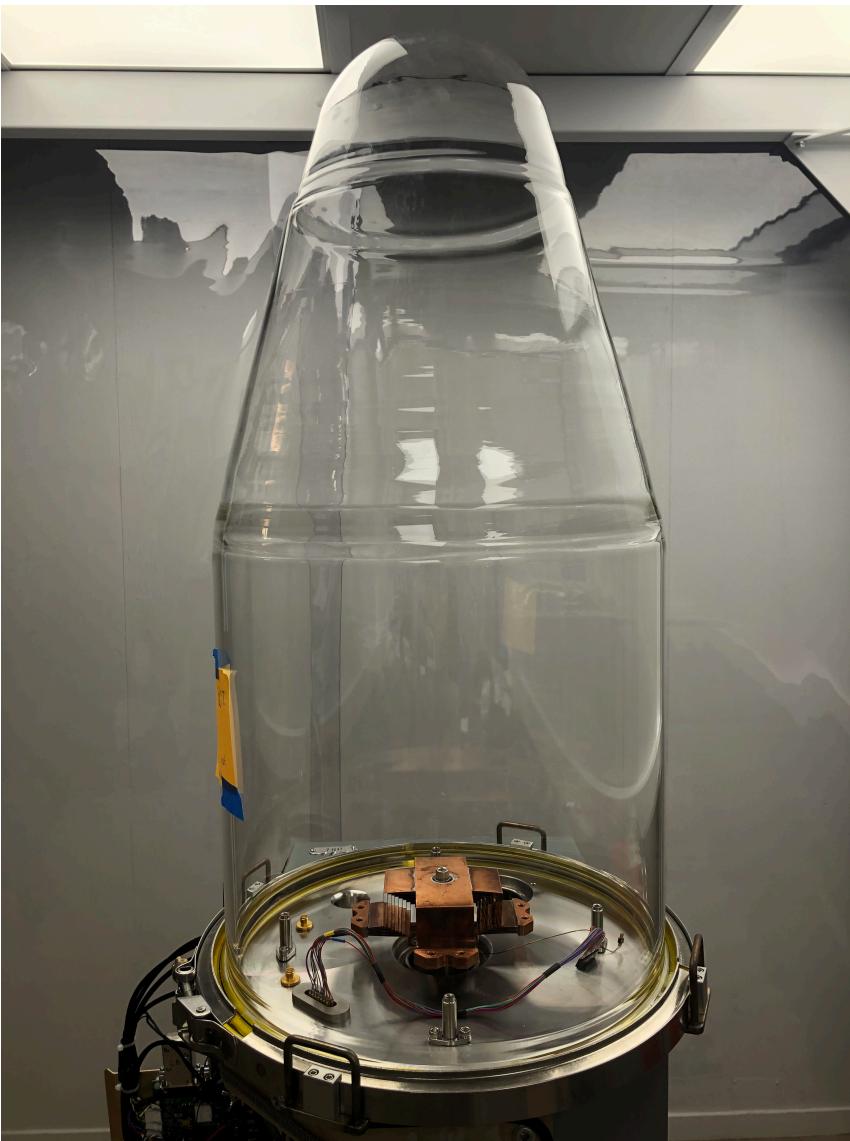
- Log-Periodic Pyramid:



Quantity Required	Quantity Existing	Unit	Description
24	0	Each	Pyramid Assembly
96	0	Each	Arm Assembly, single arm (4 required per pyramid)
24	0	Each	LNA Module assembly with conditioned coaxial cables
24	0	Each	Feed assembly and tip link installation
24	0	Each	LNA Module parts
24	0	Each	Small components such as: screws, rexolite standoffs, etc.
120	0	ft	UT-034-95 Coaxial cable
48	0	Each	Cable Assembly 085 Stainless Length 19.5" Connectors: SMA Male-SMA Male
24	0	Each	Temperature Sensor diode located at LNA
50	0	Each	1-15 GHz cryogenic amplifier IAF LNA
48	0	Each	9-pin male Nano-D pigtail 18
24	0	Each	Gold-Plating

Antonio Feed:

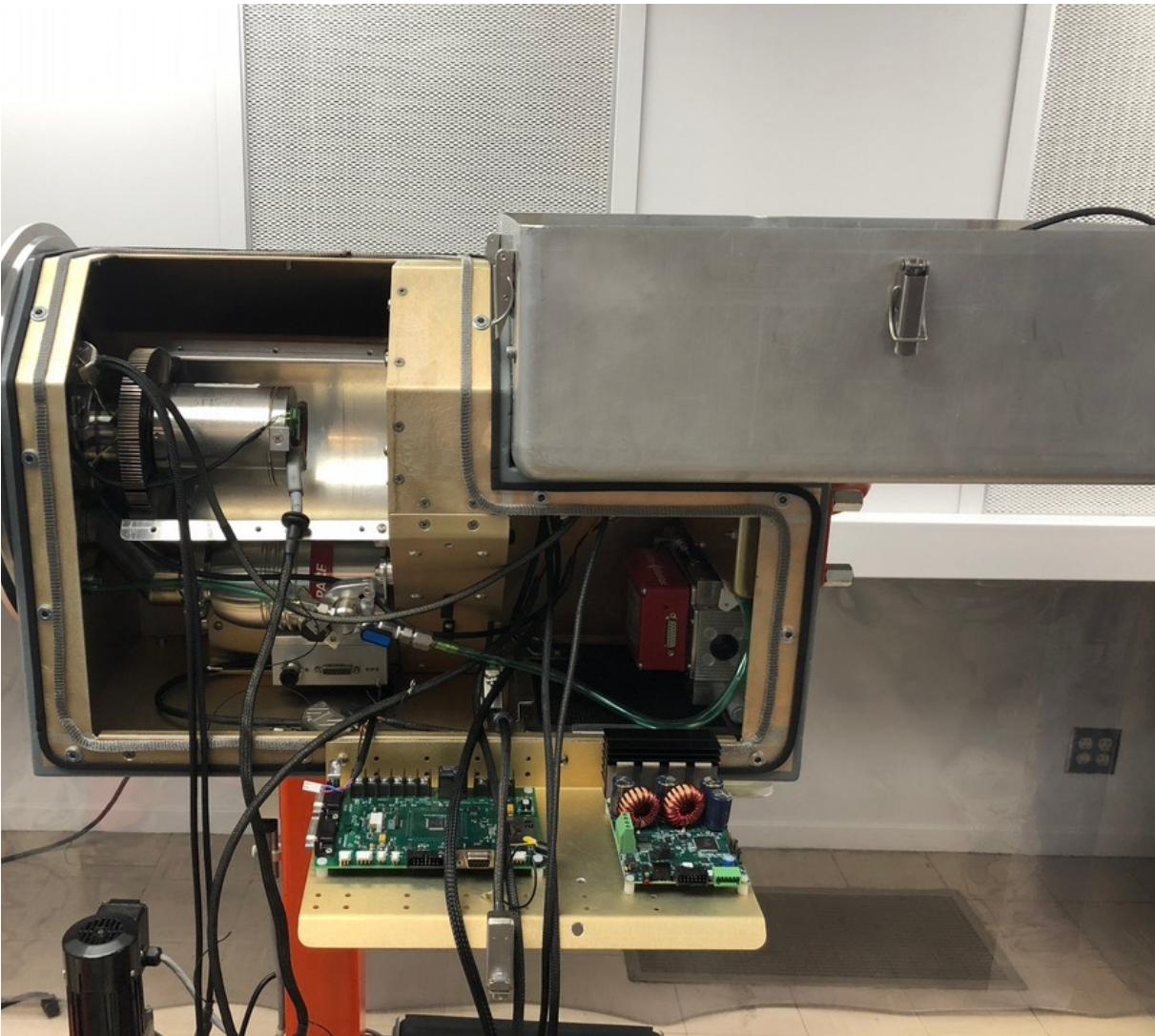
- Vacuum Enclosure:



Quantity Required	Quantity Existing	Unit	Description
24	0	Each	Base Plate Assembly (new design)
96	0	Each	Titanium standoffs including vented screws
24	0	Each	Thermal flex link (cryo-cooler to pyramid)
24	0	Each	15pin D-sub hermetic feed through including wire assembly
48	0	Each	SMA hermetic feedthroughs
100	0	Each	O-rings
24	0	Each	Glass Radome 300MM OD X 610MM
24	0	Each	Clamping ring for glass dome including mounting brackets for fabric cover
24	0	Each	Fabric Cover Assembly
24	0	Each	Lens Dome Element for glass dome.

Antonio Feed:

- Feed Base:



Quantity Required	Quantity Existing	Unit	Description
24	0	Each	Main enclosure
24	0	Each	Bottom EMI mesh inside
24	0	Each	Bottom filter outside
24	0	Each	24V / 48V power inlet, including filter
24	0	Each	Control board mounting plate
24	0	Each	Turbo pump mounting plate (bottom)
24	0	Each	Turbo pump spacer for mounting
24	0	Each	Cryo-cooler cover (lower and upper)
24	0	Each	Temperature sensor mount
24	0	Each	Fan mounting bracket + screws
24	0	Each	PAX box enclosure mounted
24	0	Each	Milspec connector in pax box case
24	0	Each	Front face machined for vacuum base plate
24	0	Each	Front support bracket for mounting
23	1	Each	Accelerometer case
4	20	Each	Feed Control PCB
3	21	Each	Sunpower GT Gen II Cryo Controller
3	21	Each	Sunpower CryoTel GT Cryocooler
3	21	Each	Sunpower temp. sensor RTD Assembly
3	21	Each	Sunpower Cooler Power Cable - GT
24	0	Each	Pfeiffer Diaphragm Pump MVP 010-3 DC
4	20	Each	Pfeiffer Turbo Pump Hi Pace 80/TC 110
24	0	Each	Vacuum Fittings NW-10
24	0	Each	Vacuum Fittings NW-40
24	0	Each	Vacuum Fittings NW-50
24	0	Each	Clamp NW-10
24	0	Each	Clamp NW-40
24	0	Each	Clamp NW-50
72	0	ft	1/4" Fre-Thane® 95A-152 Tubing
48	0	ft	1/8" Fre-Thane® 95A-169 Tubing
24	0	Each	Other vacuum parts: valve, connectors, etc.
0	24	Each	Wire harness retrofitted
24	0	Each	Temperature sensors A1-A6
4	20	Each	DC fan

ATA Signal Path:

- 33 available
- 12 in need of repair
- Total 45 units

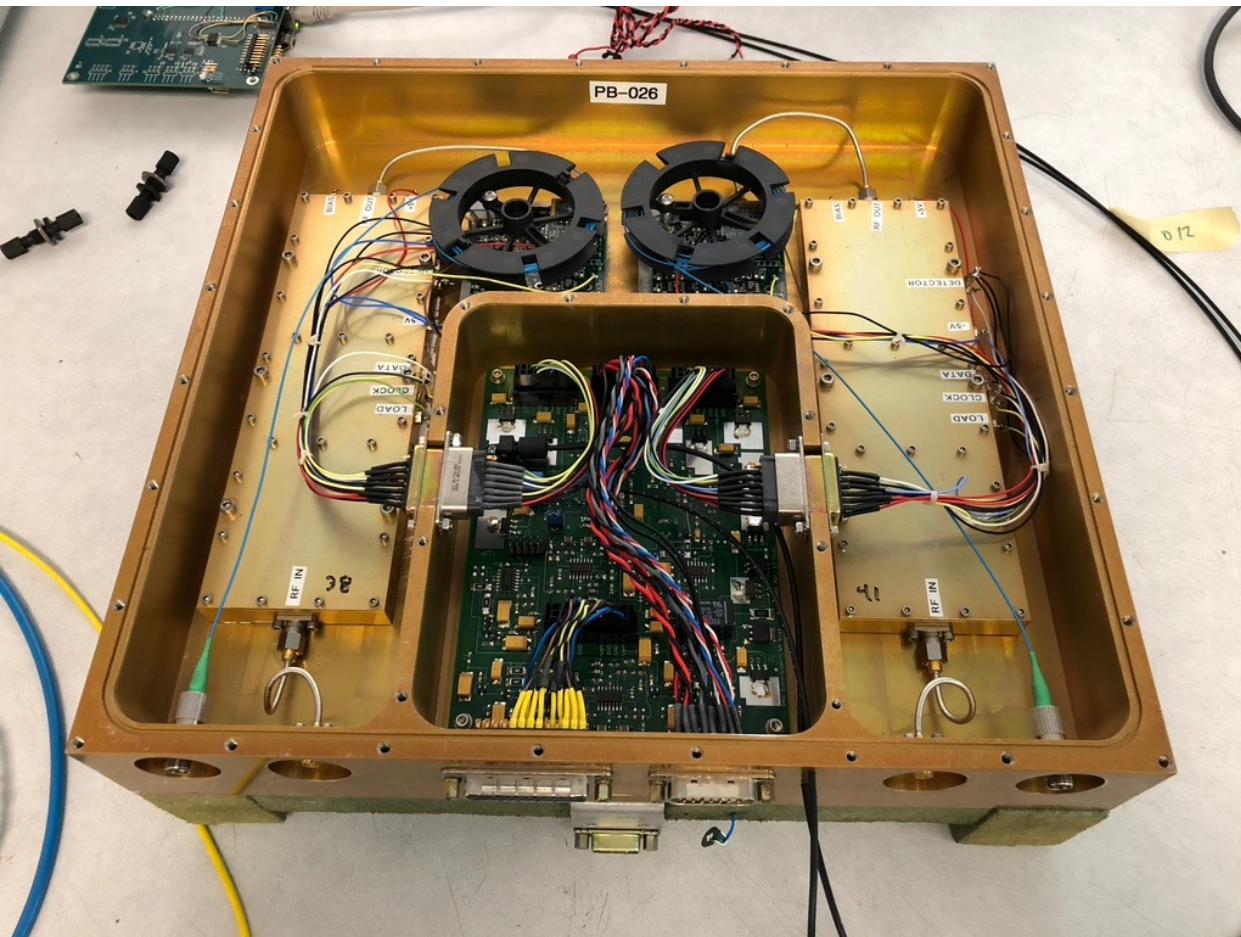


Table 4: PAX Module Component List

Quantity Required	Quantity Existing	Unit	Description
24	0	Each	Post Amplifier Module (PAM)
50	0	Each	Control PCB
6	0	Each	Fiber Transmitter
1	0	Each	Temperature stabilization (peltier cooler)
1	0	Each	D-Sub connectors and screws

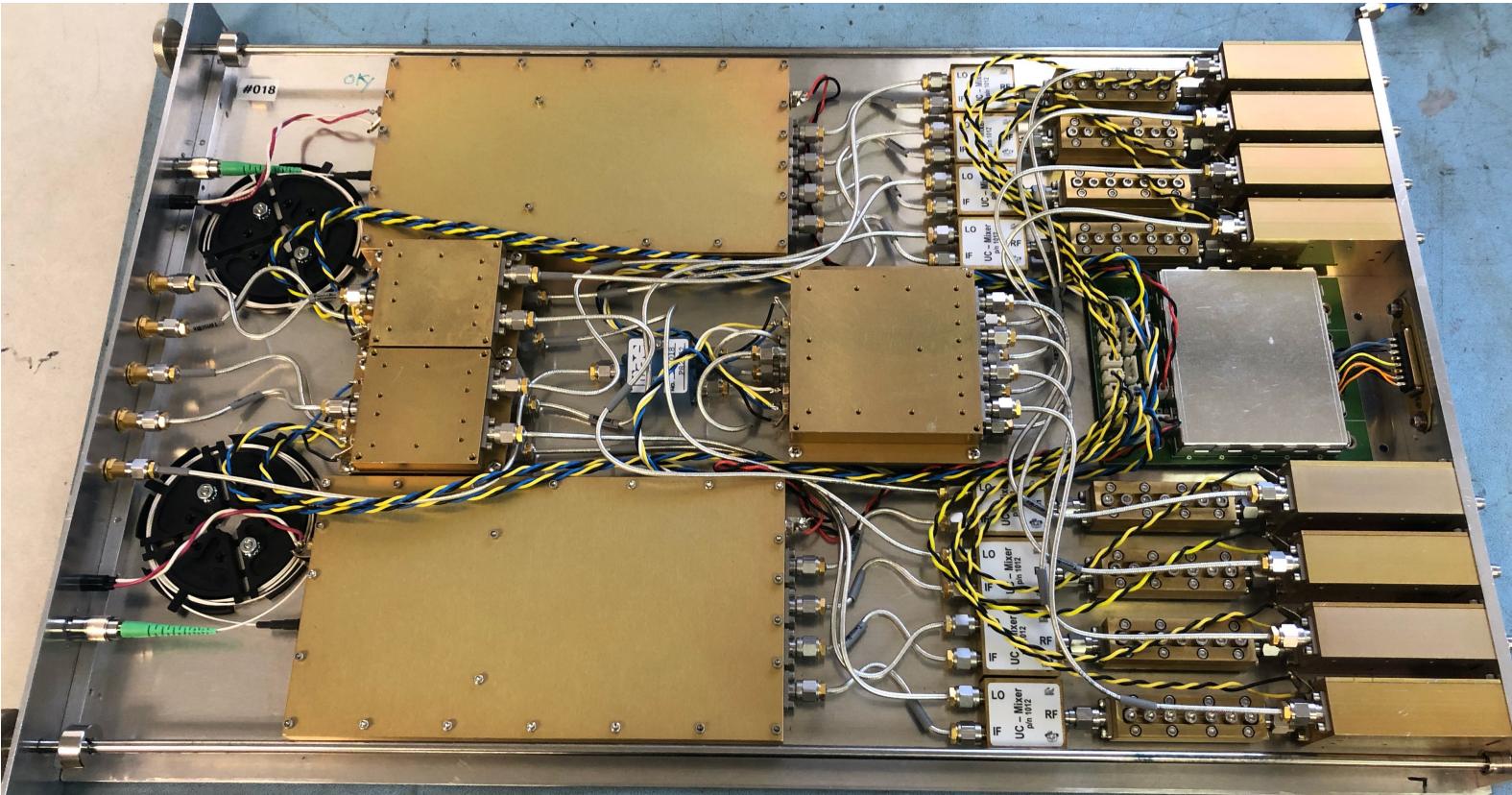


ATA Signal Path:

- 36 available
- 7 need testing
- 3 need repair
- Total of 46

Table 5: RFCB Module Component List

Quantity Required	Quantity Existing	Unit	Description
4	0	Each	LO distribution module
4	0	Each	Up-converting mixer module
3	0	Each	Band-pass filter
5	0	Each	Down-converting mixer module



Antenna Parts:

- Retrofit PSU

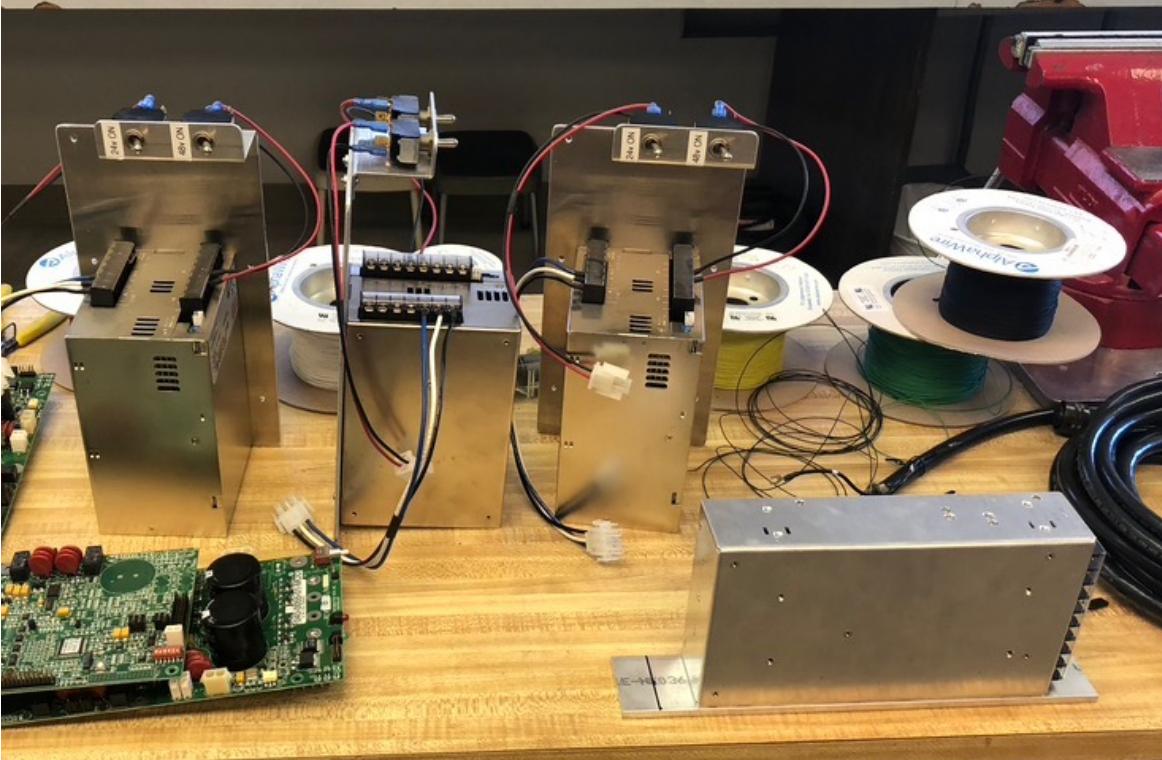


Table 6: Antenna Retrofit Component List.

Quantity Required	Quantity Existing	Unit	Description
24	0	Each	Cryo-Cooler 48 V Supply
24	0	Each	Feed 24 V Supply
14	10	Each	Circular MIL Spec Connector
0	50	Each	Standoff, Aluminum, 8-32 UNC
10	14	Each	Cable Gland, 1/2" NPT, 0.375 "
0	100	Each	Quick Disconnect Terminal
0	48	Each	Toggle Switch, On-Off, SPST
0	100	ft	LAPP ÖLFLEX® Shielded Cable

Antenna Parts:

- Spare parts

Table 7: Spare Antenna Parts

Quantity Required	Quantity Existing	Unit	Description
1	2	Each	Antenna Control Box
2	1	Each	Antenna Drive Box
3	0	Each	Elevation Drive Unit
3	0	Each	Azimuth Drive Gear Box
6	0	Each	Servo motors for El and Az drive
8	0	Each	Raydome / Sunbrella Cover



Next Steps:

- Finalizing part list and budget
- Testing existing LNAs
- Build 6 more pyramids from scratch, as spare parts
- Build prototype of new PAM

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 AlexanderPollak	added memos	f72d93c	2 minutes ago	 History
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 2019-10 Antenna Tsys Measurement	added memos		2 minutes ago	
 2020-02 PAX Power Level Control Software	added memos		2 minutes ago	
 2020-09 ATA Dynamic Range Report	added memos		2 minutes ago	
 2020-10 RFCB-Measurement Report	added memos		2 minutes ago	
 2021-03 Interface & Rate Sheet	added memos		2 minutes ago	
 2021-04 Pointing-Calibration	added memos		2 minutes ago	
 2021-07 Antonio Feed Buildout	added memos		2 minutes ago	
 .DS_Store	added memos		2 minutes ago	
 Readme.md	Update Readme.md		10 months ago	