Spex2 Hardware Block Diagram (Animatics and Steppers Motors)

1. Qth lamp
2. Inc Lamp
3. IR source
4. Argon Lamp

2 smart motors
Rotator
Grating

6 Stepper Motors
CalMir slide
Dichroic Turret
OS Filter Wheel
Slit Wheel
Guider Filter Wheel
Array focus slide
(ISM M2-2232-D)

H2RG ARC Controller

Aladdin ARC Controller

ARC PCIe Fiber interface

PC Parallel Port (timestamps shutter)

Bigdog PC
In Computer rm

Guidedog PC
In computer rm

Little dog computer (runs motor code)

Temperature Sensor/
Heater

7 HE sensors
DIT, OSF, ROT, SLIT, GRAT, GFLT, AFOC

Call Mir Limits
2 TTL

Comparator board

2 TTL

Digital IO

AC Power

AC power cntl
WTI IPS-800

IO Unit
RIO-47122

Serial Port Server
Digiport TS 16

3 Temperature controllers
Tc330
Tc330
Tc208

Stepper motor drivers
(ISM IM483I)

Controller power supplies
(2 each)

Stepper motor Controller
DMC-2143
(4 Axis per controller)

Controller power supplies
(2 each)

Fibers from TCS Rm to CASS

Fiber to TTL

Fiber to TTL

Fiber to TTL

Fiber to TTL

Fiber to TTL

ARC PCle Fiber interface

ARC PCle Fiber interface

PC Parallel Port (timestamps shutter)

PC parallel port (timestamps shutter)

In cool racks

Irtf Lan

Irtf KVM

Irtf Lan

Irtf KVM

Irtf Lan

Irtf KVM

Irtf Lan

Irtf KVM

Notes:

= new spex2 hardware

= reused old spex hardware

= IRTF Facility
Spex2 Mechanical Controller Interface illustration

- Calmir Linear stage
- Calmir motor
- Stepper driver
- Pos Limit
- Neg Limit
- Step
- Dir
- HE sensor
- Dit Wheel
- Dit motor
- Stepper driver
- OSF is similar to Dit
- Slit is similar to Dit
- GFlt is similar to Dit
- A/F is similar to Dit
- A/D
- CC
- Home
- DI
- Step
- Dir
- Smart Motor
- Rotator
- A/F is similar to Rotator
- A/F sensor
- A/F linear stage
- A/F motor
- Stepper driver
- TC330
- TC330
- TC208
- A/F
- CC
- Pos Limit
- Neg Limit
- Step
- Dir
- HE condition/Compairator board
- 4 AC Outlet
- QTH
- INCAD
- ARGON
- WTI IPS-800
- Remote Power Switch
- 8 outlets
- DMC-2183
- 8 axis stepper motor controller
- +limit
- -limit
- Step
- Dir
- Digit Input
- IO Unit
- RIO-47122
- 8 ch AI
- 16 CH DI
- 16 CH DO
- PortServer TS16
- 16 port RS-232 server.