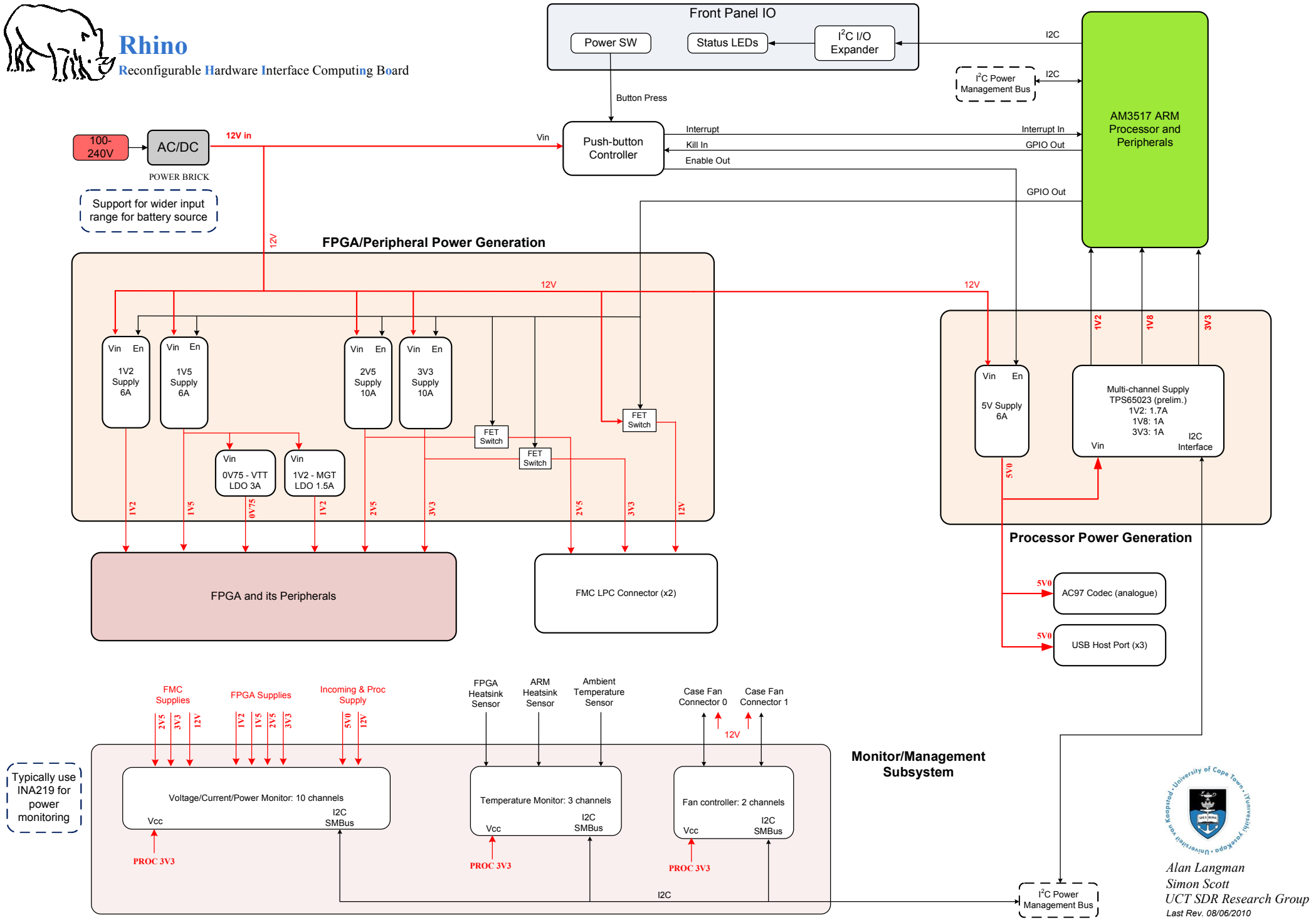

Rhino
Reconfigurable Hardware Interface Computing Board
Front Panel IO
Power SW
Status LEDs
I2C I/O Expander
I2C
I2C Power Management Bus
I2C
AM3517 ARM Processor and Peripherals
Button Press
100-240V
AC/DC
POWER BRICK
12V in
Vin
Push-button Controller
Interrupt
Kill In
Enable Out
Interrupt In
GPIO Out
GPIO Out
Support for wider input range for battery source
12V
FPGA/Peripheral Power Generation
12V
12V
Vin En
1V2 Supply 6A
Vin En
1V5 Supply 6A
Vin En
2V5 Supply 10A
Vin En
3V3 Supply 10A
FET Switch
FET Switch
FET Switch
Vin
0V75 - VTT LDO 3A
Vin
1V2 - MGT LDO 1.5A
1V2
1V5
0V75
1V2
2V5
3V3
2V5
3V3
12V
FPGA and its Peripherals
FMC LPC Connector (x2)
1V2
1V8
3V3
Vin En
5V Supply 6A
Multi-channel Supply TPS65023 (prelim.)
1V2: 1.7A
1V8: 1A
3V3: 1A
Vin
I2C Interface
5V0
Processor Power Generation
5V0
AC97 Codec (analogue)
5V0
USB Host Port (x3)
FMC Supplies
2V5
3V3
12V
FPGA Supplies
1V2
1V5
2V5
3V3
Incoming & Proc Supply
5V0
12V
FPGA Heatsink Sensor
ARM Heatsink Sensor
Ambient Temperature Sensor
Case Fan Connector 0
Case Fan Connector 1
12V
Typically use INA219 for power monitoring
Voltage/Current/Power Monitor: 10 channels
Vcc
I2C SMBus
PROC 3V3
Temperature Monitor: 3 channels
Vcc
I2C SMBus
PROC 3V3
Fan controller: 2 channels
Vcc
I2C SMBus
PROC 3V3
I2C
Monitor/Management Subsystem
I2C Power Management Bus
Alan Langman
Simon Scott
UCT SDR Research Group
Last Rev. 08/06/2010