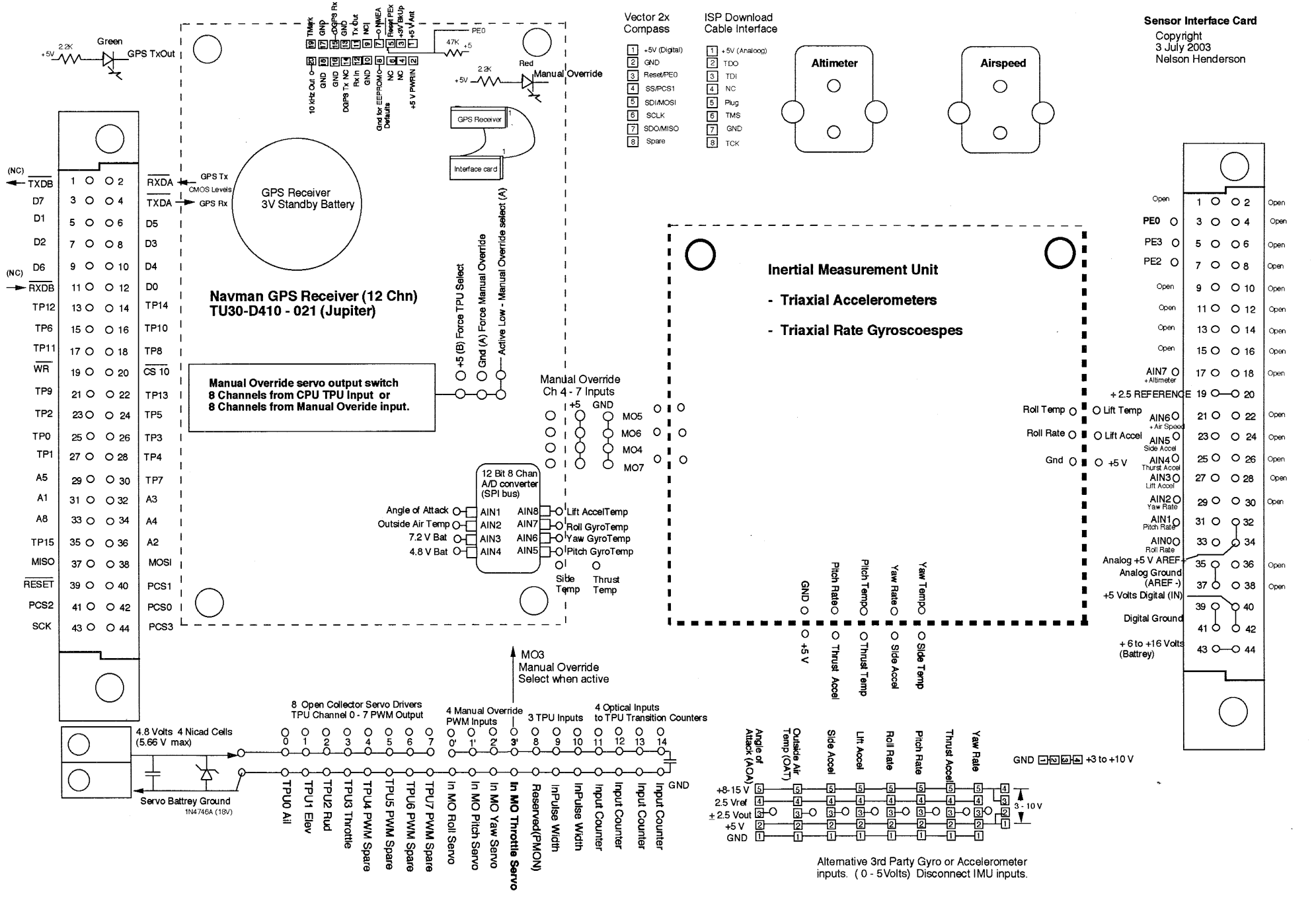
Sensor Interface Card
Copyright
3 July 2003
Nelson Henderson
Navman GPS Receiver (12 Chn)
TU30-D410 - 021 (Jupiter)
GPS Receiver
3V Standby Battery
Manual Override servo output switch
8 Channels from CPU TPU Input or
8 Channels from Manual Overide input.
Manual Override
Ch 4 - 7 Inputs
12 Bit 8 Chan
A/D converter
(SPI bus)
Angle of Attack
Outside Air Temp
7.2 V Bat
4.8 V Bat
Lift AccelTemp
Roll GyroTemp
Yaw GyroTemp
Pitch GyroTemp
Side Temp
Thrust Temp
Vector 2x
Compass
ISP Download
Cable Interface
Altimeter
Airspeed
Inertial Measurement Unit
- Triaxial Accelerometers
- Triaxial Rate Gyroscoespes
Roll Temp
Roll Rate
Gnd
Lift Temp
Lift Accel
+5 V
GND
Pitch Rate
Pitch Temp
Yaw Rate
Yaw Temp
Thrust Accel
Thrust Temp
Side Accel
Side Temp
Green
GPS TxOut
Manual Override
Red
GPS Tx
CMOS Levels
GPS Rx
+5 (B) Force TPU Select
Gnd (A) Force Manual Override
Active Low - Manual Override select (A)
MO3
Manual Override
Select when active
8 Open Collector Servo Drivers
TPU Channel 0 - 7 PWM Output
4 Manual Override
PWM Inputs
3 TPU Inputs
4 Optical Inputs
to TPU Transition Counters
4.8 Volts 4 Nicad Cells
(5.66 V max)
Servo Battrey Ground
1N4746A (18V)
TPU0 Ail
TPU1 Elev
TPU2 Rud
TPU3 Throttle
TPU4 PWM Spare
TPU5 PWM Spare
TPU6 PWM Spare
TPU7 PWM Spare
In MO Roll Servo
In MO Pitch Servo
In MO Yaw Servo
In MO Throttle Servo
Reserved(PMON)
InPulse Width
InPulse Width
Input Counter
Input Counter
Input Counter
Input Counter
GND
Angle of Attack (AOA)
Outside Air Temp (OAT)
Side Accel
Lift Accel
Roll Rate
Pitch Rate
Thrust Accel
Yaw Rate
+8-15 V
2.5 Vref
± 2.5 Vout
+5 V
GND
3 - 10 V
GND +3 to +10 V
Alternative 3rd Party Gyro or Accelerometer
inputs. (0 - 5Volts) Disconnect IMU inputs.
+2.5 REFERENCE
AIN7 +Altimeter
AIN6 +Air Speed
AIN5 Side Accel
AIN4 Thurst Accel
AIN3 Lift Accel
AIN2 Yaw Rate
AIN1 Pitch Rate
AIN0 Roll Rate
Analog +5 V AREF
Analog Ground (AREF -)
+5 Volts Digital (IN)
Digital Ground
+ 6 to +16 Volts (Battrey)
TXDB
D7
D1
D2
D6
RXDB
TP12
TP6
TP11
WR
TP9
TP2
TP0
TP1
A5
A1
A8
TP15
MISO
RESET
PCS2
SCK
RXDA
TXDA
D5
D3
D4
D0
TP14
TP10
TP8
CS 10
TP13
TP5
TP3
TP4
TP7
A3
A4
A2
MOSI
PCS1
PCS0
PCS3