

绿洲项目预备的设计复查 UWAA 空间设计

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控制. 2 RS232 港口将使用为了红外线的和 crosslink 为了传达在中间 DMS 和 DSS. 1 的 14 类似物输出将使用为了全身盘绕控制. 告密者模型 8 支持一直到 1 meg 的记忆在板上哪个是充分的记忆缓冲器为了传感器数据那将是送从 DMS 到 DSS 为了播送彻底地.

4.2.2 网能力消费

DSS: 1.5 瓦特 – 这包括估计为了通信管理员.

DMS: 1.7 瓦特 – 这包括估计为了通信管理员.

4.2.3 网计算机系统块

DSS: 0.124 公斤 – 包括通信管理员估计

DMS: 0.114 公斤 – 包括通信管理员估计

4.2.4 红外线的的数据链环

两者 DMS 和 DSS 将使用一样红外线的收发器.

IBM31T38JS 低-能力综合的红外线的收发器

能力消费

2mA @ 2.7 V

3.3mA @ 5.25 V

维: H 4.0 毫米 X D 4.8 毫米 X L 9.6 毫米

的有能力的传输一直到 4Mb/s 那数据比率的然而我们将唯一的需要分数.

山脉是 ~1m

4.2.5 记忆

4.2.5.1 DSS

靴记忆

类型: 闪光 – 闪光是类型 EPROM (可消除的可设计的只读记忆) 一般使用在基本输入输出系统或碎片的靴记忆.

容量: 512K – 典型的靴程序是周围 64K. 512K 应该是足够的到句柄无论我们需要和它来标准有 Aengine.

位置: Aengine 可选择的 16 小块闪光公羊查找在 microcontroller 木板.

程序记忆

类型: SRAM – 静态公羊是类型随机存储器那需要没有能力到维持. 它能是读从和书写到, 许多的加快比更多的共同的打兰, 然而它是更多的花费的.

容量: 512K

位置: Aengine 来标准有 512K 的 SRAM.

数据记忆

类型: 紧凑的闪光 (闪光纸牌)

容量: 100MB – Aengine 将支持一直到 420MB 紧凑的闪光的.

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control. The 2 RS232 ports will be used for the infrared and crosslink for communication between the DMS and the

DSS. 1 of the 14 analog outputs will be used for EM coil control. The Tattletale model 8 supports up to 1 meg of

memory onboard which is sufficient memory buffer for the sensor data that will be sent from the DMS to the DSS for

transmission to the ground.

4.2.2 Net Power Consumption

DSS: 1.5 Watts – this include estimates for communications controllers.

DMS: 1.7 Watts – this includes estimates for communications controllers.

4.2.3 Net Computer System Mass

DSS: 0.124 Kg – including communications controller estimates

DMS: 0.114 Kg – including communications controller estimates

4.2.4 Infrared Data Link

Both the DMS and the DSS will use the same infrared transceiver.

IBM31T38JS Low-Power Integrated Infrared Transceiver

Power consumption

2mA @ 2.7 V

3.3mA @ 5.25 V

Dimensions: H 4.0 mm X D 4.8 mm X L 9.6 mm

Capable of transmitting up to 4Mb/s however we will only need a fraction of that data rate.

Range is ~1m

4.2.5 Memory

4.2.5.1 DSS

Boot memory

Type : Flash – Flash is a type of EPROM (Erasable Programmable Read Only Memory) commonly used in the BIOS or

Boot memory of chips.

Capacity: 512K – Typical boot programs are around 64K. 512K should be enough to handle whatever we need and it

comes standard with the Aengine.

Location: The Aengine has optional 16 bit FLASH RAM located on the microcontroller board.

Program memory

Type : SRAM – Static RAM is a type of Random Access Memory that requires no power to maintain. It can be read

from and written to, much faster than the more common DRAM, however it is more expensive.

Capacity: 512K

Location: The Aengine comes standard with 512K of SRAM.

Data memory

Type : Compact Flash (Flash Card)

Capacity: 100MB – The Aengine will support up to 420MB of compact flash.