Erebus Labs

STEM Sensor Block Diagrams

date 1/13/2014

Revision 1.0

Base Station Block Diagram

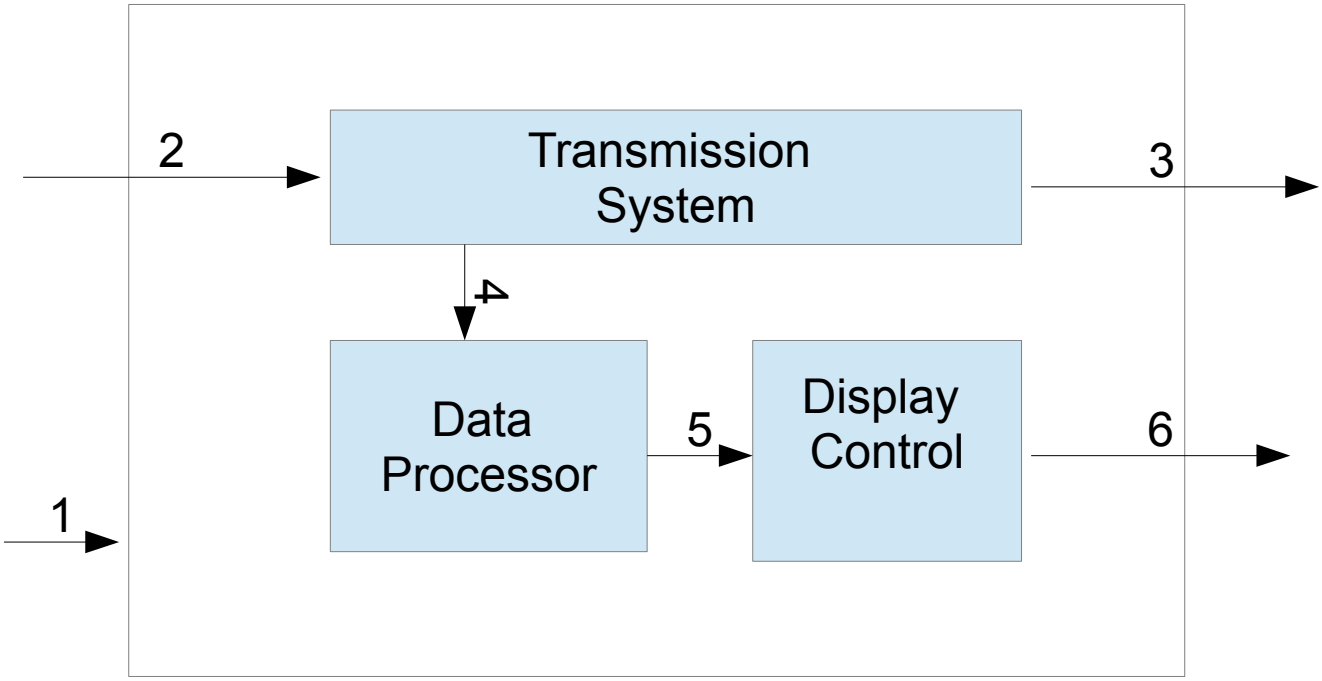

Table 1: Base Station Signal definition

Signal Number	Signal Definition
1	Power Supply: this will be defined with a after a wired or wireless system, but should not exceed logic level needs of 2.3-5 volts
2	Raw Data In: data from remote station is received.
3	Send Wake/Tx Signal Sent: signal sent to remote sensing station to activate it
4	Raw Data Send: All polled data is sent to the processor and changed to end user information.
5	End User Information is Sent: data collected is adjusted to represent the item in the environment being sensed (i.e temperature, CO_2 , ect.)
6*	Images and Information is Sent to Display: any graphs, charts, or tables are sent to the display

Note 6: The display controller takes converted information from the sensor and produces any graphs, charts or tables specific to the type of sensor being used.*

Remote Sensing Station Block Diagram

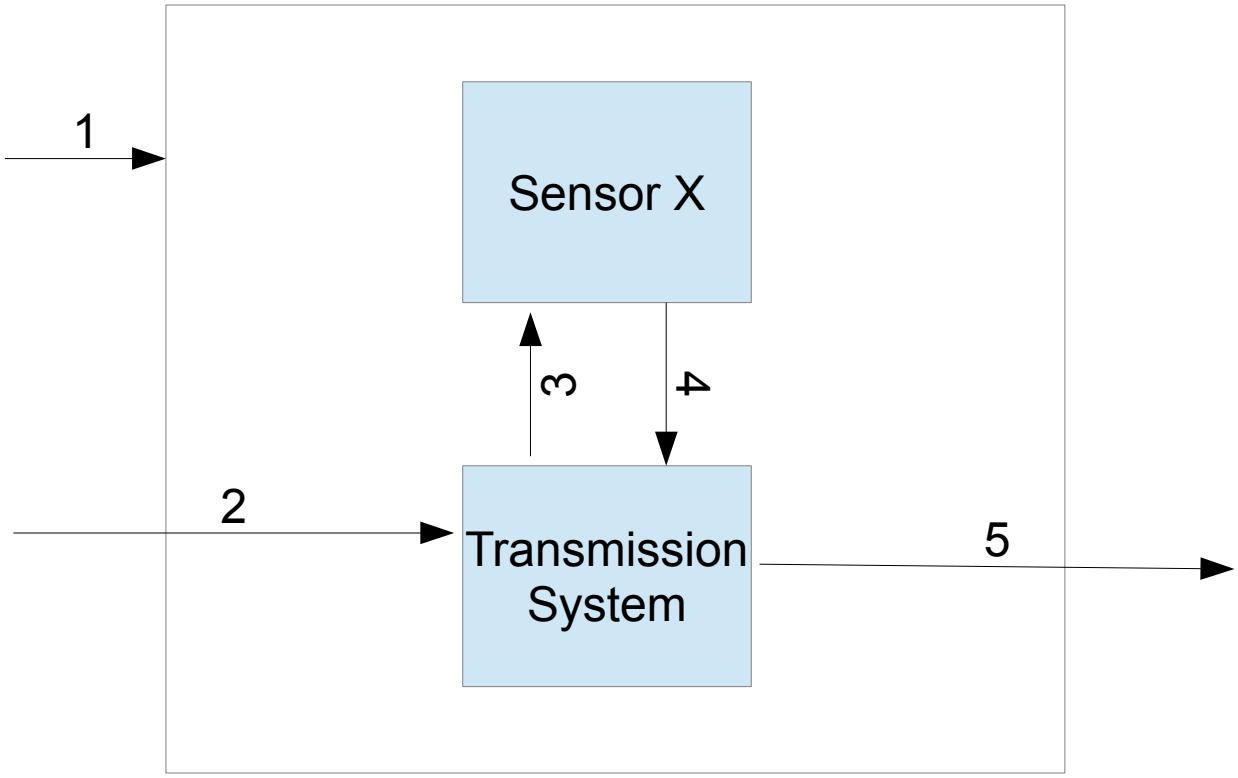

Table 2: Remote Sensing Station Signal Definitions

Signal Number	Signal Definition
1	Power Supply: this will be defined with a after a wired or wireless system, but should not exceed logic level needs of 2.3-5 volts
2	Wake/Tx Signal from Base Station: either wake the system, or switch it from Rx to Tx mode depending on wired or wireless system
3	Begin Data Collection: initiate sensor to start collecting data
4*	Send Raw data: the raw data is returned to the transmission system
5*	Transmit to base: raw data is sent to the base station

Note 4: The Raw data is collected as variations a voltage levels. This is done to unify data collection from a variety of sesnors.*

Note 5: If system is wired, data will be polled at the user specified time interval and move from the stack to memory until user initiates transmit signal. If system is wireless, Tx signal will be sent from base at the user specified time interval, then the stack will be sent to base in response to each Tx signal.*