Subject: Fwd: PCM Commands
Date: Tuesday, December 21, 2021 at 11:46:55 AM Eastern Standard Time
From: Stephen Hope
To: Massimo Robberto
Attachments: 12162_5.png, PastedGraphic-5.tiff

Regards,

PastedGraphic-5.tiff

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Begin forwarded message:

From: stephen.hope@idg.jhu.edu
Subject: PCM Commands
Date: October 16, 2020 at 2:36:50 PM EDT
To: Jonathan Hoover <12jonboy12@gmail.com>

```
#define SOLCharacter '~'
#define EOLCharacter '\n'
#define ignoreCharacter 'Wr'
#define delimiterCharacter ','

#define recEmpty 0
#define recActive 1
#define recFull '#'
#define cmdReady recFull

#define noRecordFound 255

// All commands start with '~' and end with [CR]

//command set
/*----------------------------
command structure is as follows:
[startCharacter][cmd],[subcmd],[data][CR]
for example:
~sb,dft,ch0[CR]
set default biasses for channel 0

~sb,Pp,5.124
-----------------------------*/

// get code revision
#define getRevision "gr"       // returns code revision
#define getSerialNumber "gs"    // return MAC address

// Enable the power supplies
#define setPowerEn   "se" // must include 0 or 1 for off or on
#define getPowerEn   "ge"
  #define pe_ch1   "ch1"
  #define pe_ch2   "ch2"
  #define pe_ch3   "ch3"
  #define pe_ch4   "ch4"
  #define pe_ch5   "ch5"
```

```
    #define pe_ch6   "ch6"
    #define pe_ch7   "ch7"
    #define pe_ch8   "ch8"
    #define pe_all   "all"
      #define pe_on    "on"
      #define pe_off   "off"
      #define pe_cycle  "cycle"


// Read port power
#define calVoltage   "calV"
#define calCurrent   "calC"
#define readVoltage  "rdV"
#define readCurrent  "rdC"
  #define rp_bus0       "bus0"
  #define rp_bus1       "bus1"
  #define rp_ch1        "ch1"
  #define rp_ch2        "ch2"
  #define rp_ch3        "ch3"
  #define rp_ch4        "ch4"
  #define rp_ch5        "ch5"
  #define rp_ch6        "ch6"
  #define rp_ch7        "ch7"
  #define rp_ch8        "ch8"
  #define rp_all        "all"
    // param[2] optional integer number for number of samples
      #define  rp_rawData      "rawData" //param[3] (read voltages only)
    // params[2] and [3] contain floats for offset and gain for calibration


// Read temperature, pressure
#define readEnvironment   "rdEnv"
#define calEnvironment    "calEnv"
  #define re_temp        "temp"
  #define re_pressure      "pres"
  #define re_all         "all"
    // param[2] optional integer number for number of samples
    #define re_rawData       "rawData" //param[3] optional to read raw data
    // params[2] and [3] contain floats for offset and gain for calibration

#define saveCalData     "sCal"


// Port Masks ---
#define getMask       "gMask"
```

```
#define setMask        "sMask"
  #define gm_boot      "boot"
  #define gm_low       "low"


// Thresholds
#define getThreshold    "gThr"
#define setThreshold    "sThr"
  #define gt_batt      "batt"
  #define gt_low       "low"
  #define gt_auxLow    "auxLow"


// Ethernet Switch Settings

#define getEthernet     "gEth"
#define setEthernet     "sEth"
  // param 2 == regID
  // param 3 == byte value


// Serial Settings
#define getSerial       "gSer"
#define setSerial       "sSer"
  //param2 baudrate... eg 9600
  //param3 bits parity stop... eg 8N1
  //param4 default timeout for response in ms... eg 500


// send serial data
#define send_rs485     "@"   // command must start with '@'
#define send_rs232     "#"   // command must start with '#'
  //param2 otional baud rate + optional data format + optional Timeout
  //default is 9600_8n1
  #define ss_4800      "4800"
  #define ss_9600      "9600"
  #define ss_19200     "19200"
  #define ss_38400     "38400"
  #define ss_57600     "57600"
  #define ss_115200    "115200"

  #define ss_8n1       "_8n1"
  #define ss_8e1       "_8e1"
  #define ss_8o1       "_8o1"
  #define ss_8n2       "_8n2"
  #define ss_8e2       "_8e2"
  #define ss_8o2       "_8o2"
```

```
//for optional timeout append T plus the time in ms (i.e. T2000)
//example ~@,9600_8N1T2000,/1aM1P1000R

// Param3 is data to send


// perform system reset
#define softReset      "reset"
  #define sr_system      "sys"
  #define sr_ethernet    "eth"
  //#define sr_peripherals  "per"

// get reason for last reboot and time since last boot
#define getRebootStatus  "gStatus"
  //response messages
  #define normal "Power on Reboot"
  #define watchdog "Watchdog Reboot"
  #define software "Soft Reboot"
  #define brownout "Brownout Reboot"
  #define external "MCLR Reboot"



/***************************************************************************/
/* RESPONSE MESSAGES                          */
/***************************************************************************/

#define badCmd        "INVALID COMMAND\n"
#define badParam      "INVALID PARAMETER\n"
#define badChannel    "INVALID CHANNEL\n"
#define outOfRange    "OUT OF RANGE\n"
#define overrun       "BUFFER OVERRUN\n"
#define success       "SUCCESS\n"
#define noResponse    "NO RESPONSE\n"
#define tbd           "NOT IMPLEMENTED YET\n"
```

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