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.module zcore
;
;
;   LlamaCode core VM layout
;
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;   2009-11
;
;
;-----
;; memory layout

RomBase      == 0x0000
RomBounds    == 0xbfff

RomA         == 0x0000
RomABounds   == 0x3fff
RomB         == 0x4000
RomBBounds   == 0x7fff
RomC         == 0x8000
RomCBounds   == 0xbfff

RamVideo     == 0xC000
RamColor     == 0xC800

SpriteBase   == 0xD000
  SpID       == 0x00      ; sprite ID number 1..256
  SpPac      == 0x01      ; pac-style sprite0 (may be invalid)
    SpIDMsk  == 0xFC      ; sprite ID number (may be invalid)
    SPXFlip  == 0x02      ; flip on X axis
    SPYFlip  == 0x01      ; flip on Y axis
  SpCol      == 0x02      ; sprite Color ID (pac-compatible - pac & 0x1f)
  SpX        == 0x03      ; sprite X position
  SpY        == 0x04      ; sprite Y position
  SpMax      == 0x07      ; size of each sprite register bank

RamBase      == 0xE000
RamBound     == 0xEFFF

;-----
;; bank switching

RomASel      == 0xF000      ; RW
RomBSel      == 0xF001      ; RW
RomCSel      == 0xF002      ; RW
GfxSel       == 0xF003      ; RW
GfxPal       == 0xF004      ; RW
SpriteSel    == 0xF005      ; RW
SpritePal    == 0xF006      ; RW

;-----
;; misc "hardware" (mainly for compatibility)

IntDisable   == 0xF007      ; RW
Watchdog     == 0xF008      ; W   ignored
DIP0         == 0xF009      ; R
DIP1         == 0xF00A      ; R
IN0          == 0xF00B      ; R
IN1          == 0xF00C      ; R
Coin0Count   == 0xF00D      ; W
Coin1Count   == 0xF00E      ; W
Coin0Lock    == 0xF00F      ; W
Coin1Lock    == 0xF010      ; W
LAMP0        == 0xF011      ; RW

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LAMP1          == 0xF012      ; RW
FlipScreen     == 0xF013      ; W

;;-----
;; configuration

IfConfig       == 0xF100      ; R
    IfZCore    == 0x00
    IFMsPac    == 0x80
    IFPengo    == 0x81
    IFRushn    == 0x82

DevConfig      == 0xF101      ; R
    DUnk       == 0x00        ; unknown
    DiPSim     == 0x01        ; iPhone Simulator
    DJape      == 0x02        ; JAPE emulator
    DMame      == 0x03        ; Mame
    DiP        == 0x04        ; iPhone Device

Capabilities   == 0xF102      ; RW
    CapBas     == 0x00
    CapAcc     == 0x01

;;-----
;; touches

TouchFlags     == 0xF200      ; R 0=no, 1=touching
    TFNone     == 0x00
    TFTch      == 0x01

TouchX         == 0xF201      ; R
TouchY         == 0xF202      ; R

LastTouch      == 0xF203      ; RW
LastXTouch     == 0xF204      ; R
LastYTouch     == 0xF205      ; R

TapCount       == 0xF206      ; RW

TouchRegion    == 0xF207      ; R
    TRCLR      == 0x00
    TRNW       == 0x01
    TRN        == 0x02
    TRNE       == 0x03
    TRW        == 0x04
    TRC        == 0x05
    TRE        == 0x06
    TRSW       == 0x07
    TRS        == 0x08
    TRSE       == 0x09

TouchSwipe     == 0xF208      ; RW (clear when done)
    TSCLR      == 0x00
    TSUP       == 0x01
    TSDN       == 0x02
    TSL        == 0x04
    TSR        == 0x08

;;-----
;; accelerometer

AccelX         == 0xF300
AccelY         == 0xF301
AccelZ         == 0xF302

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AccelUp == 0xF303

;;-----  
;; device orientation

SysOrientation == 0xF304  
SO\_CLR == 0x00  
SO\_P == 0x01  
SO\_PU == 0x02  
SO\_LL == 0x03  
SO\_LR == 0x04  
SO\_UP == 0x05  
SO\_DN == 0x06

;;-----  
;; sound

Sound0 == 0xFF00  
Sound1 == 0xFF01  
Sound2 == 0xFF02  
Sound3 == 0xFF03

; end zcore.asm