Rapid prototyping platform

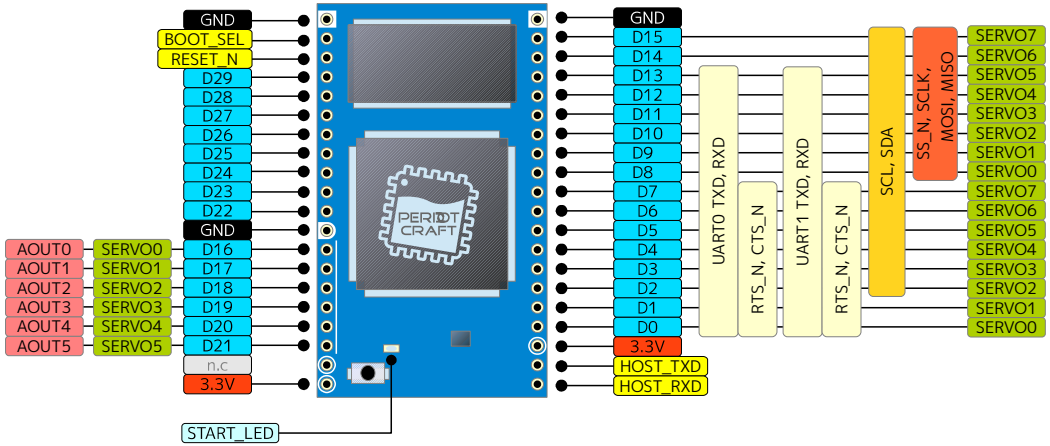
PERIDOT PICCOLO (ペリドット・ピッコロ)

PERIDOT Piccolo is the new rapid prototyping tool which can rewrite hardware.

This board is an easy procedure, and it's possible to use various hardware I/O. Composition information on a script execution engine and I/O just writes packaged firmware in that from a development environment.

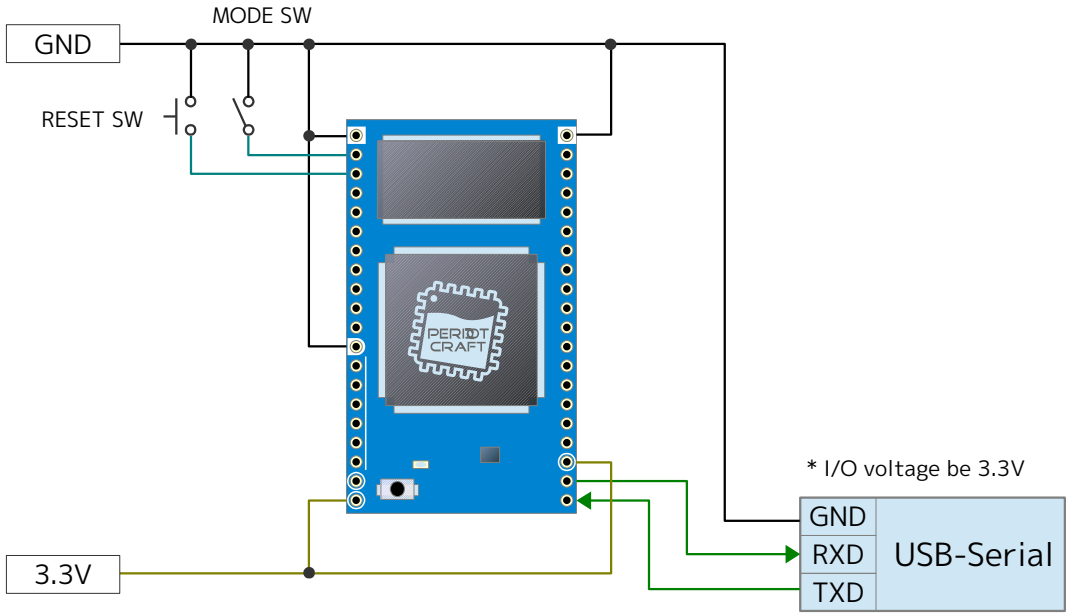
*Specification

- 1100mil/40pins DIP-shape (53.4mm×30.5mm)
- 8Mbytes on-board memory (64Mbit SDRAM)
- 4Mbytes on-board storage (32Mbit SPI-Flash)
- PIO 30pins (sharing analog input is 6pins)
- User LED
- 3.3V Single power supply
- A boot loader is already written in.
- Rubic Development environment.
  - NiosII/f(32bitRISC CPU)
  - Filesystem for on-board storage
  - JavaScript VM



*How to use

- A PSW on the board is used including rereading of firmware.
- When MODE SW is turned on and power supply on or a re-load is performed, it'll be a boot loader mode. When firmware rewrites, it's made this mode.
- When loading the firmware written in, MODE SW is turned off and power supply on or a re-load is performed.
- The RESET switch reexecutes loaded firmware.
- TXD and RXD of USB-serial change are connected to a HOST communication pin of a board. These are used by communication with a host development environment.

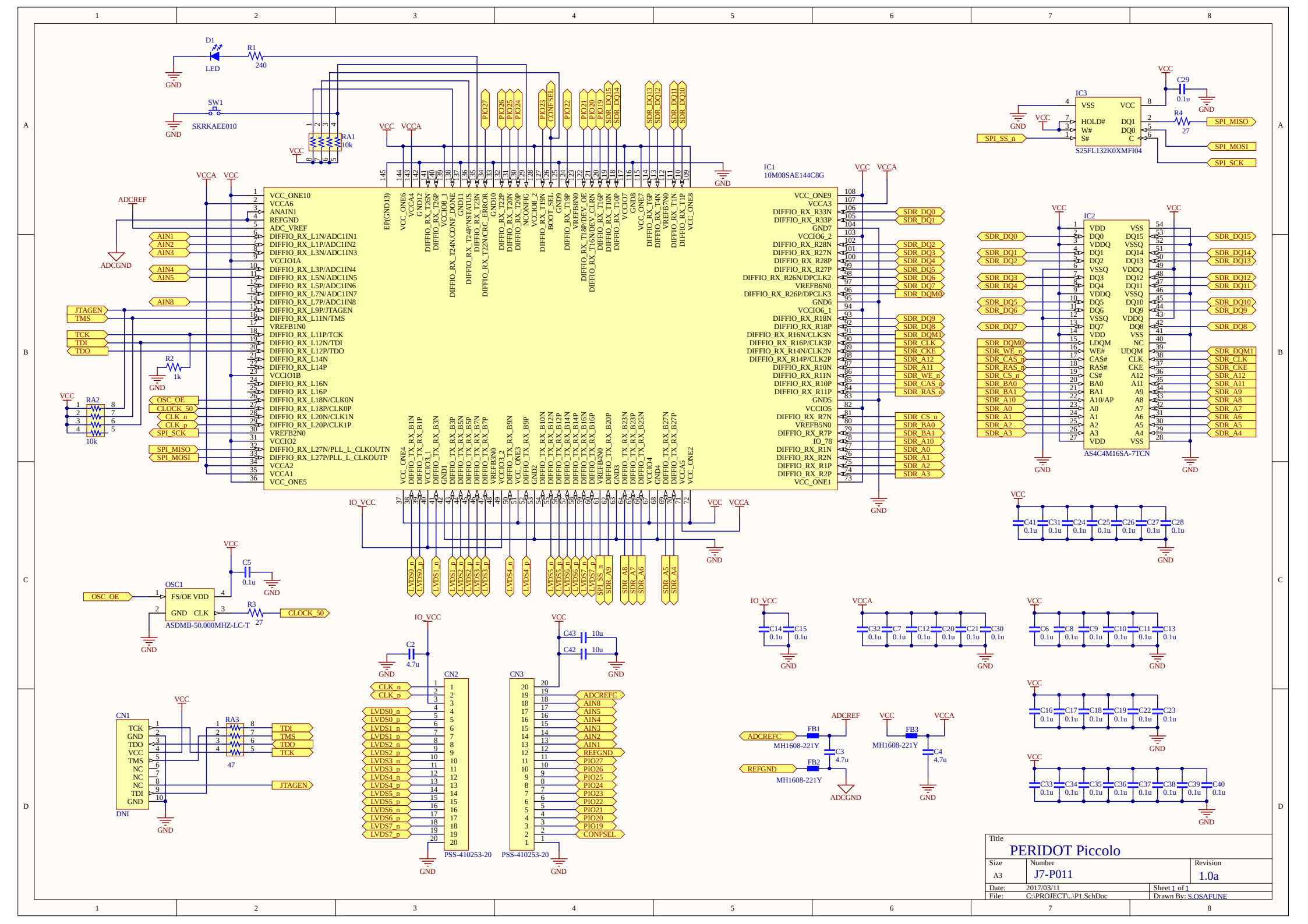


*Notice

- PERIDOT Piccolo is goods for developers. The user shoulders legal responsibility to every kind of accident and damage which occurred using this board.
- When the specification of this board is changed, there is a case that we don't give a notice.

*Github

https://github.com/osafune/peridot_newgen


D1
LED
R1
240
GND
SW1
SKRKAEE010
RA1
10k
VCC
VCCA
PIO27
PIO26
PIO25
PIO24
PIO23
CONFSEL
PIO22
PIO21
PIO20
PIO19
SDR_DQ15
SDR_DQ14
SDR_DQ13
SDR_DQ12
SDR_DQ11
SDR_DQ10
IC1
10M08SAE144C8G
VCC_ONE10
VCCA6
ANAIN1
REFGND
ADC_VREF
DIFFIO_RX_L1N/ADC1IN1
DIFFIO_RX_L1P/ADC1IN2
DIFFIO_RX_L3N/ADC1IN3
VCCIO1A
DIFFIO_RX_L3P/ADC1IN4
DIFFIO_RX_L5N/ADC1IN5
DIFFIO_RX_L5P/ADC1IN6
DIFFIO_RX_L7N/ADC1IN7
DIFFIO_RX_L7P/ADC1IN8
DIFFIO_RX_L9P/JTAGEN
DIFFIO_RX_L11N/TMS
VREFB1N0
DIFFIO_RX_L11P/TCK
DIFFIO_RX_L12N/TDI
DIFFIO_RX_L12P/TDO
DIFFIO_RX_L14N
DIFFIO_RX_L14P
VCCIO1B
DIFFIO_RX_L16N
DIFFIO_RX_L16P
DIFFIO_RX_L18N/CLK0N
DIFFIO_RX_L18P/CLK0P
DIFFIO_RX_L20N/CLK1N
DIFFIO_RX_L20P/CLK1P
VREFB2N0
VCCIO2
DIFFIO_RX_L27N/PLL_L_CLKOUTN
DIFFIO_RX_L27P/PLL_L_CLKOUTP
VCCA2
VCCA1
VCC_ONE5
VCC_ONE9
VCCA3
DIFFIO_RX_R33N
DIFFIO_RX_R33P
GND7
VCCIO6_2
DIFFIO_RX_R28N
DIFFIO_RX_R27N
DIFFIO_RX_R28P
DIFFIO_RX_R27P
DIFFIO_RX_R26N/DPCLK2
VREFB6N0
DIFFIO_RX_R26P/DPCLK3
GND6
VCCIO6_1
DIFFIO_RX_R18N
DIFFIO_RX_R18P
DIFFIO_RX_R16N/CLK3N
DIFFIO_RX_R16P/CLK3P
DIFFIO_RX_R14N/CLK2N
DIFFIO_RX_R14P/CLK2P
DIFFIO_RX_R10N
DIFFIO_RX_R11N
DIFFIO_RX_R10P
DIFFIO_RX_R11P
GND5
VCCIO5
DIFFIO_RX_R7N
VREFB5N0
DIFFIO_RX_R7P
IO_78
DIFFIO_RX_R1N
DIFFIO_RX_R2N
DIFFIO_RX_R1P
DIFFIO_RX_R2P
VCC_ONE1
SDR_DQ0
SDR_DQ1
SDR_DQ2
SDR_DQ3
SDR_DQ4
SDR_DQ5
SDR_DQ6
SDR_DQ7
SDR_DQM0
SDR_DQ9
SDR_DQ8
SDR_DQM1
SDR_CLK
SDR_CKE
SDR_A12
SDR_A11
SDR_WE_n
SDR_CAS_n
SDR_RAS_n
SDR_CS_n
SDR_BA0
SDR_BA1
SDR_A10
SDR_A0
SDR_A1
SDR_A2
SDR_A3
ADCREF
ADCGND
AIN1
AIN2
AIN3
AIN4
AIN5
AIN8
JTAGEN
TMS
TCK
TDI
TDO
R2
1k
RA2
10k
OSC_OE
CLOCK_50
CLK_n
CLK_p
SPI_SCK
SPI_MISO
SPI_MOSI
IO_VCC
LVDS0_n
LVDS0_p
LVDS1_n
LVDS1_p
LVDS2_n
LVDS2_p
LVDS3_n
LVDS3_p
LVDS4_n
LVDS4_p
LVDS5_n
LVDS5_p
LVDS6_n
LVDS6_p
LVDS7_n
LVDS7_p
SPI_SS_n
SDR_A9
SDR_A8
SDR_A7
SDR_A6
SDR_A5
SDR_A4
IC3
S25FL132K0XMFI04
VSS
VCC
HOLD#
W#
S#
DQ1
DQ0
C
C29
0.1u
R4
27
IC2
AS4C4M16SA-7TCN
VDD
VSS
DQ0
DQ15
VDDQ
VSSQ
DQ1
DQ14
DQ2
DQ13
VSSQ
VDDQ
DQ3
DQ12
DQ4
DQ11
VDDQ
VSSQ
DQ5
DQ10
DQ6
DQ9
VSSQ
VDDQ
DQ7
DQ8
VDD
VSS
LDQM
NC
WE#
UDQM
CAS#
CLK
RAS#
CKE
CS#
A12
BA0
A11
BA1
A9
A10/AP
A8
A0
A7
A1
A6
A2
A5
A3
A4
VDD
VSS
C41
C31
C24
C25
C26
C27
C28
OSC1
ASDMB-50.000MHZ-LC-T
FS/OE VDD
GND CLK
C5
0.1u
R3
27
C14
C15
C32
C7
C12
C20
C21
C30
C6
C8
C9
C10
C11
C13
C16
C17
C18
C19
C22
C23
C33
C34
C35
C36
C37
C38
C39
C40
C2
4.7u
C43
10u
C42
10u
CN1
DNI
TCK
GND
TDO
VCC
TMS
NC
TDI
RA3
47
CN2
CN3
PSS-410253-20
ADCREFC
REFGND
FB1
FB2
FB3
MH1608-221Y
C3
4.7u
C4
4.7u
Title
PERIDOT Piccolo
Size
A3
Number
J7-P011
Revision
1.0a
Date:
2017/03/11
File:
C:\PROJECT\..\P1.SchDoc
Sheet 1 of 1
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