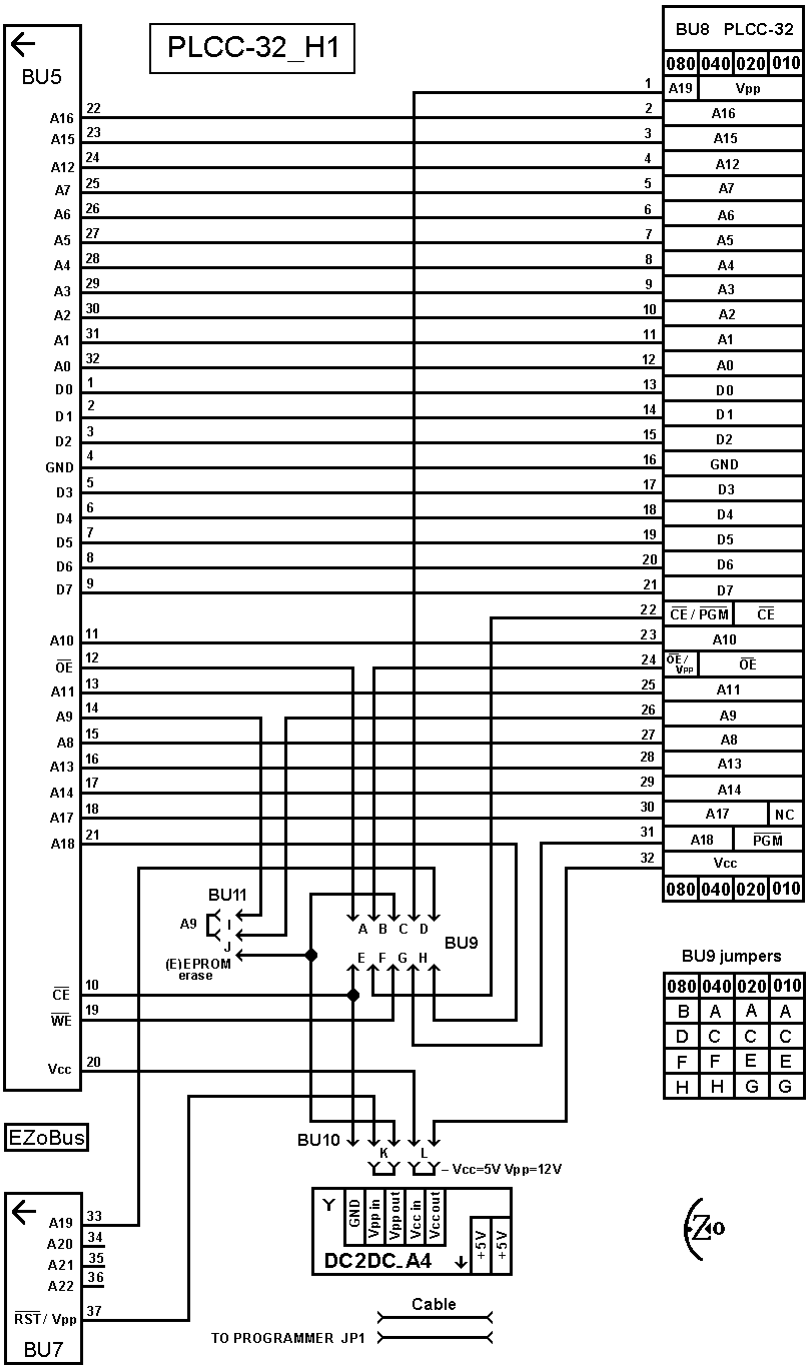
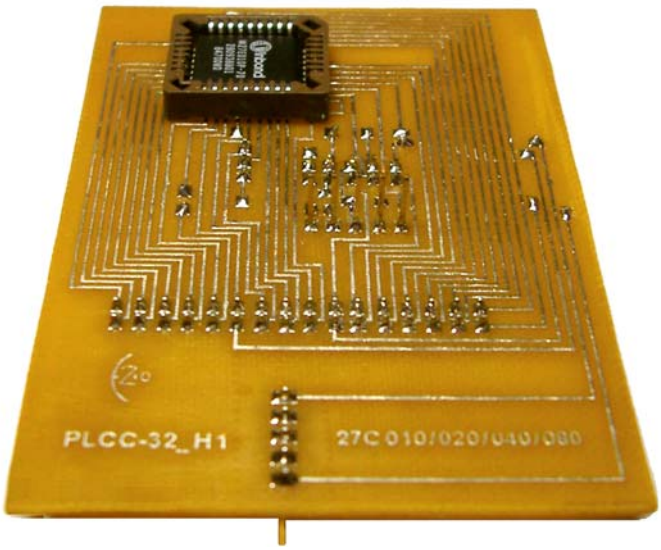
Adapter PLCC-32_H1
EzoFlash+ adapter for 8 bit EPROM (1Mb-8Mb) in PLCC-32 package.

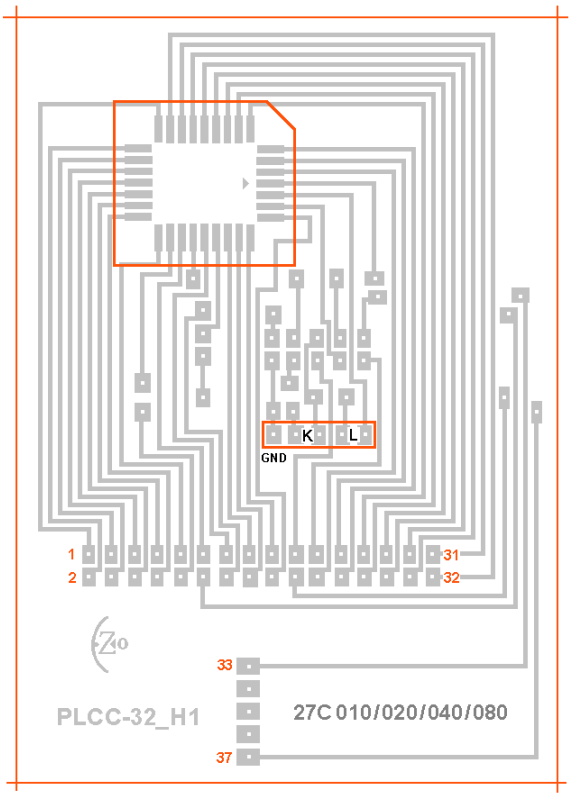
1. Part list.

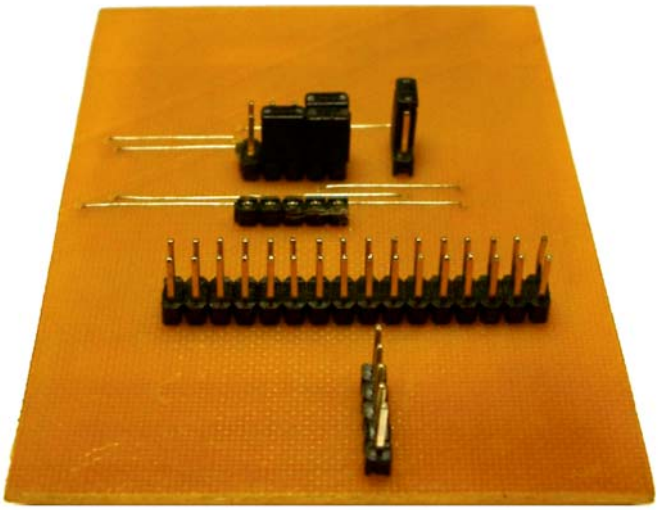
BU5 – Straight pin-header 2x16, division 2.54
BU7 – Straight pin-header 1x5, division 2.54
BU8 – IC Socket PLCC-32 surface mount
BU9 – Straight pin-header 2x5, division 2.54 / Jumper, division 2.54 (4pcs)
BU10 – Straight pin-header 1x5, division 2.54 (modified, move plastic to end) / Jumper, division 2.54 (2pcs) / DC2DC_A4
BU11 – Straight pin-header 1x3, division 2.54, / Jumper , division 2.54 (1pc)

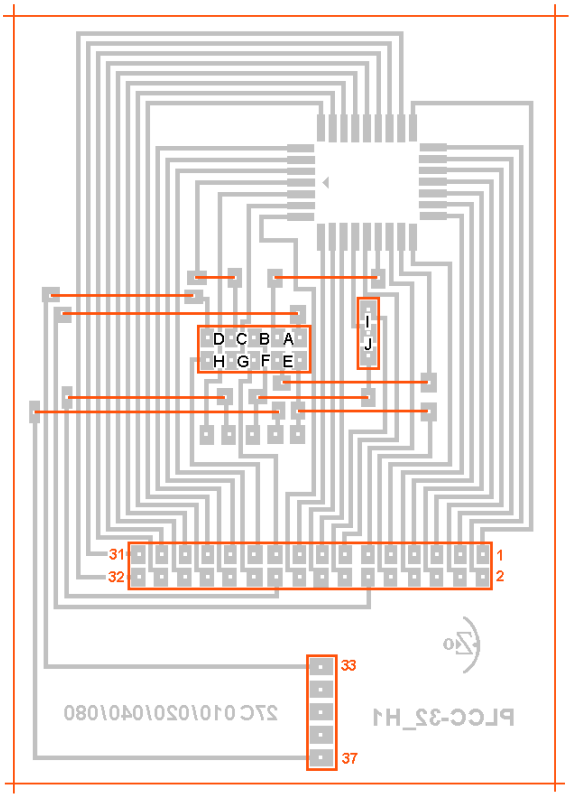
2. Schematic, PCB and pictures




PLCC-32_H1
27C 010/020/040/080


K
L
GND
1
2
31
32
33
37
PLCC-32_H1
27C 010/020/040/080




D
C
B
A
H
G
F
E
I
J
31
32
1
2
33
37

3. Settings, verified chip list and info.

Willem programmer software version 0.97ja

Programmer jumpers - W/Jp1- wire cable to dc2dc_a4, Jp3 (+5V), Jp5 (A18)
plcc32h1 jumpers A…E according to density – A,C,E,G (1Mb, 2Mb); A,C,F,H (4Mb), B,D,F,H (8Mb), jumper I (A9)

27010, 27020, 27040
Selected device EPROM > 27xxx > …, twp =1.2ms
dc2dc_a4 jumpers –
JpR (Vcc from LM317), JpM (Vcc=5.8V) , JpP (Vpp=11..14V)
Adjust R5 - Vpp=12.8V
No verified chips.

27C010, 27C101, 27C1001, 27C020, 27C201, 27C2001, 27C040, 27C401, 27C4001, 27C080, 27C801
Selected device EPROM > 27Cxxx > …, twp=140mks
dc2dc_a4 jumpers –
JpR (Vcc from LM317), JpM , (Vcc=5.8V) , JpP (Vpp=11..14V)
Adjust R5 - Vpp=12.8V
Verified chips :
AM27C010, AT27LV010, AT27C010, Intel N27C010, MX27C1000QC, NM27C010VE,
AT27C020, AM27C040, AT27C040, ST Micro M27C4001

Electrically erasable EPROM
Selected device EPROM Electrical Erase >…

W27x010/020/040, MX26C1000/2000/4000
dc2dc_a4 jumpers – JpR (Vcc from LM317), JpP (Vpp=11…14V)
Erase – adjust R5- Vpp=14V(W27…), Vpp=12.8V (MX26C…)
Set jumper JpJ. Action Erase. Set back jumper JpI !!
Program – adjust R5- Vpp=12.0V (W27…), Vpp=12.8V (MX26C…, set jumpers M, N, Vcc=6.2V)

SST27SF010/020, W27C/E01/02
Chips are erased/programmed without dc2dca4. Set jumpers JpK, JpL (+5, +12V from programmer).
Set jumpers Jp1,Jp3, Jp5 (Vcc=5V), JpJ (erase), JpI (read, programm).

SST37VF512/010/020/040, PM37LV512 (+3.3V, pin1- NC/A18, pin24 - OE#/Vpp)
Chips are erased/programmed without dc2dca4. Set jumpers JpK, JpL (+5, +12V from programmer).
Set jumpers Jp2, Jp5 (Vcc=3.6V).
For all chips set jumpers E (pin22 CE#), G (pin31 WE#). For SST37VF040 provide wired (cannot be done with jumper) connection between BU9 pins 7 (DIP-32 pin1) and 10 (programmer A18).
Remove jumpers A…D.
Erase – set jumpers B (OE#=Vpp), J (A9=Vpp). Indicator will run cycles 0…2%. Cancel.
Blank check - set jumpers A (OE#), I (A9).
Program – set jumpers B (OE#=Vpp), I (A9). Program verify fail (chip 0x0000 0x04, buffer 0x..).
Verify, read – set jumpers A (OE#), I (A9).

Verified chips:
W27E010P, SST27SF010, SST37VF020

Chip test results find in chip_test.xls file.

Note.
Chips are tested in long period, different dc2dc adapters and voltages used, SW 0.97g and 0.97ja .
dc2dca4 is functionally equal to previous versions (a2, a3; same jumpers).

Adjust other Vpp value or change Vcc=6.2V (jumper N), change twp, if required from EPROM datasheets or programming fail.
A range of chips (1Mb, 2Mb, 4Mb) are programmed without dc2dc_a4. Set jumpers JpK, JpL. (Vcc=5V, Vpp=12V).

How to adjust Vpp ?
Install dc2dc_a4 and eprom adapter without target chip on ezoflash+.
Connect power supply, PC and run SW. Adjust Vpp on LM317- IN with R5

1Mb, 2Mb, 4Mb chip read available without dc2dc_a4. Set jumpers JpK, JpL.

Chips in PLCC-32 package (except electrically erasable) are OTP (one time programmable) and cannot be erased. Only new EPROM can be programmed, all bits of the EPROM are in the logic high state.
Run SW command Blank check to assure all bytes are 0xFF.
Logic lows are programmed into desired locations. Repeat programming (check voltage, increase twp) on logic low programming failure.

Report problems and share your experience on Willem and EZoFlash forums.