Versions

Version 1.4

Important: While updating to 1.4 from minor versions Netzer automatically resets its settings to factory state due internal memory changes.

Version 1.4.220 (2012-01-02)

120102_netzer.tar.gz

Bug fix: I2C configuration was not correctly loaded if not in I2CMasterMode.

Version 1.4.219 (2011-12-23)

111223_netzer.tar.gz

Bug fix: GPIOs were not acessable in I2CMasterMode.

Version 1.4.215 (2011-12-21)

111221_netzer.tar.gz

Bug fixes:

- Changes of IP address due DHCP elapsed lease times, late IP address arrival or fallback from DHCP to AutoIP or manual address now works better with socket closing and MDNS restarting.
- Waiting for the idle polarity on SPI clock in SPI slave mode removed. Solution: The serial task does not start until the clock polarity and clock signal match. All other tasks (GPIO, TCP/IP) start normally, so the Netzer is accessable via web. Changing the SPI clock mode on the serial page takes effect after restart first (for SPI slave).
- Guest-Login shows the ID and configure button
- Remove space from IO strings (i.e. “IO 0” → “IO0”)
- Translate configure button in German
- Bug fixed in base version: Authentication dialog appears with no need.

Version 1.4.198 (2011-10-14)

111014_netzer.tar.gz

The firmware is now splitted into two parts, base and pro. The base version is maintained and published for free. The base version is a subset of the pro version. Pro licenses are bundled with Netzer hardware or can be purchased seperately in the MoBaCon webshop.

Bugfixes and new features in the base and pro version:

- Password of the admin account was not changeable???
- Added dutch as third supported Netzer language (thanks goes to Bart Eversdijk for translation)
- GPIO service is now a standalone service which can be activated independently of the serial service
- Completly reworked GPIO websites for simpler configuration
- Added baudrate 38400 bps for serial UART mode
- Improved serial transmit and receive routines (mostly rewritten in assembler)
- Increased both, receive and send serial buffer to 256 bytes
- Changed the SPI master protocol (more details: SPImaster)
- Completly reworked the SPI slave protocol (more details: SPIslave)

New features in the pro version:

- Added events for GPIO server: The GPIO server sends messages on rising and/or falling edges for digital inputs.
- Added event counter functionality for IO0, IO1 and IO2. The features are:
  - Configurable for rising or falling edges
  - Decrementing or incrementing
  - 16 bit + 1 bit overflow flag value, accessable and resetable due website
  - Optional filter (1ms - 250ms) i.e. for debouncing of switches
- Added ADC (10 bit) functionality for IO4 and IO5
- Added 10 bit (hardware) PWM functionality for IO3 and SPI_INT This impulse mode has the following features:
  - Selectable frequency: 2.5 kHz, 10 kHz or 40 kHz (common for both channel)
  - Selectable logic, active low or high
  - Configurable duty value on startup
- Added 16 bit impulse functionality for IO3 and SPI_INT: This impulse mode has the following features:
  - Three modi: Single impulse, single impulse on IO0 trigger and continuous mode
  - Configurable impulse unit (100ns, 200ns, 400ns and 800ns)
  - Selectable logic, low or high impulse
  - Configurable duty value on startup
- Selectable radix (hexadecimal or decimal) for GPIO website and server communication
- Selectable auto refresh rate for GPIO website
- Javascript (deactivatable) on GPIO website
- Authentication (using web user accounts) can be enabled for GPIO server
- All the new channel mode values (ADC, impulse and pwm) can also be accessed from GPIO server

- Added more variants how the device obtains the IP address:
  - DHCP without failover
  - DHCP with failover to AutoIP (default) - thats the original variant
  - DHCP with failover to ManualIP
  - AutoIP
  - ManualIP - Also from the orginal code
- HTTP port can be changed
- All IO pins can be changed in serial SPI master mode with a protocol extension (more details: [de:netzer:spimaster|SPI Master Protokoll])

Version 1.3

Version 1.3.134 - Inofficial release

Bug fixes:

- Prevent authentification dialog on unknown files.

Version 1.3.132 from 11-04-25

110425_netzer.tar.gz

Bug fixes:

- Fixed wrong eeprom address for I2C when doing a reset to factory setting.
- SPI modes were completly broken due a stupid copy and paste error in the ISR.

Version 1.3.129 from 11-04-13

110413_netzer.tar.gz

Important bug fix: Fixed interpreting bug at GPIO server module when accessing via the 'x' placeholder.

Version 1.3.128 from 11-03-15

110315_netzer.tar.gz

Added 4800 Baud as UART Baudrate.

Important bug fixes:

- Sending all DHCP messages as UDP-broadcast fixes possible problems with some DHCP servers.
- All serial modes ran with the wrong baudrate due the wrong MCU frequency. The MCU runs with 41.6667 MHz now as intended.

Version 1.3.122 from 11-02-22

110222_netzer.tar.gz

- Upgraded to latest MCC18 compiler 3.37.01
- Show a message on web interface if no valid bootloader is installed.
- Added the authentication module to the web interface. The web sites can only be accessed with a valid username and password. HTTP simple authentication is used for this. With the authentication module a great security leak is hopefully gone: Firmware updates can only be started from the administrator. The TFTP reboot module is only started if activated via the webinterface. Netzer supports three different user: administrator, user and guest. Each user has different rights (standard username, standard password):
  - The administrator has root rights (admin, admin).
  - The user can only do a few commands and has GPIO access (user, user).
  - The guest has readonly rights (guest, guest).
- A early init routine is added where a project can do some initialization directly after main is called. For the NtzerIO project some IO port registers are configured (unused ports as outputs to prevent floating).
- Reseting Netzer to factory settings can be started directly at the board (in case the password is lost...). Simply put a resistor (about 10K) between GND and PGD (one of the ICD2 pins) on startup. If the Netzer seems to “hang” remove the resistor. After removing the LEDs should blinking some time and afterwards the Netzer restarts.
- Fixed a Gratuitous ARP bug in the bootup module. This bug leads to lot of gratuitous ARPs on startup in a short time (not in DHCP). It is changed to only three ARP packets with an interval of 500 ms.
- Added a Netzer mode, called “Webinterface only” - no GPIO and serial server are started in this mode.
- Fixed a bug in serial and GPIO server: After unplugging network cable both servers did not start anymore.

Version 1.2

Version 1.2.103 from 11-01-08

110108_netzer.tar.gz

- I2C Master module implemented with friendly support of Hygrosens Instruments Ltd. Possible transactions: Write, Read, Write/Read.
- Versioning of bootloader. IO module displays the bootloader version on the index website.
- Fixed a IP address filter problem in UDP module

Version 1.1

Version 1.1.83 from 10-11-02 (Elektor release for Netzer project website)

101102_netzer.zip

- Cleaned up the source files and completed documentation for this version.
- Fixed a bug in bootloader module: faulty upload of debug images completly blocked some devices.
- Added the project identifier in the boot EEPROM. Migration between different Netzer project is possible now.

Version 1.1.5 from 10-09-14 (Official release for Elektor)

- Added the SPI modules for master and slave operation to Netzer IO.
- Added some useful buttons on the web page like shut down and LED blinking.

Version 1.0.1 from 10-09-02 (First release candidate running on hardware)

Added the first parts of the Netzer IO project including the GPIO and UART module.

Version 1.0.X (Inofficial development)

Initial release of the Netzer project. Porting the core modules from eWicht to Netzer project.