

```
-----
+-----
|      Bosch Motorsport
|      MSA-Box LX: USB-CAN-KLine device
|      MSA-Box 2 : USB-CAN-KLine-Ethernet device
|
|      Version History
+-----
-----
```

-----  
-----  
V1.07 - 20070424

- fixed OBD-disconnect/connect problem (on HW with DC/DC removed)
- use USB-SYS-driver version V1.0.5.9 (allows standby + hibernation)
- firmware
  - CAN: filter repaired
  - CAN: 10kbps is not possible
  - CAN: BusOFF Recovery is working
- communication DLL
  - improved DriverOpen
- known bugs
  - Firmware is crashing after/while standby + hibernation.

-----  
-----  
V1.08 - 20070702

- firmware
  - KLine: added KLine B Protocol implementation
  - changed interrupt priorities to avoid missing data on high KLine speed
    - moved priority of USB interrupt below UART and Timer interrupt
- known bugs
  - Sometimes PnP doesn't work when starting with plugged LiteXS
  - 313kbps needs fractal-baudrate-generator setup in the firmware

-----  
-----  
V1.09 - 20070712

- firmware
  - KLine: use fractal-baudrate-generator (enable correct 313kbps)

-----  
-----  
V1.10 - 20070727

- installer
  - display firmware version in windows software list
  - deinstall a previously installed version

-----  
-----  
V1.11 - 20070908

- communication DLL
  - improved device disconnect handling (fast driver close ca. 100ms)
- installer
  - added History.txt
  - use new picture

-----  
-----  
V1.12 - 20071218

- communication DLL
  - changed handling during USB polling  
(tester CPU is released anyway in read cycles)
  - reduce CPU usage (ca. 20 - 30% less) during USB read cycles
  - but also less performance

-----  
-----  
V1.13 - 20080618

- fixed CAN timestamp problem
- fixed error in manual CAN BTR setting
- communication DLL: faster stopp of RxThread -> faster unload of driver
- KLineB
  - disabled single byte transfer to PC except when buffer overflow
  - enlarged buffer limit on firmware to a multiple of 80 ==> 80\*13 =

1040  
-----

-----  
-----  
V.20 pre

- 20090120 - added ethernet driver to installer
- 20090121
  - added support for MSA Box 2
  - don't send serial of device as part of USB-id string
  - enlarged size for productname in USB comm. from 9 to 10
  - increased versions: levelx 1.14; bootloader 1.9

-----  
-----  
V1.15

b) 20090420

- dismiss version conecept 2.0 - return to 1.15
- added CCP
  - handle TX before RX in CAN ISR to ensure log TX request before answer
  - fixed error of permuted bytes for quantity in UploadRequ
  - added Quantity attribute to DownloadRequ and UploadDataInd
  - accept 8 byte CAN Data reply for X (<8) bytes UploadRequest  
(Error 0x4 is now only send when rx 0 bytes)

c) 20090826

- added functionality to check KLine power supply for MSABOX II
- added error codes for: KLineL2 5BaudInit, Tx, TxBlock, TxBlockWithIntertime
  - 11: no external power
  - 12: short circuit
  - added short circuit indication message (0x04,0x04,0x30,0)
  - added 3. timer

d) 20090909 - bugfix: reset UART after leaving KLine-Short-Circuit status  
-----

-----  
-----  
V1.16 20090909

- version number has changed in order to become an official release

-----  
-----  
V1.17 20100309

a) 20091112

- bugfix: debounced KLine short circuit detection to 300 ms
- use new version (3.4.3.35) of AX88772 driver

b) 20091203 - include AX88772 driver for Windows Vista and Windows 7 (32bit)

20091218 - bugfix AX88772 driver installation for Windows 7

c) 20091218 - bugfix AX88772 driver installation for Windows Vista

d) 20100301

- don't use USB driver as shared DLL anymore
  - remove USB driver during every deinstallation
  - remove also the msd-directory during deinstallation
- 

-----  
-----  
v2.00 20100811

- Support for following operating systems

Windows XP SP3 32bit

Windows XP SP3 64bit

Windows Vista 32bit

Windows Vista 64bit

Windows 7 32bit

Windows 7 64bit

- All drivers are digitally signed with Microsoft Authenticode

-----

-----  
-----  
v2.01 20101118

- Update AX88772A driver for all supported operating systems  
this update shall fix some BSoD caused by asix drivers

-----

-----  
-----  
v2.02 20110415

- LevelX DLL driver close handling fixed

-----  
-----