

# BusLogic BT-445S SCSI Adapter Device Driver

by

Tomas Hurka, Hukatronic [tom@hukatronic.cz](mailto:tom@hukatronic.cz)

Ondrej Cada, OCSoftware [ocs@earn.cvut.cz](mailto:ocs@earn.cvut.cz)

**Version 1.0 of BusLogic BT-445S SCSI Adapter Device Driver for NEXTSTEP  
Release 3.2 for Intel Processors**

## OVERVIEW:

**BusLogic BT-445S** SCSI adapter device driver lets you take advantage of the following SCSI adapters:

Manufacturer	Adapter	PC Bus
Bus Logic	445S	VL-Bus

The driver replaces the NeXT's universal Adaptec154xDriver on BT-445S card. Driver uses BT-445S 32-bit addressing mode, therefore the disk performance is a little bit better on computers with more than 16 MB RAM. The increase of performance is according to **DrivePerformance.app** about 8% on 486DX2/66 with 32 MB RAM and 1.2 GB TOSHIBA MK538FB SCSI-2 drive. The driver works with BT-445S firmware version 3.31C - we didn't have a chance to test other versions of firmware.

## WARRANTY:

**THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.**

## **INSTALLATION:**

These instructions show you how to install the BusLogic BT-445S SCSI adapter device driver on an Intel-based computer running NEXTSTEP™ Release 3.2. The driver is distributed as file named **BusLogicBT445S.tar.Z**.

1. If you received the **BusLogicBT445S.tar.Z** file via NeXTmail™ or downloaded via FTP or another electronic source, place a copy of the file in a location where you can access it when you log in as **root**.
2. Log in as **root**.  
Only the superuser, **root**, can install the device drivers. If you're not sure how to log in as **root**, see your system administrator.
3. Double-click the **BusLogicBT445S.tar.Z** file and uncompress and unarchive it.
4. Double-click the **BusLogicBT445S.config**. It automatically launch **Configure.app** and copy the driver into **/NextLibrary/Devices** directory.
5. Add BT-445S driver as SCSI device and configure IRQ and port address according to setting of the card. The default setting is the same as Adaptec setting and should be OK for most cases.
6. Save configuration and quit **Configure.app**.
7. Reboot computer.

### **Notes about hardware setting of BT-445S:**

1. In order to achieve a 10MBytes/sec transfer rate, the 'Maximim Synchronous Data Rate Allowed' option must be enabled (switch 7 -Off) and the 'Adapter Initiate Synchronous Negotiation must be enabled (switch 6-Off).
2. Some older SCSI drives that can only support a data rate of up to 5 MB/s may misinform the BT-445S during the negotiation that it can transfer data above 5 MB/s. When the BT-445S is connected to such drives, 5 MB/s option must be used (switch 7 - On) . Otherwise, it will cause data transfer failure!

### **COPYING:**

The BusLogic BT-445S driver for NSFIP is a freeware. This means that the driver

must be redistributed unmodified and free of charge for anybody, who is interested in.

### **BUGS:**

Send all bug reports and any other suggestion via e-mail to [tom@hukatronic.cz](mailto:tom@hukatronic.cz).

Before sending bug report, please, try reproduce the bug using NeXT's

**Adaptec154xDriver**. Also don't forget to write us your configuration.

### **Release 1.0 notes:**

1. We have found at least one particular configuration (Gateway 4DX2/66V board, PAS-16 sound adapter, Logitech bus mouse, ATI UltraPro graphics, SEAGATE ST3600N hard disk) where this driver doesn't work properly. Anyway, even the NeXT's universal Adaptec154x Driver doesn't work with the same configuration. Should you possibly happen to have any problems, we will very appreciate to be informed, so as to be able to fix the problems.

Tomas Hurka  
Hukatronic (H.C.C.)  
Kankovskeho 8  
182 00 Praha 8  
Czech Republic  
e-mail: [tom@hukatronic.cz](mailto:tom@hukatronic.cz)

Ondrej Cada  
OCSoftware  
Pernerova 51  
180 00 Praha 8  
Czech Republic  
e-mail: [ocs@earn.cvut.cz](mailto:ocs@earn.cvut.cz)