

BusLogic BT-445S SCSI Adapter Device Driver

by

Tomas Hurka, Hukatronic tom@hukatronic.cz

Ondrej Cada, OCSoftware 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.

Notes about hardware setting of BT-445S:

1. In order to achieve a 10MBytes/sec transfer rate, the 'Maximum 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!

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.