SUBJECT: Qualstar AIT JBX -Product Support Plan November 23, 2005

Attached please find the Product Support Plan, for Qualstar AIT libraries.



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Product Overview

The TLS-4xxx products are a family of automated tape library systems, which use eight-millimeter (8mm) data cartridges in models, which can accommodate from 22 to 360 cartridges. One to twelve tape drives can be installed. Compressed data capacity range from 550 gigabytes to over 46 terabytes, depending on the number of data cartridges and the tape format. Features include an I/O port and two barcode readers. The entire system (drives and medium changer) is under host control via the LVD SCI interface.
The Jukebox can be connected as a second device to any existing DLT Jukebox.
Timna and Legato software will support full functionality.

• Features Common to All Models

Barcode scanning of data cartridges supported in all models
I/O Port for inserting and removing cartridges
Up to twelve pre-wired tape drive mounting bays
High degree of common parts with other models in the TLS-4000 family – mechanics, motherboard, etc.
Automated tape drive cleaning.

• Product Status

The product is released.

• Support Level

Customer: Customer is expected to replace the filters once in 3 months, or more often, if the environment conditions require so.
Note: the “filter-needs-replacement” alarm can be set upon installation to time/thermostat activation.
Engineer on -site: In case of a problem that can not be solved via phone or remote support, or in case the problem was identified as failed component, engineer should be on-site.
Once on site the engineer may call Qualstar Hot-line (7x24) directly (see Appendix A). Machine’s serial number is required when calling in.
Dealers: If self-supporting, should act the same as Creo engineer. If supported by Creo, Creo engineer should be involved.
Service Centers support: Subsidiary Specialist will support Local Service Centers. In case a problem will not be solved, Specialist will call CIL support. In emergency cases a specialist may call Qualstar directly.

• High availability issue

In case the controller fails – one can unplug the jukebox controller connection, so that all drives are used as single ones, till the failed part is replaced.
We recommend to offer customers that require high availability a standalone AIT drive option, just in case the jukebox PS fails.

INSTALLATION AND SITE PREPARATION

• Installation Engineer Profile

An Engineer who was trained already on the machine operation and installation should do the installation.

• Installation Policy

The installation should take not more than 2 hours. An Engineer who was trained already on the Qualstar JBX operation and installation should do it (Legato configuration is not included).
Note: Qualstar are offering their participation in several initial field installations in CMA/CE.
Qualstar policy states that any machine can be returned back free of charge within 30 days as of installation.

DOA machine qualifies for a 30 days free replacement by a trained engineer upon approval of DU's specialist and providing the serial number of the affected machine.

Sony recommends that the drive(s) be cleaned with a cleaning tape at about every 25 hours of use (head to tape contact). Although the drives are self-cleaning - Sony informed us that the cleaning tape does not cause any extraordinary wear or tear. Because of that they suggested inserting a cleaning tape at 25 hours just to keep things predictable and spotless in environments where we cannot control every aspect of what goes into the tape drive.
In practice we recommend to set Legato for a 2-week cleaning cycle for all drives.
The cleaning cassette can be used up to 50 times.

Documentation

Documentation for TLS-4000 (4222, 4480, 44120) Libraries:

Vendor PN	Description
501370	TLS-4000 Installation and Operation Manual
501380	TLS-4000 Technical Service Manual
501050	AIT Tape Drives Installation and Operation Manual

Documentation for TLS-412xxx (412180 and 412630) Libraries:

Vendor PN	Description
501300	TLS-412xxx Installation & Operations Manual
501300	TLS-412xxx Technical Services Manual
501050	AIT Tape Drives Installation and Operation Manual

Training

- ## Customers training

A "User Guide" will be handed to the customer at the end of the installation.
It is the engineer responsibility to teach the customer:
How to handle media.
Identify errors
How to handle the JBX from the front panel

- ## Specialist Training

Qualstar are offering Creo free quarterly training in the main service centers.
The training dates are TBD.
The training duration is one day. Once the engineer is trained on one library type – he can handle other types as well.

This training includes:
Qualstar product overview
AIT drive overview
Qualstar Jukebox diagnostics and FUP procedures
Qualstar FRU configuration and replacement
Packing/unpacking
Setup and installation
Operation
Component location & replacement
Diagnostics & tests
Break and repair

- ## Engineers Training

Engineers training should include a full day on this product added to a regular Server training.

Service support levels

- ## Overview

Subsidiaries will have in stock a spare TLS-4212 unit that will be offered to Creo for just a half price. This unit will be used as a source for spare parts ever needed, and will be "cannibalized" when needed. This will be much cheaper then purchasing spare parts.
All failed items (drives, power supplies, etc.) will be shipped to Qualstar for repair.
Qualstar will provide a 24x7 hot line for Creo engineers.
Extra to that a spare power supply and drive are defined in spare parts.

- ## Customer Serviceability

Customer can replace a failed drive and PS. The failed part should be sent to Creo for replacement.

- ***On-site Support***

In case of a problem that cannot be solved via phone, or in case the problem was identified as failed component (not a drive), engineer should be on-site. If the engineer cannot solve the problem - he should contact Qualstar hot line (see appendix A).

- ***Dealers***

If self-supporting, should act the same as Creo engineer. If supported by Creo, Creo engineer should be involved.

- ***Escalation procedure***

1. Call for Assistance

· for questions regarding Qualstar libraries or if technical support is required, call the Qualstar Customer Service at 1-805-583-7744 or toll
Free 1-877-444-1744 from 8:00 a.m. to 5 p.m. PST. After 5 p.m. PST call 1-805-526-7480. Identify yourself as Creo and request a 1-hour call
Back by a Qualstar technician.

2. Prepare for Call

· Have the following information ready when you call:
· Model number and serial number of tape drive and/or library
· Brief description of the problem
· Contact information, including company, requestor's name, and our call log number
· complete ship to address, in case a replacement unit is required
· Method of shipment requested. Creo pays for shipping costs in both directions. Standard method of shipment is prepaid UPS ground from Qualstar. Priority handling requests are billed at cost.

3. Explain your problem to the Technician

· Describe problem you are having with the library or tape drive
· Advise what error message you are getting and when it occurs
· Advise what you are doing when the error occurs
· Advise steps you may have already taken to solve the problem

4. Parts Replacement

· Qualstar products have an advanced replacement warranty during the first three years.
· Qualstar will issue an RMA for defective items. Replacement parts will be immediately shipped same day from Qualstar if requested before 1:00 p.m. PST. If call received after 1:00 p.m., then replacement parts will ship next day.
· Parts are available from Qualstar's factory in California, and also from stocking depots in Europe.
· all requests for replacements must be submitted to Qualstar USA. Qualstar from the closest stocking location will dispatch parts.
· Creo to return the defective unit upon receipt of replacement unit to Qualstar USA.

5. On-Site Service

· On-site service contracts are available worldwide from Qualstar.
· if on-site support is required a technician will be dispatched after determining entitlement. Response times are normally 4 hours subject to location restrictions.
· Parts are available from the US or Europe, Creo site locations worldwide.
· On-Site service contracts may be purchased from Qualstar on an annual basis.

6. Service Limitations

· Qualstar provides service on Qualstar hardware only, no software services is available.

LOGISTIC

- ***QUALSTAR AIT-II Kits***

Type	Vendor #	Sales#	Creo#
AIT II Desktop Single Drive	900350-2	501R49370	606A00260 AIT-2 External Single Drive

TLS-4222i 2 Drives, 22 slots	9003003 + 501042-01-4 RACK KIT A for 4222	501R49362 Includes Rack mount kit	606A00230 AIT-2 QUALSTAR 22S, 2D Rack mount
TLS-4222i 2 Drives, 22 slots	9003003	501R49361	606A00230 AIT-2 QUALSTAR 22S, 2D

Requires: 501R44790 LEGATO AUTOCHANGER S/W 1-32SLOTS (1500)

TLS-4212 2 Drives, 12 slots	900300	501R49433	606A00270 AIT-2 QUALSTAR 12S, 2D

Requires: 501R44790 LEGATO AUTOCHANGER S/W 1-32SLOTS (1500)

TLS-4480 4 Drives, 84 slots	900307	501R49363	606A00210 AIT-2 QUALSTAR 84S,4D

Requires: 501R49312 LEGATO AUTOCHANGER S/W 1-128 SLOTS (2400)

TLS-46120 4 Drives, 126 slots	900309	501R49364	606A00200 AIT-2 QUALSTAR 126S,4D

Requires: 501R49312 LEGATO AUTOCHANGER S/W 1-128 SLOTS (2400)

412180 AIT-2 6 Drives, 180 slots	900310.	501R49365	606A00240 AIT-2 QUALSTAR 180S,6D

Requires: 501R49367 LEGATO AUTOCHANGER S/W 1-256 SLOTS (2850)

TLS-412360 6 Drives, 360 slots	900311	501R49372	606A00250 AIT-2 QUALSTAR 360S,6D

requires: 501R49389 LEGATO AUTOCHANGER S/W UNLIMITED SLOTS (6573)

TLS-412300 6 Drives, 300 slots	900337	501R49434	606A00280 AIT-2 QUALSTAR 300S, 6D

requires: 501R49389 LEGATO AUTOCHANGER S/W UNLIMITED SLOTS (6573)

TLS-412600 6 Drives, 600 slots	900338	501R49435	606A00290 AIT-2 QUALSTAR 300S, 6D

requires: 501R49389 LEGATO AUTOCHANGER S/W UNLIMITED SLOTS (6573)

- ***Additional libraries***

606A00270	AIT-2 4212 LIB 2DRV 12SLOT	(900300)	501R49434
606A00280	AIT-2 412300 LIB 6DRV 300SLOT	(900337)	501R49434
606A00290	AIT-2 412600 LIB 6DRV 600SLOT	(900338)	501R49435
606A00275	AIT-2 4212 LIB 2-12 DEMO	(900300-DEMO)	
606A00235	AIT-2 4222 LIB 2-22 DEMO	(900303-DEMO)	

606A00215	AIT-2 4480 LIB 4-80 DEMO	(900307-DEMO)	
606A00205	AIT-2 46120 LIB 4-120 DEMO	(900309-DEMO)	
606A00245	AIT-2 412180 LIB 6-180 DEMO	(900310-DEMO)	
606A00255	AIT-2 412360 LIB 6-360 DEMO	(900311-DEMO)	
606A00285	AIT-2 412300 LIB 6-300 DEMO	(900337-DEMO)	
606A00295	AIT-2 412600 LIB 6-600 DEMO	(900338-DEMO)	

- ***AIT library kit***

The kit comes with each library .It includes

1 Documentation for TLS-4000 (4222, 4480, 44120) Libraries:
501370 TLS-4000 Installation and Operation Manual
501380 TLS-4000 Technical Service Manual
501050 AIT Tape Drives Installation and Operation Manual
2. Documentation for TLS-412xxx (412180 and 412630) Libraries:
501300 TLS-412xxx Installation & Operations Manual
501300 TLS-412xxx Technical Services Manual
501050 AIT Tape Drives Installation and Operation Manual
3. Set of barcode labels:
734-0003-8 AIT 8mm barcode labels 6 digits, with check character numbered 0-179 or 0-539, depending on the number of slots in the library
4. Set of 5 SONY 50/100GB AIT2 8MM Tape Cartridges and 1 SONY Cleaning Cartridge for AIT 8MM Drives :
646-0034-9 SDX2-50C SONY 50/100GB AIT2 8MM Tape Cartridge 230 meter with MIC.
646-0020-8 SDX-TCL SONY Dry Cleaning Cartridge for AIT 8MM Drives - 36 Cleanings
5. 738-0127-6 SCI interface cable 6FT fast
6. 117-0011-9 HD68 LVD/SE Multi mode Terminator

Note: there will be 2 cables and terminators shipped for all Jukeboxes with more then 2 drives.

- ***LVD interface kit 510K1P230A (Kit LVD Interface)***

The kit is attached to each kit and includes:

399Z1P350B INSTLL.HOST ADAPTER ON TIMNA
501V1P222A CD, LVD/FC UPDATE (AIX 4.2.1)
510V1P332 S/W-PK, F50 FIRMWARE UPDATE
605B00301 IBM DUAL CH. ULTRA-2 SCI ADPT

- ***015-00125A AIT-2 TO AIT-3 UPGRADE KIT FOR TLS***

609-00046 AIT-2 TO AIT-3 UPGRADE KIT FOR TLS LIB)

609-00044 TLS LIB FW2.18 UPGRADE FOR EXEC III PCB (Qualstar P/N: 900355-1)
609-00045 TLS LIB FW2.18 UPGRADE FOR EXEC IV PCB (Qualstar P/N: 900355-2)
610-00012 AIT-2 DRV FW 010F UPDATE TAPE

Note: These libraries can be connected to the E-30's via ultra SCSI SE.

- ***12->22 slot UPGRADE KIT FOR TLS***

11-1029A Tape Storage - Additional AIT-2 Tape Drive for Libraries with 12 or 22 Tape Slots
15-3519 Tape Storage - AIT Tape Library Slot Expansion Kit

- ***Firmware Upgrade kits***

The firmware upgrade kits for Qualstar TLS libraries and AIT-2 drives both are available now:

609-00044 "TLS LIB FW2.18 UPGRADE FOR EXEC III PCB"
609-00045 "TLS LIB FW2.18 UPGRADE FOR EXEC IV PCB"
610-00012 "AIT-2 DRV FW 010F UPDATE TAPE"
610-00022 AIT-3 DRV FW 0103 UPDATE TAPE
610-00025 AIT-3 DRV FW 0202_0004 UPDATE TAPE
636-00093A F/W XILINX/LCA/FPGA,MCE 2.23

- ***Options/Accessories:***

1. Additional Accessory Kit is available (included in each library), that can be ordered also separately:
510K1P407 -A179 KIT
Set of 5 SONY 50/100GB AIT2 8MM Tape Cartridges and
1 SONY Cleaning Cartridge for AIT 8MM Drives
Barcode labels A000-A179
510K1P408 -A539 KIT
Set of 5 SONY 50/100GB AIT2 8MM Tape Cartridges and
1 SONY Cleaning Cartridge for AIT 8MM Drives
Barcode labels A000-A539

2. Additional Barcode labels are available:
606E10010 BCL FOR AIT (A000-A179)
606E10020 BCL FOR AIT (A000-A539)
606E10040 BCL FOR AIT (B000-B179)
606E10050 BCL FOR AIT (B000-B539)
606E10060 BCL FOR AIT (C000-C179)
606E10070 BCL FOR AIT (C000-C539)

Note: To order customized barcodes please contact the following US companies:
Labels from EDP(Engineered Data Products) -303-465-2800
Labels from Dataware: - 800-426-4844

3. Tapes:
457A10040 - AIT-2 8MM 50/100GB CARTRIDGE
457A10050 - AIT 8MM CLEAN CARTRIDGE

- ***Spare Parts***

We recommend keeping a smaller TLS-4212i model as a “Spare parts unit”.
Extra to that one PS , drive and air filter should be kept spare for each 30 installed Jukeboxes.

The s/p part numbers are:

C p/n	Description	Vendor p/n
606A00180	AIT II SNGL DRV-SONY 50/100G	637-0206-2

606A00315	Qualstar Lubricant	732-0004-1
606A00325	Qualstar SDX3-100C tape	646-0039-8
606E10010	Qualstar labels A000-199	734-0010-3
606E10020	Qualstar labels A000-599	734-0011-1
606S00121	Qualstar Executive III PCBA	501387-01-3
606S00122	Qualstar Barcode Reader	500983-01-0
607S00746	Qualstar HD68M-HD68M 6 FT	738-0126-8
607S00747	Qualstar HD68-LVD/SE MM	117-0011-9
607S00753	Qualstar PS 110 watt	500826-03-7
607S00754	Qualstar PS 40 watt	500826-02-9
607S00755	Qualstar PS 65 watt for 6110	500826-04-5
607S00756	Qualstar PS Robotic I	500826-01-1
607S00757	Qualstar Air Filter-TLSxxxx	500584-01-6
607S00759	Qualstar JBX magazine	501110-02-1
607S00832	Qualstar Switch Bracket	500815-01-4
607S00836	Qualstar Carousel PCBA	500617-01-4
609-00010	Qualstar Executive IV PCBA	501447-01-5
609-00011	Qualstar Y Receiver PCBA	501307-01-1
609-00012	Qualstar Carriage Ass-8mm	500650-01-5
609-00013	Qualstar Carousel Motor	500822-53-1
609-00014	Qualstar 2 Drv pwr distrib	501327-01-9
609-00015	Qualstar 4 Drv pwr distrib	501327-01-8
609-00016	Qualstar 6 Drv pwr distrib	501357-01-1
609-00020	Qualstar Cleaning tape	646-0020-8
609-00046	AIT-2 TO AIT-3 UPGRADE KIT FOR TLS LIB	

A single drive can be offered as an option for a high availability:

501R49370	AIT-2 Single Drive
606A00260	Qualstar AIT II Desktop Single Drive
510K1P230	LVD interface kit

The spare unit will be ordered as following:
CN, CE, CAP, CMA - From Israel
CA - Directly from Qualstar
Delivery time is estimated in 30 days.

Parts Repair policy

Failed Parts, which are under warranty, will be sent to repair to Qualstar.
Qualstar offers Creo a standard warranty for 3 years period, starting as of installation date.
This warranty includes:
3 year – Advanced replacement, covering repair cost. Creo will cover the shipment costs only for this period.

Appendix A -Contacts

QUALSTAR CORPORATION
6709 Independence Avenue
Canoga Park, CA 91303
FAX: (818) 592-0116
Phone: (818) 818-592-2974 -This is a strategic partner number
www.qualstar.com -general Qualstar site
http://www.qualstar.com/146035.htm -technical issues (contacts, email, etc)

1) George Brightenburg - Service Manager: handles all service requests including RMA's (george@qualstar.com <mailto:george@qualstar.com>, 1-805-5831748 or 1-805-526-7480 24/7)

2) Stuart Quirke - Account Manager:(SFQuirke@qualstar.com <mailto:SFQuirke@qualstar.com> 1-818.592.0061 or cell 1-805-358-8964)

3) LogistiC and staging in Europe. Expected uptime end of February. All RMA or replacement requests have to go to George Brightenburg, he will dispatch the shipment from a location that guarantees 24hours.
Local focal point is - Eric Hoogveld (hoogveld@qualstar.com <mailto:hoogveld@qualstar.com> 49.606.192.53.58 or cell 49.171.812.51.27)