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SA100 Storage Subsystem Installation and User's Guide

EK–SA100–IM–001

Digital Equipment Corporation

First Edition, November 1991

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Preface

This guide consists of four chapters that provide the following information about the SA100 storage subsystem:

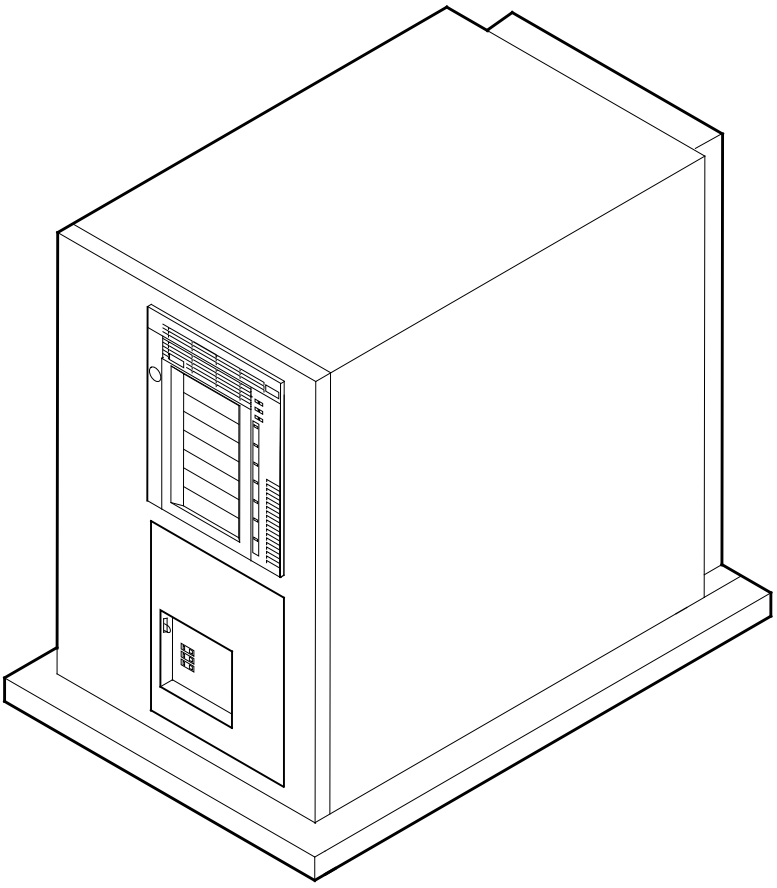
- User information
- Physical installation
- Configuration
- Acceptance testing

1
User Information

The SA100 storage subsystem does not require any special site preparation, and can be added to any installation that uses conventional ac power.

The SA100 storage subsystem consists of two compartments: the upper compartment contains one factory installed magazine tape subsystem; the lower compartment contains the SCSI/STI adapter assembly.

Figure 1–1 SA100 Storage Subsystem



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See the *Tx857 Series Magazine Tape Subsystem Owner's Manual* for information on the magazine tape subsystem.

1.1 Specifications

The following table lists the specifications of the SA100 storage subsystem:

Table 1–1 Specifications

Characteristic	SA100 Storage Subsystem
Data backup capacity	18.2 Gbytes
Performance	800 KBytes/s sustained data rate
Power requirements	100 to 120/220 to 240 Vac (50/60 Hz)
Weight	86.184 kg (190 lb)
Height	71.12 cm (28 in)
Width	43.18 cm (17 in)
Length	86.36 cm (34 in)
Communications interface	STI bus
Environmental standard (operating)	10 to 40°C 20 to 80% RH
Environmental standard (nonoperating)	–40 to 66°C 10 to 90% RH
EMI certification	Meets applicable FCC standards for Class A devices
Safety certification	Meets UL, CSA, and IEC standards
Power consumption	285 W

1.2 Related Documentation

The following documentation can be used to supplement this guide:

Table 1–2 Related Documentation

Title	Order Number
Tx857 Series Magazine Tape Subsystem Owner's Manual	EK–TF857–OM

2
Physical Installation

2.1 Site Planning

Follow the requirements specified in this section to prepare a site for the SA100.

2.1.1 Space Requirements

Leave enough space to remove the magazine tape subsystem from the front of the cabinet. Also leave enough space to remove the SCSI/STI adapter assembly from the rear of the cabinet (about 1 meter).

2.1.2 Power Requirements

The subsystem can operate from 100 to 120 Vac at 60 Hz, or from 220 to 240 Vac at 50 Hz.

2.1.3 Environmental Requirements

The SA100 conforms to a modified class A environment (general offices and workstations). When the SA100 is operating, the temperature should range from 10 to 40°C with relative humidity of 20 to 80% noncondensing. When the SA100 is not operating, the temperature should range from –40 to 66°C with relative humidity of 10 to 90%.

2.1.4 STI Interconnect Cabling

1. Connect the STI cable(s) to the rear of the SA100 chassis. They are held in place with two captive screws per cable. See Figure 2–1, SA100 Rear View
2. Connect the HSC cable(s) to the K.SI module. **K.STI modules do not support the SA100 storage subsystem.**
3. Assign a unique unit number to the magazine tape subsystem. The unit number is a decimal number between 0 and 255. To assign the unit number, use the pushbuttons on the side of the unit number switch to increment or decrement the number.

   Transport numbers are always assigned in groups of four to each formatter. Transports are assigned unit numbers of 0 to 3 for the first formatter. On a system with two or more formatters, transports are assigned unit numbers of 4 to 7 on the second formatter, 8 to 11 on the third formatter, and so on.
4. Place a decal identifying the transport unit number on the magazine tape subsystem just below the loader fault indicator.

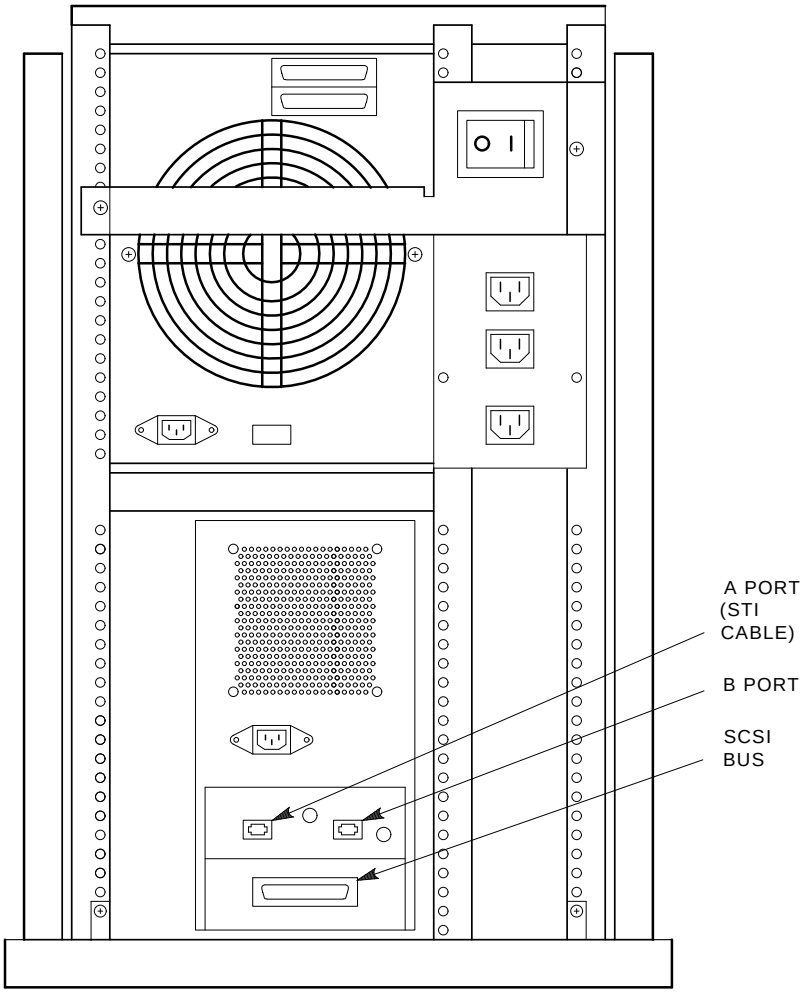
2.1.5 STI Cables

The SA100 storage subsystem will contain one 25 foot STI cable. For dual applications, a second cable is required. Following is a list of part numbers and length of cables that can be connected to a SA100 storage subsystem:

Table 2–1 STI Interconnect Cables

Part Number	Length
BC26V–03	0.914 m (3 ft)
BC26V–06	1.828 m (6 ft)
BC26V–12	3.657 m (12 ft)
BC26V–25	7.62 m (25 ft)
BC26V–50	15.519 m (50 ft)
BC26V–6D	1.93 m (6 ft 4 in)
BC26V–7L	2.387 m (7 ft 10 in)
BC26V–80	24.663 m (80 ft)

Figure 2–1 SA100 Rear View



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3
Configuration

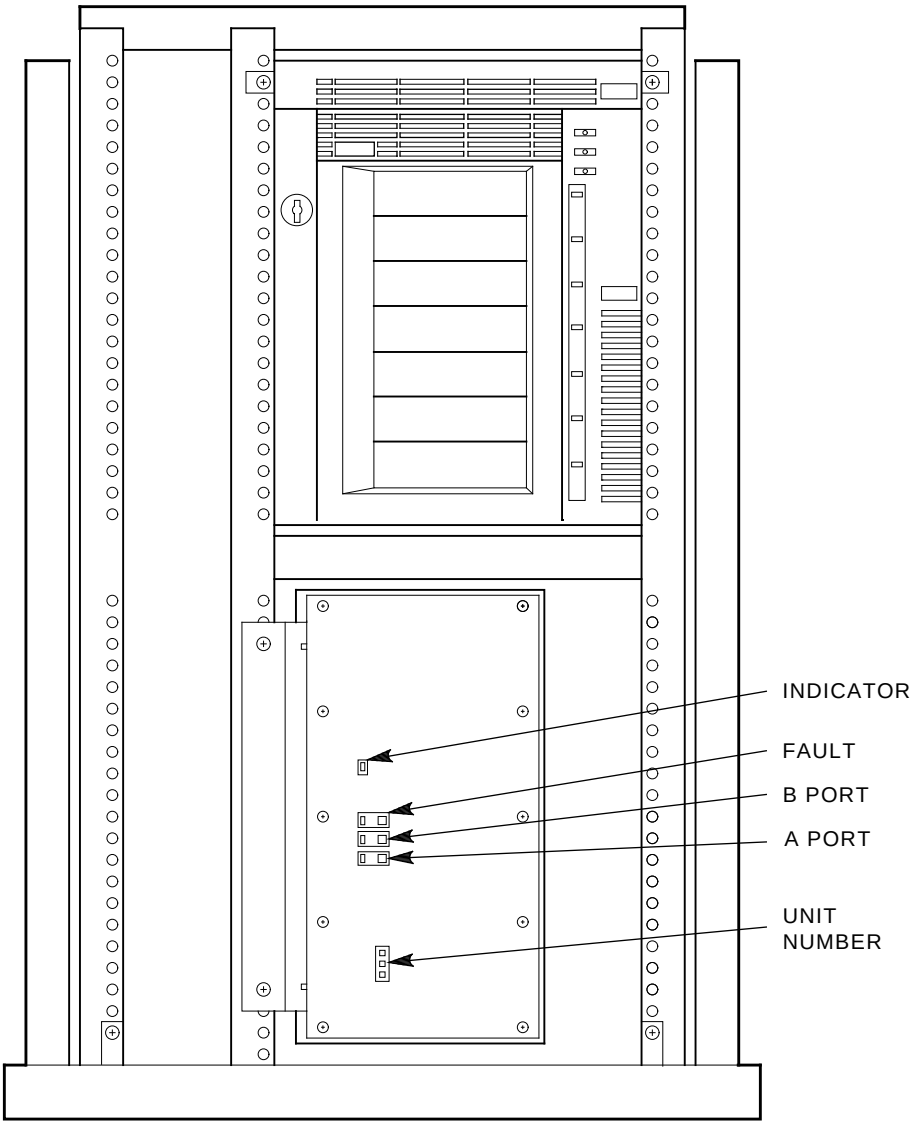
3.1 Controls and Indicators

The port select, fault, ready, and unit number indicators and switches are on the SCSI/STI adapter module. See Table 3–1 and Figure 3–1.

Table 3–1 SA100 Controls and Indicators

Control/Indicator	Function/State
PORT SELECT A	In the enable (in) position, PORT SELECT A allows the HSC to access port A. Under microprogram control, the HSC can then cause port A to go on-line.
	Placing PORT SELECT A in the disable (out) position with port A on-line causes serious errors at the HSC.
	PORT SELECT A lights when port A is on-line (ready to receive any command or data).
PORT SELECT B	The definition of PORT SELECT B for port B is the same as the definition of PORT SELECT A for port A.
FAULT	The fault indicator lights when a potentially fatal error has been detected in the formatter. Even though an error has occurred, the formatter still attempts to communicate with the HSC.
	With a fatal error present, press the FAULT switch to clear the error.
Ready	The ready indicator lights after the SCSI/STI adapter successfully completed its power-on self-tests.
UNIT NUMBER	DSA unit number.
TZ857	See the *Tx857 Series Magazine Tape Subsystem Owner's Manual*.

Figure 3–1 SA100 Controls and Indicators



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Acceptance Testing

See the *Tx857 Series Magazine Tape Subsystem Owner's Manual* for information on power-on self-test (POST) for the magazine tape subsystem.

4.1 Diagnostics

There are two SA100 subsystem diagnostics, ILTAPE and ILEXER:

- **In-Line Tape Diagnostic (ILTAPE)** — A canned sequence diagnostic that tests the SA100 functions by using the basic tape commands.
- **In-Line Exerciser (ILEXER)** — This diagnostic exercises from 1 to 10 units in any combination of disk and drives connected to an HSC. Logic is tested by writing and reading predetermined data patterns and recording modes.

ILTAPE and ILEXER are run from the HSC ASCII port. See the appropriate HSC user documentation for more information.

Perform the following procedure to test the SA100:

1. Run ILTAPE for three passes. No errors are allowed. (When both STI ports are used, run ILTAPE through the second port for one pass also.)
2. Run ILEXER for 15 minutes. (When both STI ports are used, run ILEXER through the second port for 15 minutes also.)