



TX1320M1 DCS Platform

Overview

The TX1320M1 is a hardware platform for the open nodes that compose the DCS system. This platform can be installed on a desk or in a console or cabinet.

Features

- Highly reliable memory
- ECC memory with hardware-based automatic correction of transient 1-bit errors
- Redundant hard disks (RAID 1) that reduce the risk of data loss
- High-speed LAN (100 Mbps) that can be made redundant
- Up to 8-year maintenance service after delivery *

* For 8-year service, regular replacement of consumables and limited-life parts and a maintenance contract are necessary. Without a maintenance contract, the maintenance service period is 5 years after delivery.



Table 1. Connectable devices

Name	DOSS	DOSS_H	TSS	DOHS™	DOBS™	DOGS
Monitor 1 *1 (optional)	1	1	1	1	1	1
Monitor 2 *2 (optional)	1	1	1	-	-	-
DVD multi-drive	1	1	1	1	1	1
Mouse	1	1	1	1	1	1
Keyboard	1	1	1	1	1	1
Operator keyboard (optional)	1	1	1	-	-	-
External speakers (optional)*5	1	1	1	-	-	-
Line printer (optional)	1 *4	1 *4	1 *4	-	-	-
Color inkjet printer (optional)	1 *4	1 *4	1 *4	-	-	-
Monochrome laser printer (optional)				-	-	-
Color laser printer (optional)				-	-	-
Ethernet port (network A)	1	1	1	1	1	1
Ethernet port (network B)	1	1	1	1	1	1
Ethernet port (Plant information network) (optional)	1	1	1	1	1	1
Uninterruptible power supply*3 (optional)	1	1	1	1	1	1

*1 A touch screen monitor can be selected for DOSS, DOSS_H, and TSS. A 19-inch monitor or larger can be used. For DOHS and DOGS, a 15-inch or 19-inch monitor can be selected. A configuration without a monitor is also possible.

*2 Monitor 2 cannot have a touch screen.

*3 Be sure to install an uninterruptible power supply. Otherwise, a hard disk failure or other device failure may occur in the event of a power outage.

*4 This is the number of printers that can be directly connected to the TX1320M1.

*5 Used for sound output because the TX1320M1 has no built-in speakers.

Specifications

Item	Specifications		Notes
	DOSS/DDGS/DOBS	DOSS_H/DOHS/TSS	
Operating system	Windows 7 Professional (64bit) SP1 Japanese/English version	Windows Server 2008 R2 standard (64-bit) SP1 (5-CAL) Japanese/English version	*2
Processor	Intel® Xeon® Processor E3-1231 v3 (8 MB Cache, 3.40 GHz, 4 cores)		-
Main memory (with ECC)	4 GB		Standard feature
Display resolution	2048 × 1536 max., 32-bit color (VGA) 1920 × 1200 max., 32-bit color (DVI-I)		-
User input devices	Keyboard	JIS109 Japanese keyboard (USB) English keyboard (USB)	Standard feature
	Mouse	Optical mouse (USB)	Standard feature
Internal storage device	HDD	500 GB (RAID 1, mirroring)*1	Standard feature
	DVD	1 DVD multi-drive (DVD-RAM: single-sided, 4.7 GB, 3 ×)	Standard feature
Interface	Display	Two 29-pin DVI-I (using a dedicated branch cable) If a 19-inch TFT monitor is connected, use the included DVI conversion cable. If a KVM switch and 15-inch TFT monitor are connected, use the 2 included converter connectors (DVI-I to VGA).	Standard feature
	USB ports	USB 2.0 (front: 2, back: 4), USB 3.0 (front: 2, back: 2) Connectable devices: mouse, keyboard, license key, printer, external speakers	Standard feature
	LAN port	RJ45 NIC connector for 2 channels (10/100/1000 Mbps)	Standard feature
	Serial port	D-sub 9-pin port (COM1)	Standard feature
Expansion bus*2	1 slot	PCI Express Gen 2 × 1 used for expansion serial card (COM3, COM4)	Selected by model number
	2 slots	PCI Express Gen 2 × 4 used for 1-channel LAN	Selected by model number
	3 slots	PCI Express Gen 3 × 8 for the exclusive use of video card	Standard feature
	4 slots	PCI Express Gen 3 × 8 for the exclusive use of the RAID card	Standard feature
Power source specifications	Voltage	100 to 120 or 220 to 240 Vac ±10 Note: For 220 Vac models, a dedicated power cable (HD-PWC12) is needed.	-
	Frequency	50/60 Hz	-
	Instantaneous power outage	10 ms	-
	Power consumption	Max. : 149 W/152 VA. Normal: 90 VA or less	-
External dimensions (W × D × H)	98 × 399 × 340 mm		-
Mass	10 kg max.		-
Recommended replacement period	5 years		-
Recommended replacement period of components	HDD	3 years	-
	Keyboard	3 years	-
	Mouse	3 years	-

*1 For DOSS/DOGS/DOBS/TSS nodes, 80,000 MB has been allocated for the C drive. The rest is unformatted.
For DOHS/DOSS_H nodes, 50000 MB and 200000 MB have been allocated for the C and D drives respectively. The rest is unformatted.

*2 The operating system has a Windows Embedded license. Accordingly, use is possible only in an Azbil Corporation system such as Harmonas-DEO.

Expansion slot assignment

Model No.	HD-PA15FDSC2_ HD-PA1DFDSC2_	HD-PA15FDSC3_ HD-PA1DFDSC3_
Slot 1	Expansion serial card	Expansion serial card
Slot 2	Empty	1-channel LAN
Slot 3	2-channel video card	2-channel video card
Slot 4	RAID card	RAID card

Installation environment

Item		Conditions
Temperature	During operation	10 to 35 °C
	During transportation or storage	-10 to +50 °C
Temperature change rate		±10 °C/h max.
Humidity	During operation	20 to 80 % RH (without condensation)
	During transportation or storage	10 to 90 % RH (without condensation)
Dust *1		0.3 mg/m ³ max.
Corrosive gas		No detectable amounts
Vibration resistance	During operation *2	Amplitude: 0.35 mm max. (2 to 9 Hz) Acceleration: 1 m/s ² max. (9 to 150 Hz)
	During transportation or storage	Amplitude: 1.5 mm max. (2 to 9 Hz) Acceleration: 5 m/s ² max. (9 to 150 Hz)
Shock resistance	During transportation or storage	Acceleration: 40 m/s ² max.
Supply power frequency:		50/60 Hz ±2 %
Spike noise from power lines		1000 V max.
Electrostatic noise		Contact discharge: 4 kV (air discharge: 8 kV)
Insulation resistance		500 Vdc, 20 MΩ
Dielectric strength		1500 Vac for 1 minute
Instantaneous power outage		10 ms max.
Altitude	During operation	1000 m max. above sea level

*1 This device cannot be used in an environment where there is a conductive substance like dust.

*2 Excluding vibration caused by the DVD drive.

Model numbers

■ TX1320M1 model number

Table 2. DOSS/DOGS/DOBS

Basic model No.	Specifications						Description
	1	2	3	4	5	6	
HD-PA1							TX1320M1 model number
	5						Windows 7 Professional (64-bit) SP1
		F					4 GB ECC memory
			DS				500 GB, RAID 1
				C			DVD multi-drive
					2		2 Ethernet ports
					3		3 Ethernet ports
						E	English OS, 115 Vac, 220 Vac

Table 3. DOSS_H/DOHS/TSS

Basic model No.	Specifications						Description
	1	2	3	4	5	6	
HD-PA1							TX1320M1 model number
		D					Windows Server 2008 R2 Standard (64-bit) SP1
			F				4 GB ECC memory
				DS			500 GB, RAID 1
					C		DVD multi-drive
						2	2 Ethernet ports
						3	3 Ethernet ports
						E	English OS, 115 Vac, 220 Vac

Optional model No.

Model No.	Name	Notes
HD-SIF05	Serial communication I/F board (PCI Express low-profile card)	2 D-sub 9-pin ports (COM3/COM4) with dedicated branch cable
HD-ETH31B	1-channel Ethernet board (PCI Express low-profile card)	RJ45 NIC connector for 1 channel (1000/100/10 Mbps)
HD-ACVSPK7U	External USB speakers (powered by USB port)	2 speakers, output: 2.1 W max (1.05 W max. each). [Specifications] Frequency range: 50 to 18000 Hz Speaker unit impedance: 8 Ω Input terminal: USB port Power supply system: via USB port External dimensions (1 speaker): 64 × 78 × 103 mm Cable length: 1.2 m
HD-PWC12	220 to 240 Vac power cable	Rating: 250 V, 10 A Essential for 230 Vac models. Cable length: 2 m
FNV-USBCVR01	USB port guard	6 protective plugs for unused USB ports and a plug removal tool
FNV-USBCVR01K	USB port protective plug	12 protective plugs for unused USB ports

External dimensions

(Unit: mm)

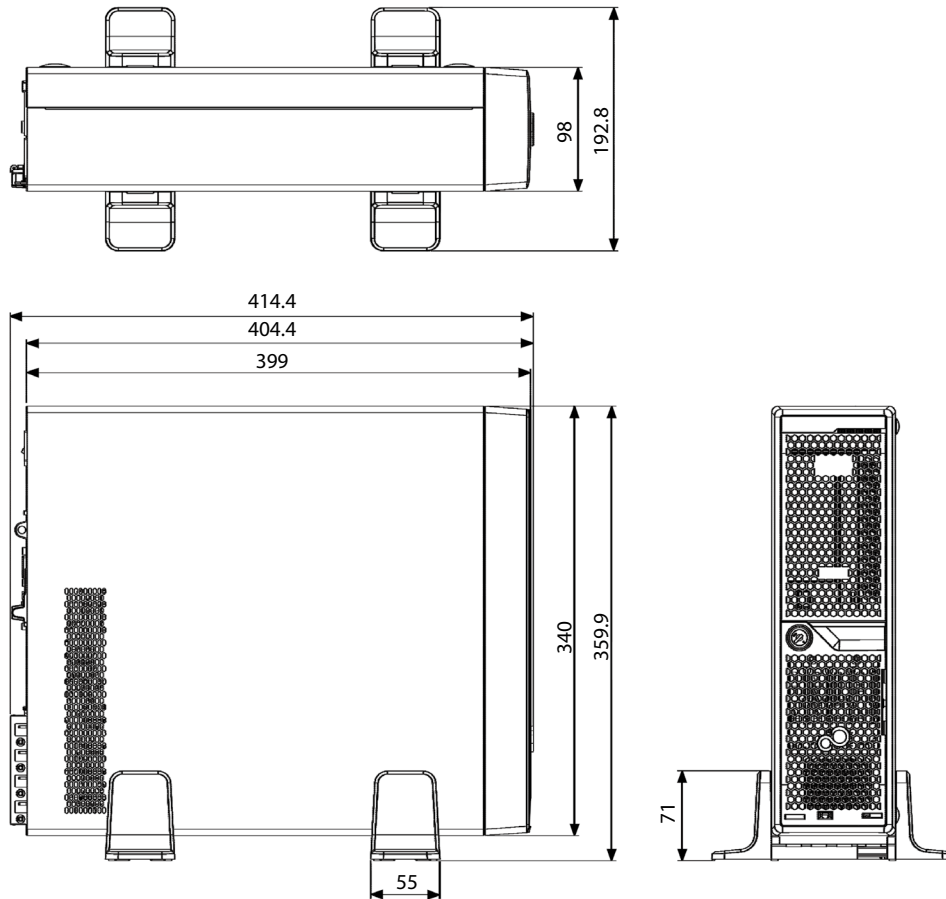


Figure 1. TX1320M1 DCS Platform

- Harmonas-DEO, PlantWalkerHyperVision, PREXION, Knowledge Power, DOHS, DOBS, DOPL, and DOPC are registered trademarks of Azbil Corporation.
- Windows and Windows Server are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.
- Ethernet is a registered trademark of Xerox Corporation.
- Intel Xeon is a trademark of Intel Corporation.
- Product names, model names, and company names that are specified in this document are trademarks or registered trademarks.
- Unless otherwise specified, products that are mentioned in this document are standard models.

Please, read 'Terms and Conditions' from following URL before the order and use.

<http://www.azbil.com/products/factory/order.html>

Specifications are subject to change without notice.

azbil

Azbil Corporation
Advanced Automation Company

1-12-2 Kawana, Fujisawa
Kanagawa 251-8522 Japan
URL: <http://www.azbil.com/>

1st edition: Feb. 2016
2nd edition: May 2016

No part of this publication may be reproduced or duplicated without the prior written permission of Azbil Corporation.