



ASTRA Server 4U

Technical Reference Sheet



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Aveco

www.aveco.com

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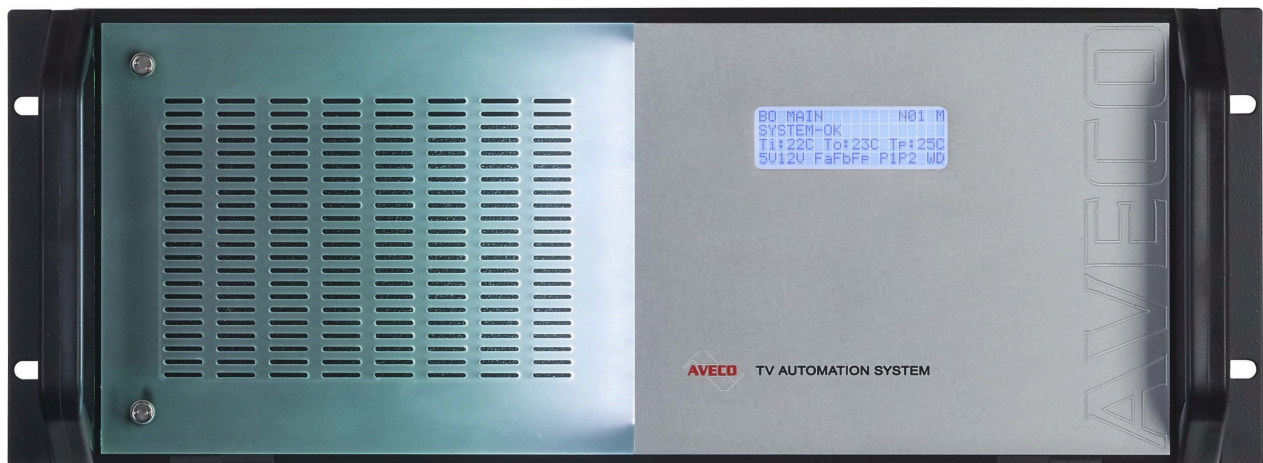
INTRODUCTION

OVERVIEW

Aveco's automation servers are industrial PC computers with a mission critical real-time operating system QNX. Automation software consists of a large set of dedicated software modules that can be used to build the required solution, from all-in-one automation server providing MCR and Studio automation together with the MAM, up to large networks of geographically distributed redundant automation servers, always acting as one automation system.

The role of our automation has always been to integrate the 3rd party products of our customers' choice to deliver optimum solutions for their business models; we make a working playout facility out of a pile of 3rd party boxes.

Figure 1. ASTRA Server 4U



DESCRIPTION

Designed to fully support small to large systems for ingest and playout, the ASTRA Server is the heart of the automation system. A fully featured piece of hardware which was built with the needs of a demanding studio in mind. With features including multi-site disaster recovery, multi-path architecture for flexible control and redundancy options, and hot-swappable modules for expansions, upgrades and repairs, you can be certain about your on air status.

With up to 48 connectors, the ASTRA Server provides comprehensive support for centralized Hub & Spoke operations so your studio's equipment can be designed your way and will always be under your control.

Equipped with ASTRA MCR or ASTRA Studio, the ASTRA server can become the most powerful, reliable, and user friendly broadcast automation system on the market.

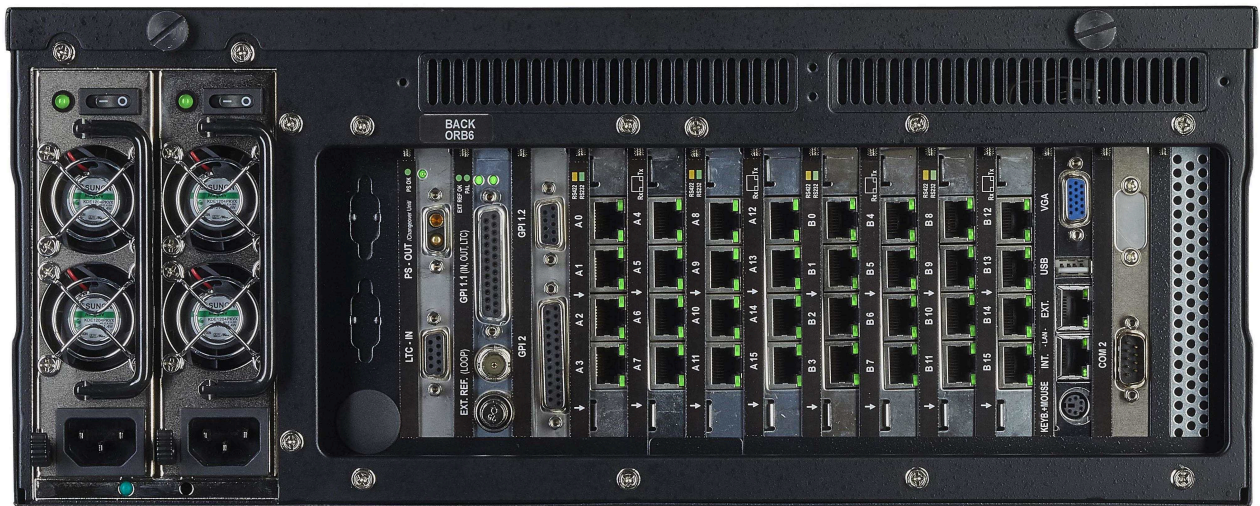
Assembly of the ASTRA Server 4U:

Unit	Qty	Control ports for devices
ASTRA Server 4U	1	16x or 32x RS232/RS422 serial ports

For even more control, the ASTRA Server can be delivered as a 5U variant.

Unit	Qty	Control ports for devices
ASTRA Server 5U	1	48x RS232/RS422 serial ports

Figure 2. ASTRA Server 4U - Back Panel



PACKAGE CONTENTS

When delivering ASTRA Server 4U, Aveco will include the server unit and only the power cables necessary to supply power to the server.

Qty	Content
1	ASTRA Server 4U
2	Power cable, 1m

OPERATION

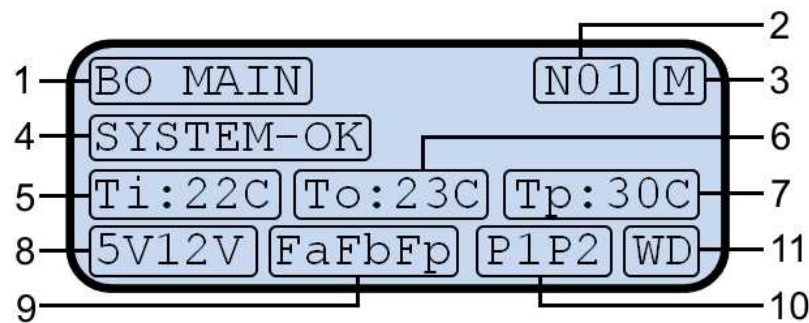
The server is switched on using the POWER button under the front panel of the server.

To switch off the server, follow the instructions on the monitor.

- Stop the system - press “S” and confirm with “Y”
- Prepare for Power off - press “P”, after that, you will see a countdown from 10 to 0
- When the countdown reaches 0, you will see a notice, “System may now be powered down”. Now, you can power off the server using the POWER button under the front panel of the server

STATUS DISPLAY ON RUNNING SYSTEM

Figure 3. Status Display - System Running

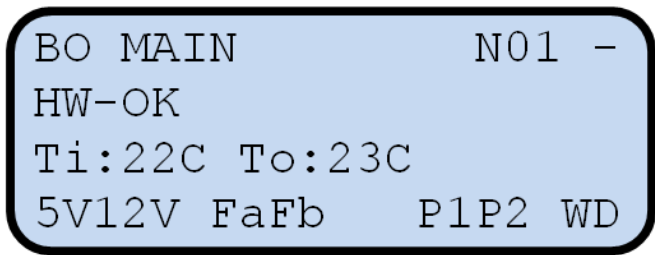


1	Name of instance
2	Number of node
3	Master (or Slave)
4	Error Status
5	Temperature in (sensor in front of the server)
6	Temperature out (sensor in back of the server)
7	Temperature of processor
8	Voltage status 5V and 12V
9	Fan status (Fa and Fb are in the front of the server, Fp is processor fan)
10	Status of power sources modules
11	Watchdog status

STATUS DISPLAY ON STOPPED SYSTEM

When the system is stopped, some data will not be displayed - Server Master/Slave Status, temperature of the processor, processor fan and **SYSTEM-OK** are replaced with **HW-OK**.

Figure 4. Status Display - System Stopped



TECHNICAL SPECIFICATIONS

ASTRA SERVER SPECIFICATIONS

Figure 5. ASTRA Server Configured with 2 ILC Cards - 4U Variant

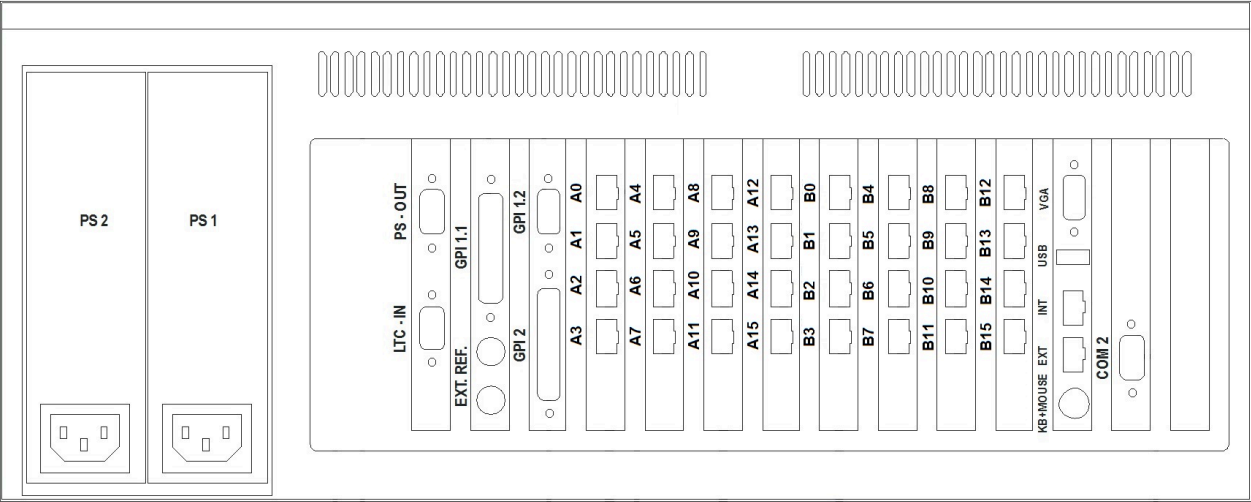
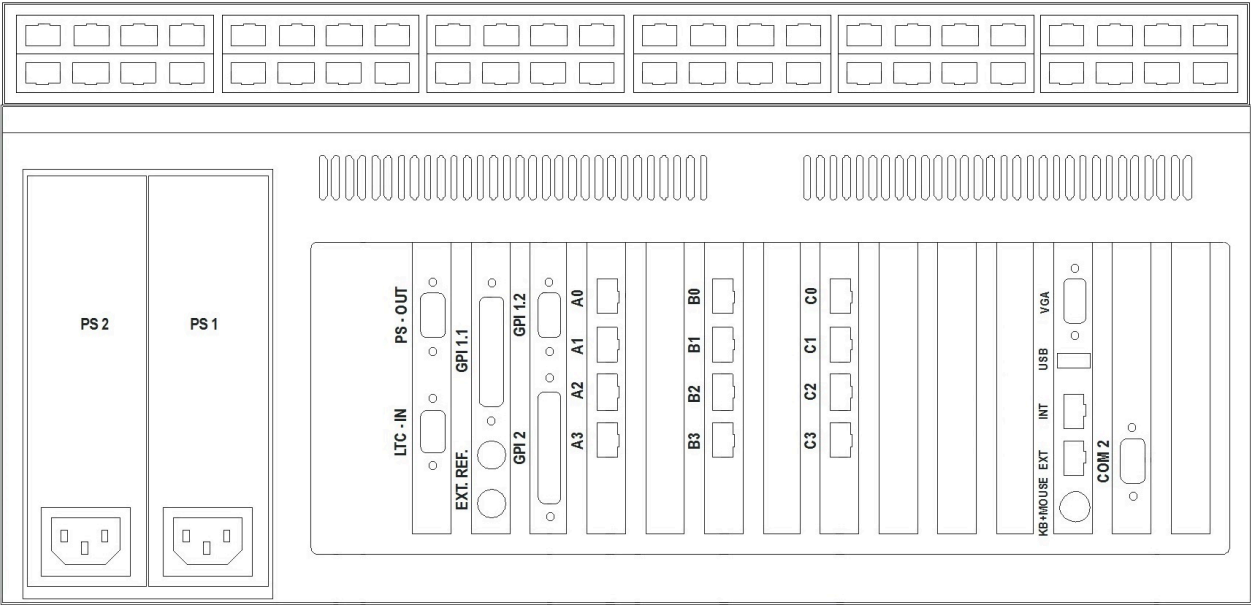


Figure 6. ASTRA Server Configured with 3 ILC Cards - 5U Variant



Connectivity	
ASTRA Server 4U	16 or 32 RS232/RS422 serial ports
ASTRA Server 5U	48 RS232/RS422 serial Ports

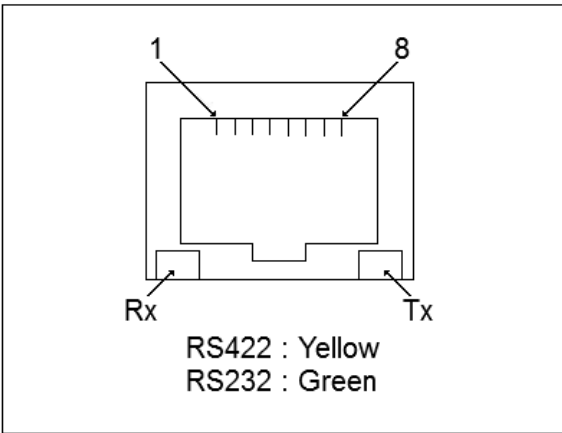
Physical	
Dimensions	4U (483mm x 180mm), depth 540mm 5U (483mm x 225mm), depth 540mm
Weight	~35kg

Power	
Power Supply	Redundant, hot swappable Two power cords
Input Voltage	110-240V, 50-60Hz
Power consumption	280W

SERVER CONNECTORS

Figure 7. Pinout of RS422/RS232 Ports

Connectors A0-A15, B0-B15, C0-C15		
RJ45 8 pin female		
	RS442	RS232
1		CTS
2	Frame ground	Frame ground
3	Tx A(-)	TxD
4	Rx B(+)	
5	Rx A(-)	
6	Tx B(+)	RTS
7		RxD
8	Signal ground	Signal ground



RS422 : Yellow
RS232 : Green

Figure 8. Pinout of GPI Connectors - GPI 1.1 / GPI 2

Connector GPI 1.1				Connector GPI 2			
D-SUB 25 pin female				D-SUB 25 pin female			
GPI OUT, GPI IN, LTC IN				GPI OUT, GPI IN			
1	GPI IN 1	14	GPI OUT 1 a	1	GPI OUT 9 a	14	GPI OUT 13 a
2	GPI IN 2	15	GPI OUT 1 b	2	GPI OUT 9 b	15	GPI OUT 13 b
3	ground	16	GPI OUT 1 c	3	GPI OUT 10 a	16	GPI OUT 14 a
4	GPI IN 3	17	GPI OUT 2 a	4	GPI OUT 10 b	17	GPI OUT 14 b
5	GPI IN 4	18	GPI OUT 2 b	5	GPI OUT 11 a	18	GPI OUT 15 a
6	ground	19	GPI OUT 2 c	6	GPI OUT 11 b	19	GPI OUT 15 b
7	GPI IN 9	20	GPI OUT 3 a	7	GPI OUT 12 a	20	GPI OUT 16 a
8	GPI IN 10	21	GPI OUT 3 b	8	GPI OUT 12 b	21	GPI OUT 16 b
9	ground	22	GPI OUT 3 c	9	GPI IN 5	22	nc
10	GPI IN 11	23	GPI OUT 4 a	10	GPI IN 6	23	nc
11	GPI IN 12	24	GPI OUT 4 b	11	GPI IN 7	24	ground
12	LTC IN a	25	GPI OUT 4 c	12	GPI IN 8	25	ground
13	LTC IN b			13	nc		

Figure 9. Pinout of GPI Connectors - GPI 1.2

Connector GPI 1.2	
D-SUB 9 pin female	
GPI OUT	
1	GPI OUT 5 a
2	GPI OUT 5 b
3	GPI OUT 6 a
4	GPI OUT 6 b
5	GPI OUT 7 a
6	GPI OUT 7 b
7	GPI OUT 8 a
8	GPI OUT 8 b
9	ground

Figure 10. Schematic of GPI input and output - GPI 1.1 / GPI 1.2 / GPI 2

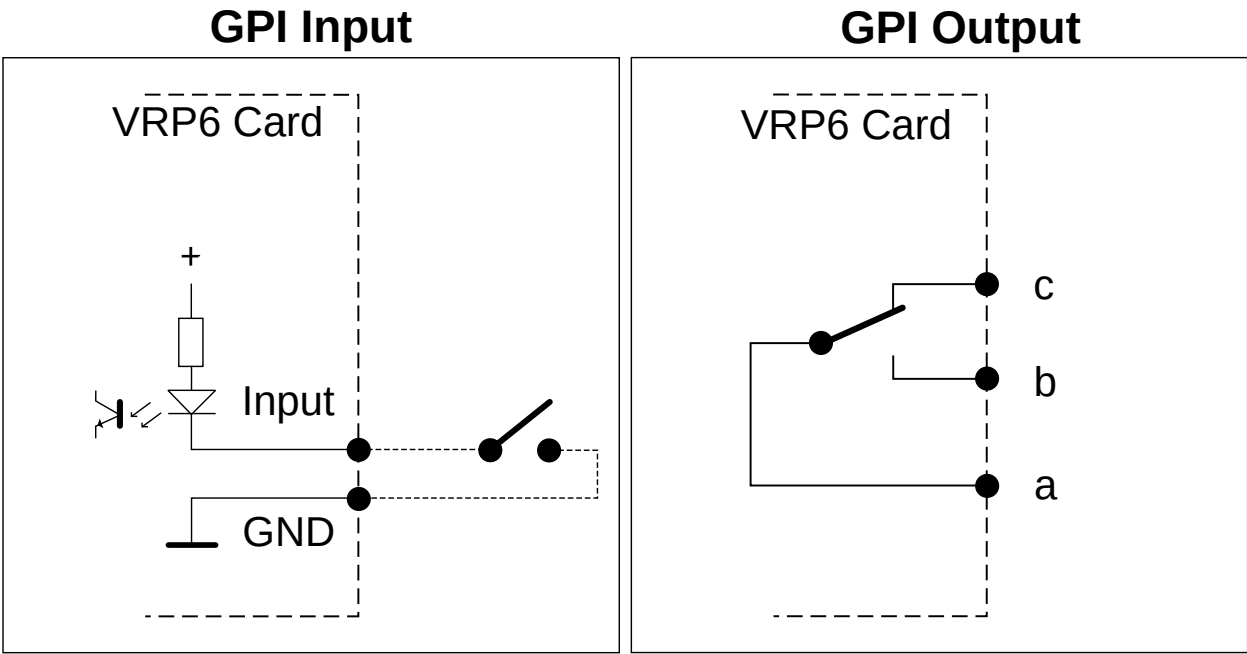


Figure 11. Pinout of LTC Connector

Connector LTC IN	
D-SUB 9 pin female	
LTC INPUT	
1	Input a
2	Input b
3	
4	
5	
6	ground
7	
8	
9	

Figure 12. Schematic of LTC input

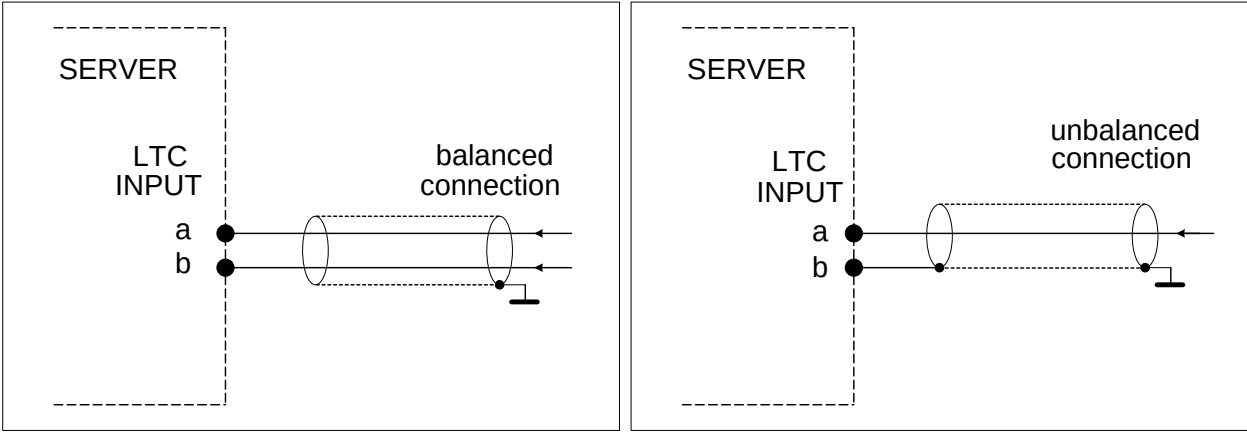
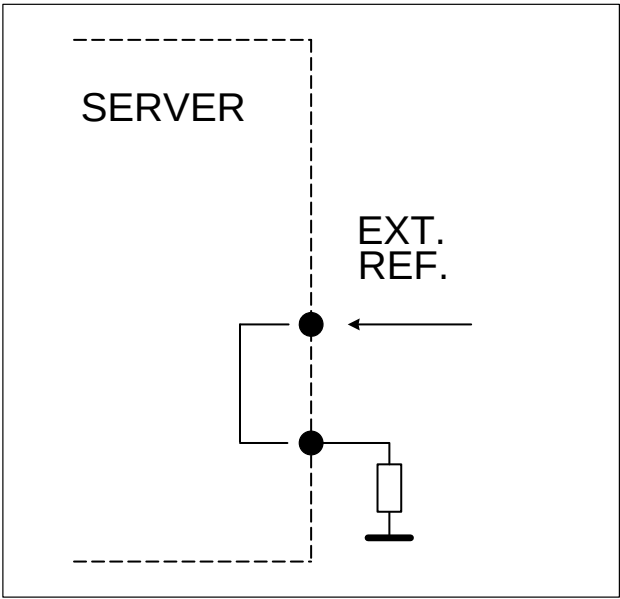


Figure 13. Pinout of COM Port

COM Port	
D-SUB 9 pin female	
RS 232	
1	DCD
2	RxD
3	TxD
4	DTR
5	signal ground
6	DSR
7	RTS
8	CTS
9	RI

Figure 14. Schematic of REF input



CABLING

ASTRA Server 4U ships with only two power cables used to provide power to the server. Cables to connect any other devices to the ASTRA server are not provided with the server unit and are to be supplied by the system integrator, the end customer, or may be bundled with other devices.

When supplying cables to connected devices, refer to the pinout of the RS422/RS232 ports in [Figure 7](#), the pinout of GPI connectors GPI 1.1 / GPI 2 in [Figure 8](#), GPI 1.2 in [Figure 9](#), the schematic of GPI input and output in [Figure 10](#), the pinout of the LTC connector in [Figure 11](#), the schematic of LTC input in [Figure 12](#), the pinout of the COM Port in [Figure 13](#), and the schematic of REF input in [Figure 14](#).