

## DATASHEET

### Experion LS I/O Specifications and Technical Data

Experion LS I/O Specifications and Technical Data, EP03-110-400, V2, January 2012

#### 1. Introduction

##### 1.1 I/O Families

Experion provides three I/O families that can be used in conjunction with the C200E/C200 control processor. The table below lists each family along with major characteristics.

Figure 1-1 Experion LS I/O Families

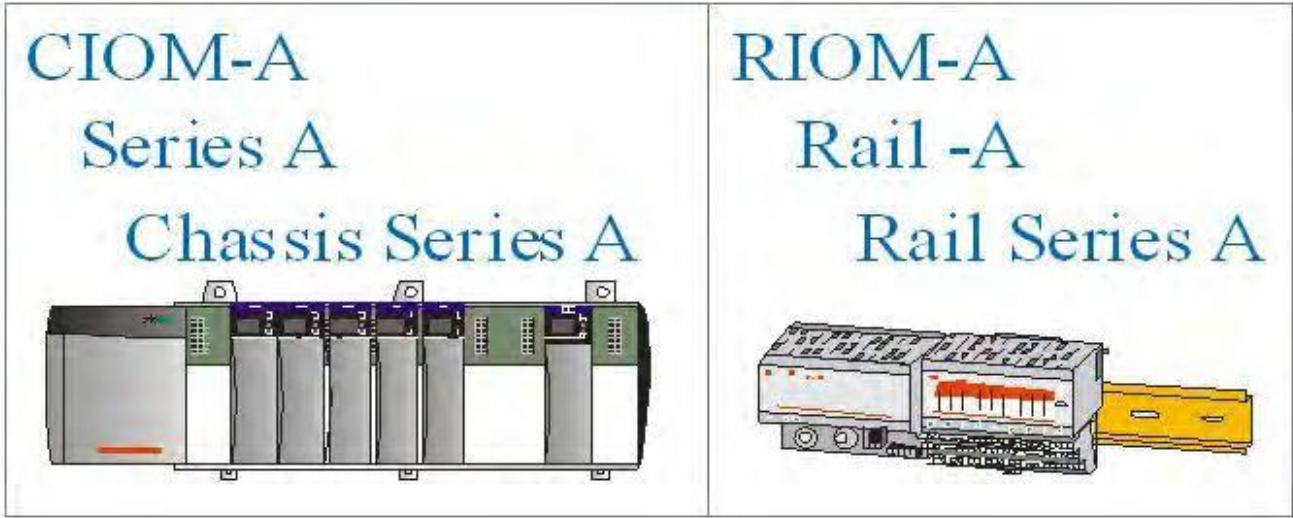


Table 1-1 I/O Family Summary and Description

I/O Family (Source)	Mounting Type/style	Major Features and Distinguishing Characteristics
CIOM-A	Chassis	Wide variety of I/O types and chassis sizes Good Backplane robustness (but non-redundant) Good quality I/O when redundancy is not required
RIOM-A	Din Rail	Inexpensive installation and wiring Flexible mounting configurations

**Table 6-3: Chassis - Series A Network and Specialty I/O Module Model Numbers**

Description	Chassis Slots Used	Model Number
<b>Specialty Modules</b>		
PI (High Speed Pulse Input). 8-high speed counter inputs & 2- On/Off outputs. This module uses a 36 pin Terminal Block (TC-TBCH). Corresponding A-B model number is 1756-IJ4.	1	TK-MDP081
SI (Serial Interface) module. Provides 2-Serial Channels to communicate with smart devices.	2	TC or TK-MUX021
C200 Control Processor For complete information, consult the C200 Specification document.	2	TK-PRS021
RM (Redundancy Module) to support C200 redundancy	2	TK-PRR021
<b>Communication/ Network/ Gateway Modules</b>		
PBIM (PROFIBUS DP Interface Module) <i>Order directly from SST</i> For complete information, consult the PBIM Specification document.	1	SST-PFBCLX
DeviceNet Bridge Module. <i>Order directly from Allen-Bradley</i> For complete information, consult the DeviceNet Specification document.	1	1756-DNB
IOLIM (I/O Link Module), Interface for PMIO. For complete information, consult the PMIO Specification document.	2	TK-IOLI01
CNI (Single media Type)	1	TC-CCN014
CNI (Dual Media Type)	1	TC OR TK-CCR014
Ethernet Module	1	TK-FTEB01

## 6.2 Series-A Chassis Summary

**Table 6-4 – Series-A Chassis Types & Specifications**

Table 7. TC-FXX041, TC-FXX071, TC-FXX102, TC-FXX132, TC-FXX171, TK-FXX101, TK-FXX131			
Model	Module slots	Dimensions (with mounting tabs & power supplies) W x H x D	Approx. weight (without modules)
TC-FXX042	4	26.3 x 16.9 x 14.5 cm (10.3 x 6.7 x 5.8 in)	0.75 kg (1.6 lbs)
TC-FXX072	7	36.8 x 16.9 x 14.5 cm (14.5 x 6.7 x 5.8 in)	1.1 kg (2.4 lbs)
TC-, TK-FXX102	10	48.3 x 16.9 x 14.5 cm (19.0 x 6.7 x 5.8 in)	1.45 kg (3.2 lbs)
TC-, TK-FXX132	13	58.8 x 16.9 x 14.5 cm (23.1 x 6.7 x 5.8 in)	1.9 kg (4.2 lbs)
TC-FXX172	17	73.8 x 16.9 x 14.5 cm (29.1 x 6.7 x 5.8 in)	2.2 kg (4.8 lbs)
Minimum Chassis-to-Cabinet Vertical Distance		15.2 cm (6.0 in)	
Minimum Chassis-to-Cabinet Horizontal Distance		10.2 cm (4.0 in)	
Minimum Chassis-to-Chassis Vertical Distance		20.3 cm (8.0 in)	
Minimum Chassis-to-Chassis Horizontal Distance		10.2 cm (4.0 in)	
Type of mount		Panel mount	
Environmental Conditions Agency Certification		Same as Power Supply Specifications	
Minimum Enclosure Depth		20.3 cm (8.0 in)	

## 6.5 Specifications – Traditional I/O Modules

### TC-IAH061, TK-IAH061

**Table 6-6** High Level Analog, 6-Input, Voltage and Current (10 V & 4-20 mA) Module

Parameter	Specification
Number of Points	6 galvanically isolated channels
Input Voltage Range (Voltage) Input Current Range (Current)	10.50 VDC maximum 0 to 21.0 mA (w/249 resistor)
Voltage Resolution ± 10.5 volt range 0 to 10.5 volt range 0 to 5.25 volt range Current Resolution	16 bits across each range shown below 343 $\mu$ V typical (15 bits + sign) 171 $\mu$ V typical 86 $\mu$ V typical 0.34 $\mu$ A
Input Impedance (Voltage) (Current)	Greater than 10 M 249
Open Circuit Detection Typical OC Detection Time	Upscale reading (Voltage); Zero scale reading (Current) 5 seconds (Voltage); 1 sec (Current)
Normal Mode Noise Rejection Common Mode Rejection	Greater than 60 dB @ 60 Hz 120 dB @ 60 Hz, 100 dB @ 50 Hz
Channel Bandwidth	0 to 15 Hz (-3 db)
Settling Time to 5% of Full Scale	Less than 80 milliseconds
Calibrated Accuracy @ 25 C	Better than 0.1% of range (Voltage); better than 0.15% of range including 0.05% sense resistor (Current)
Module Update Rate for All Channels	25 ms
RFI Immunity	Error of less than 2.0% of range at 10 V/m, 27 to 1000 MHz
Overvoltage Capability	120 VAC/VDC continuous at room temperature (Voltage); 8 VAC/VDC with on-board current resistor (Current)
Input Offset Drift with Temperature	2 $\mu$ V/C typical (Voltage) 8.0 $\mu$ V/C typical (Current)
Gain Drift with Temperature	35 ppm/C typical (Voltage); 45 ppm/C typical (Current)
Power Dissipation	4.3 W max
Backplane Current	See Module Power Consumption Data, page 46.
Isolation Voltage Channel to channel User to system	100% tested at 2546 VDC for 1 second 100% tested at 2546 VDC for 1 second
Connection Terminal Blocks	TC-TBNH, 20-position terminal block