

ENGINEERING DOCUMENTATION

EtherCAT Remote I/O Module

Dimensional & Integration Guide

DOCUMENT	REVISION / ISSUE	STATUS
DIG-ES-IO-01-M004	DRAFT-08 / 27 Aug 2026	Engineering Integration Reference

Integration Overview

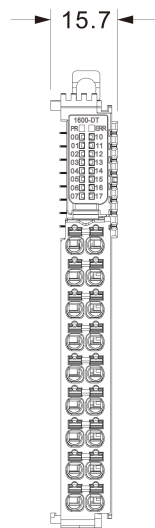
Distributed EtherCAT remote I/O module for control-cabinet and machine-level signal integration. This guide supports mounting, backplane and field-power planning, channel loading, network wiring, grounding and commissioning.

Key Integration Facts

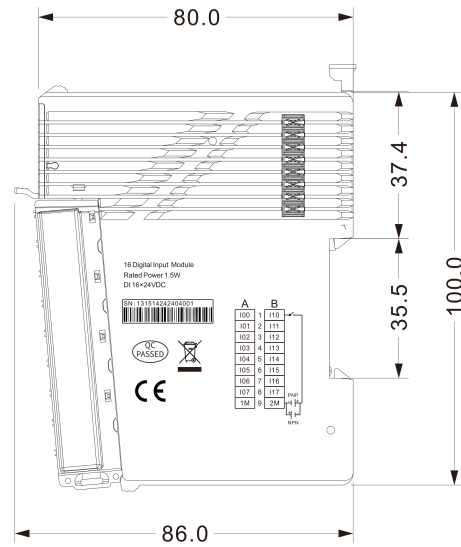
INTEGRATION ITEM	PUBLISHED VALUE
Module type	Digital input module

Product Structure & Views

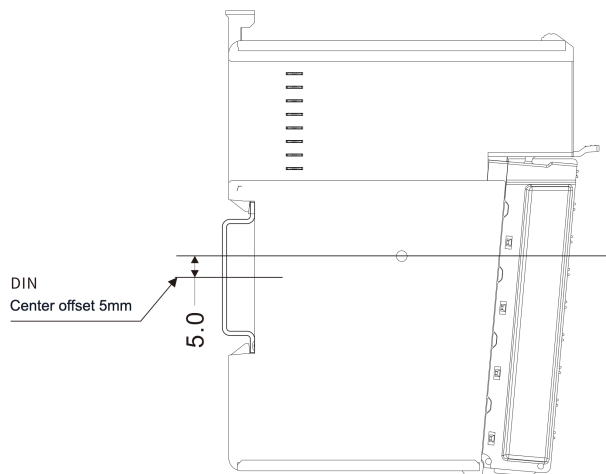
These views present product structure, mounting interfaces and relevant integration geometry for this SKU.



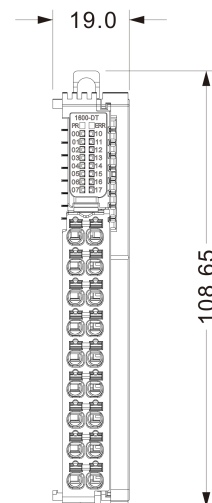
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

VIEW	FIELD	VALUE
Mechanical View 1	Width	15.7 mm
	Error indicator label	ERR
	Power indicator label	PR
Mechanical View 2	Overall Width	80.0 mm
	Right Side Distance	37.4 mm
	Overall Height	100.0 mm
	Lower Section Distance	35.5 mm
	Module Depth	86.0 mm
Mechanical View 3	DIN rail mounting position label	DIN rail mounting position
	Product center offset from DIN rail	5.0 mm downward offset
Mechanical View 4	Module width	19.0 mm
	Module total height	108.65 mm
	PR status indicator	PR
	Error indicator	ERR

Overall Dimensions and Mounting Interface

PARAMETER	PUBLISHED VALUE	UNIT
Weight	Approx. 70 g	kg

- Confirm module width, rail or backplane engagement, connector access and replacement clearance against the applicable exact-SKU drawing.
- Mount on a rigid supported rail or approved backplane without twisting the enclosure or connector interface.

Power Distribution and Channel Loading

- Separate logic, field and load power as required by the applicable module definition.
- Verify per-channel and aggregate current, protection and conductor sizing for normal and fault conditions.

EtherCAT Network Integration

- Use qualified industrial Ethernet cabling, connector retention and topology consistent with the controller and cycle-time design.
- Validate node order, addressing, distributed-clock behavior and network recovery during integration planning.

Signal Interface and Wiring

- Use the current terminal and channel assignment for this exact SKU.
- Separate sensitive analog and communication wiring from switching loads and provide suitable suppression for inductive circuits.

Grounding, EMC and Environment

- Bond rails, functional earth and shields according to the cabinet grounding architecture.
- Validate enclosure protection, contamination, condensation, temperature and airflow for the complete installed assembly.

Commissioning and Diagnostics

- Commission with field loads isolated where practicable, verify module identity and channel mapping, then enable outputs in specified stages.
- Include communication, power and channel diagnostic states in the machine fault strategy.

Integration Checklist

- | | |
|----|--|
| 01 | Confirm the exact SKU, 2D drawing and applicable terminal data. |
| 02 | Verify mounting, module width, connector access and replacement clearance. |
| 03 | Validate logic, field and load power distribution and protection. |
| 04 | Confirm EtherCAT topology, addressing, cycle timing and recovery. |
| 05 | Verify every channel assignment and load boundary. |
| 06 | Complete shielding, grounding, cable segregation and enclosure checks. |
| 07 | Commission inputs and outputs in specified stages and verify diagnostics. |

[View SKU Product Datasheet](#) [Request controlled 2D drawing](#) [Request controlled STEP review](#) [Request a Quote](#)

Engineering Use and Verification Notice

01. This Dimensional & Integration Guide applies only to EmbodyStack SKU ES-IO-01-M004 and is intended for dimensional evaluation and preliminary integration. It is not a applicable manufacturing drawing, wiring definition, application approval, machinery risk assessment, safety validation or integration planning document. Before design freeze, machining, wiring or energization, verify all dimensions, tolerances, mounting and locating features, load boundaries, electrical interfaces, thermal conditions, cabling, grounding, protection, commissioning and applicable regulatory requirements against the applicable EmbodyStack engineering data for this exact SKU. Where this guide and applicable product documentation differ, the applicable product documentation governs. Validate the complete installed system under intended duty cycles, loads, accelerations, environmental conditions and credible fault cases.