

EMERSON OVATION

OMC100

Ovation micro controller with software-defined I/O

Product identity and technical data

Manufacturer	Emerson
Model	OMC100
Product family	Ovation
Product type	Ovation Micro Controller
Embedded I/O	32 software-defined channels
Processor	Quad-core ARM Cortex-A53
Memory	1 GB LPDDR4
Storage	1 GB flash and 256 MB QSPI NOR
Ethernet	2 independent 10/100/1000 RJ45 ports

Model-specific summary

OMC100 is an Emerson Ovation Micro Controller for power, water, and wastewater control applications requiring compact distributed I/O.

The unit provides 32 software-defined I/O channels, dual Gigabit Ethernet, Ovation I/O expansion, serial and CAN connectivity, and local control execution when the host connection is unavailable.

Configuration and selection checks

Additional technical data

Expansion	One branch of eight Ovation I/O modules
Serial / field interface	RS-232, RS-485, and CAN through a 9-pin D-sub connector
Operating temperature	-20 to +70 °C
Originated points	Up to 10,000
Control tasks	Up to 3; 10 ms to 300 s in 10 ms increments

Channels

- Analog-output channels can be configured for 0–10 V or 4–20 mA with optional HART
- Analog-input channels can be configured for 0–10 V or 4–20 mA with optional HART
- Additional channel choices include 24 VDC DI and DO, thermocouple, and 2- or 3-wire RTD

Events

- Sequence-of-events processing provides 1 ms resolution
- No more than four of the 32 channels can be configured for sequence-of-events use at one time
- The controller supports as many as three process-control tasks

Security

- A secure VPN is supported beginning with Ovation release 3.8
- The controller continues local control when the host connection is lost
- Embedded protocol software connects supported PLC, PAC, and RTAC devices without extra hardware

Application

- Distributed power-generation control
- Water-treatment process control
- Wastewater-treatment process control

Selection note

OMC100 selection must define all 32 channel types, expansion I/O, serial or CAN interfaces, network security, task rates, and the saved Ovation configuration.