

SC-UCMX02 51307195-276

Honeywell SC-UCMX02 is a nonredundant ControlEdge RTU controller with mixed onboard I/O. It combines local control, data logging and SCADA communications in one modular controller assembly.

01

Mixed analog, digital and pulse signal handling

02

HART digital access with the required I/O license

03

Flash or removable-SD data logging

04

Ring-network expansion through dedicated end plates

Field signals

28 onboard points

CPM + IOTA

Local RTU logic

SCADA / I/O

Networks and expansion

APPLICATION BOUNDARY

Confirm the SC-UCMX02 label, installed IOTA, input modes and approved RTU application before commissioning or replacement.

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Configuration	Nonredundant CPM and IOTA
Onboard I/O	28: 8 AI, 2 AO, 10 DI, 6 DO, 2 PI/DI
Processor	Dual-core 32-bit ARM Cortex-A9, 667 MHz
RAM / flash	256 MB / 256 MB
Nonvolatile memory	4 Mbits; 20+ year data life without battery
Rated input	24 Vdc +/-25%; 18-30 Vdc
Maximum ripple	120 mVpp
Maximum input current	1.20 A at 30 Vdc; controller plus 9 IOMs
Ethernet	2 shielded RJ45 ports; 10/100BaseTx

Serial ports	2 RS232 and 2 RS485; 300-115200 baud
AI modes	8 channels; 4-20 mA or 1-5 Vdc, software-selectable
PI modes	2 channels; pulse or digital input; 0-10 kHz
Expansion capacity	30 IOMs; 5 rows; maximum 9 IOMs per row
SD media	32 GB; Class 6 or Class 10
Execution cycle	20 ms or longer
Power, minimum	1.7 W at 24 Vdc; all onboard I/O active, no serial, only Ethernet 2 active
Power, no expansion	2.9 W at 24 Vdc; onboard I/O and 4 serial ports active; Ethernet 1/2 active
Power, expansion	3.4 W at 24 Vdc; onboard I/O, 4 serial ports, Ethernet 1/2/3 active; excludes IOMs/instruments

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LOCAL MIXED-I/O CONTROL

Acquire transmitter, discrete and pulse signals through the onboard I/O and execute the approved RTU application.

REMOTE SCADA STATION

Use configured Ethernet or serial protocols to exchange data with the supervisory system and local subsystems.

EVENT AND TREND CAPTURE

Select flash or SD storage and a supported logging interval for time-stamped process records.

EXPANDED REMOTE I/O

Use dedicated end plates and ring cabling to extend the controller to additional mixed-I/O rows.

STATION INTEGRATION

Select the current or voltage input mode in software, document each pulse/digital assignment, and size controller and field-instrument power separately. Plan expansion rows with the designated end plates and ring cabling; verify protocol settings, log intervals and HART licenses before downloading the application and testing the complete remote station.

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How are the 28 SC-UCMX02 onboard channels divided?	There are 8 HART-capable analog inputs, 2 HART-capable analog outputs, 10 digital inputs, 6 digital outputs and 2 channels configurable as pulse or digital inputs.
Can its analog inputs accept both current and voltage transmitters?	Yes. The standard analog-input mode is selected in software as 4-20 mA or 1-5 Vdc.
What signals can the two pulse-input channels process?	The sink-type pulse inputs accept 5-10 V peak-to-peak signals from 0 to 10 kHz. They support accumulator/rate functions and a configurable filter, or can be configured as digital inputs.
Which license enables digital HART access on the onboard I/O?	SP-IHARTP is required for each onboard or expansion I/O module on which HART digital access is needed.
Where can SC-UCMX02 save a data log?	The RTU can log to flash memory or an optional SD card. Supported SD media is 32 GB, Class 6 or Class 10.
Which data-log intervals can be selected?	Intervals are 1, 5 or 10 seconds; 1, 5 or 10 minutes; or 1 hour. Datalog timestamps have 1 ms resolution.
How far can its RS485 network extend?	The RTU specification permits 1200 m, up to 32 responders and 120-ohm termination on a two-wire half-duplex RS485 network.
Does the 3.4 W expansion-case power figure include field loads?	No. At 24 Vdc it covers active onboard I/O, four serial ports and Ethernet ports 1/2/3. Expansion IOM consumption and connected instrument loads must be budgeted separately.

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STEP 1

Record the full controller and IOTA identity before disconnection.

STEP 2

Use the approved isolation procedure for power and field circuits.

STEP 3

Keep the supply within 18-30 Vdc and 120 mVpp ripple.

STEP 4

Verify each analog-input current/voltage mode in software.

STEP 5

Map all 28 onboard points, including both PI/DI assignments.

STEP 6

Fit the required HART license before requesting digital device data.

STEP 7

Check RS485 polarity, termination and configured baud rate.

STEP 8

Validate expansion-ring communication and the downloaded application before release.

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MANUFACTURER SOURCE

Honeywell ControlEdge RTU Specification Sheet, SC03-300-174, Version 1.0, December 2022, pp. 6-17, 23-25, 29

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