Item	Specification
Resolution	Recommended resolution: 1280x800 or above Optimal resolutions: 1920x1080, 1366x768, 1280x1024 and 1280x800
Graphic Card	DirectX9 compatible graphic adapter
Installation Media	Via CD-ROM drive

2.9. General

2.9.1. Power Requirements

Power is supplied to the controller and I/O modules through the power input terminals on the controller IOTA and the left end plate, (when used). The relevant specifications at each power input terminals are detailed below.

Model Number / Description / Item	SC-UCMX02 Non Redundant Controller with onboard IOM	SC-UCNN11 Redundant Controller	SC-TEPL01 Left End Plate
Rated input voltage	24 VDC ± 25%	24 VDC ± 25%	24 VDC ± 25%
Input voltage range	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC
Maximum ripple voltage	120 mVpp	120 mVpp	120 mVpp
Maximum rated input current	1.20 A at 30 VDC (controller plus 9 IOMs)	1.30 A at 30 VDC (Redundant controllers plus 9 IOMs)	1.02 A at 30 VDC (9 IOMs)

2.9.2. Power Consumption

The tables below are provided for the purpose of sizing power systems. Three different scenarios are provided with each having various controller options configured. Select the scenario most suited and interpolate values when required.

These tables only include power consumption data of the listed modules and do not include power consumption of any connected instruments, (transmitters, valves etc.), even if that power is provided through the I/O module terminals. Allow for instrument power consumption separately in your power system sizing calculations along with other components to be powered by the system, (e.g., network radio).

Model Number	Minimum Power Consumption where there are no expansion IOMs	Maximum Power Consumption where there are no expansion IOMs	Maximum Power Consumption where there are expansion IOMs
SC-UCMX02	1.7 W [2]	2.9 W [3]	3.4 W [4]
SC-UCNN11	5.76 W [5]	6.72 W [6]	6.96 W [7]

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Model Number	Minimum Power Consumption where there are no expansion IOMs	Maximum Power Consumption where there are no expansion IOMs	Maximum Power Consumption where there are expansion IOMs
Note 1 – All values exclude power consumption of any connected instruments. Note 2 – Input voltage 24Vdc; All I/O channels active; no serial ports active; Ethernet port 2 active; Ethernet ports 1 and 3 not active. Note 3 – Input voltage 24Vdc; All I/O channels active; 4 serial ports active; Ethernet ports 1 and 2 active; Ethernet port 3 not active. Note 4 – Input voltage 24Vdc; All I/O channels active; 4 serial ports active; Ethernet ports 1, 2 and 3 actives; Does not include expansion IOMs. Note 5 – Input voltage 24Vdc; no serial ports active; Ethernet port 1 active; Ethernet ports 2, 3, 4 and 5 not active. Note 6 – Input voltage 24Vdc; 4 serial ports active; Ethernet ports 1, 2, 3 and 4 active; Ethernet port 5 not active. Note 7 – Input voltage 24Vdc; 4 serial ports active; Ethernet ports 1, 2, 3, 4 and 5 active; Does not include expansion IOMs.			

Other hardware

Model Number	Specification
SC-UMIX01	2.0 W
SC-TEPR01	0.0 W
SC-TEPL01	0.0 W
Note 1 – All values exclude power consumption of any connected instruments. Note 2 – Input voltage 24Vdc; All I/O channels active;	

2.9.3. Physical and Environment

Dimensions and Weight

Model Number	Specification	
	Dimensions (mm) L x W x H	Weight (g)
SC-UCMX02	190 x 99 x141	700
SC-UCNN11	190 x170 x141	1000
SC-UMIX01	190 x 99 x141	680
SC-TEPR01	190 x 39 x 16	140
SC-TEPL01	190 x 39 x16	140

Other

Unless specified separately, all ControlEdge RTU hardware meets the following common specifications.

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2.10.3. Marine Certification

Certification	Approval Rating
BV	Bureau Veritas Rules for the Classification of Steel Ships (EC Code: 31) [1]
DNVGL	DNV GL Rules for classification of +/- Ships, Offshore units, and high speed and light craft
Note 1 - Approval valid for ships intended to be granted with the following additional class notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.	

2.10.4. Security Certification

Item	Specification
ISASecure, IEC 62443 Conformance	SC-UCMX02, firmware version R160: Security Level 2; SC-UCNN11, firmware version R150: Security Level 2;

2.10.5. Other Standards

Item	Specification
Flammability	UL 94 V-0
EMC	RCM Mark
Conformal Coating	ANSI/ISA S71.04 Class G3
Vibration	IEC 60068-2-6: 1.0 g acceleration over 10–150 Hz; 0.5 g acceleration over 150–2000 Hz

3. Model Numbers

3.1. Hardware

To simplify the ordering process, ControlEdge RTU has a limited number of model numbers to provide complete RTUs. For example, for one complete non-redundant Controller with Onboard Mixed I/O Module, only 1 model number is required, SC-UCMX02.

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3.1.1. ControlEdge 2020 Platform

Model Number	Description
SC-UCMX02 [1]	Non-redundant Controller with 28 mixed onboard I/O with 256MB DRAM
SC-UCNN11 [2]	Redundant Controller
SC-UMIX01 [3]	Mixed I/O Module, 28 channels
SC-TEPR01	Expansion End Plate, Right
SC-TEPL01	Expansion End Plate, Left

Note 1 – Includes a complete Controller: CPM and IOTA
Note 2 – Includes a complete Controller: 2 x CPM and 1 x IOTA
Note 3 – Includes a complete IOM: IOM and IOTA

3.1.2. Series C Foundation Fieldbus Module

Model Number	Description
CC-PFB402	Series C Foundation Fieldbus Interface Module with 4 H1 Links (FIM4)
CC-TFB402	Series C FIM4 IOTA, Non-redundant, 4 Links, coated

3.2. Software Licenses

3.2.1. Controller Resident

Model Number	Description
SP-IHARTP [1]	HART Protocol Enabler License
SP-MRUN01 [2]	Meter Run License, one (1)
SP-IWIO01 [3]	Wireless I/O License
SP-LEPIU1 [4]	ELEPIU License per controller

Note 1 – HART enabler license required for each I/O module (onboard or expansion) where HART digital access is required
Note 2 – Required per meter run per RTU for electronic flow meter functionality. Maximum meter runs supported per non redundant controller is 4 and redundant controller is 12.
If an RTU has 4 meter runs then 4 x SP-MRUN01 are required.
Note3 - Wireless I/O license is required for each controller where ISA100 devices need to be connected and accessed.
Note 4 - ELEPIU license is required per controller using ELEPIU solution.

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