

# iSOC

## intelligent Server Open City

The iSOC is an edge controller that enables the realisation of complex tasks in street lighting control and building automation.

The integrated software framework is a universal management tool for LON, M-Bus, Modbus, BACnet, and other fieldbuses and enables the commissioning and control of different systems and devices, wired or wireless.

Devices from different manufacturers with different protocols can be installed and combined with each other in a simple, intuitive way.

## Typical Applications

Management of smart city applications for

- Street and building lighting
- Car parks, bus stops and railway stations
- Company premises, warehouses
- Sports facilities



## Product Benefits

- Raspberry Pi Compute Module CM3+
- Broadcom SoC quad-core 64-bit processor
- 1 GB SDRAM memory and 32 GB eMMC flash memory
- Integrated communication interfaces: HDMI 1.3a, Ethernet, USB 2.0 Hi-Speed, Micro-USB, RS-485, RS-232, DIN rail system bus
- The following communication technologies can be realised via additional hardware interfaces: Narrowband or Broadband Powerline, ISM radio
- LON interfaces and I/O modules can be connected directly via the mounting rail using the system bus
- 2-year guarantee

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**iciti** intelligent.  
efficient.  
controls.

*Interoperable Communication Technology  
for Smart Cities and Buildings*

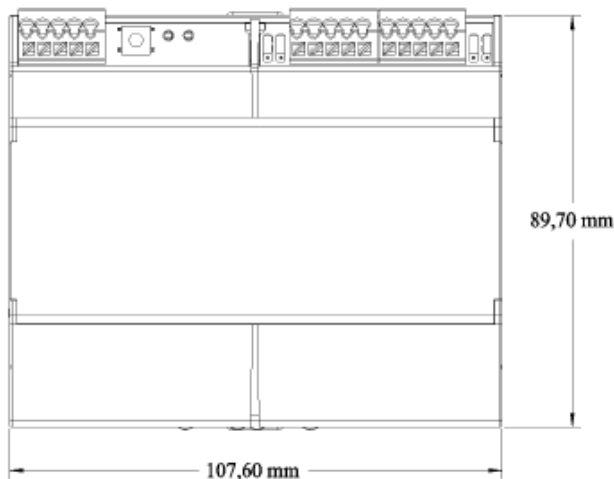
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## Technical Details

<b>Electronic Edge Controller</b>	<b>iSOC – intelligent Server Open City</b>
<b>Type</b>	iSOC
<b>Ref. No.</b>	200078
<b>Input voltage range</b>	12-30 V
<b>Power consumption</b>	Ø 10 W; max. 20 W (incl. 4 x 500 mA per USB port)
<b>Communication interfaces</b>	4 x USB 2.0 A (all loadable with 500 mA) 1 x Micro-USB 1 x HDMI V1.3a 2 x RJ45 (Ethernet) 10/100 Mbit/s 1 x RS-485, isolated, individually terminable 1 x RS-232/RS-485, isolated; RS-485 individually terminable 1 x System bus for connecting LON interfaces and I/O modules directly via the mounting rail
<b>Processor / Memory</b>	1.2 GHz, Quad-Core 64-bit / RAM 1 GByte / Flash memory 32 GByte
<b>Operating system</b>	Linux, customised
<b>RTC / Optical display, push-button</b>	Lithium battery CR2032 for RTC / 1 status LED, freely programmable / 1 button, freely programmable
<b>Data transfer (USA)</b>	ANSI/CTA 709.1 (ANSI/CTA 709.2 with additional powerline interface), ANSI/CTA 852
<b>Data transfer (Europe)</b>	EN 14908-1 (EN 14908-3 with additional powerline interface), EN 14908-4
<b>Powerline communication</b>	With additional hardware components, communication can be realised via the power supply (Powerline) can be realised in accordance with CENELEC 50065-1; Primary band 125-140 kHz / secondary band 95-125 kHz
<b>LonMark®</b>	Compatible with LonMark® profiles using network variables and configuration parameters
<b>Certifications</b>	IEC 61000-6-2 (electromagnetic compatibility), EN 55032 (EMC interference emission), EN 55024 (interference immunity)
<b>Firmware updates</b>	Can be automatised
<b>Operating temperature range tc</b>	-40 to +55 °C
<b>Storage temperature range</b>	-40 to +65 °C
<b>Humidity</b>	max. 93 % (non-condensing)
<b>Connection terminals</b>	Push-in terminals for conductor cross-section 0.25-0.75 mm <sup>2</sup> (24-19 AWG) for solid or fine-stranded conductors, stripping length: 9 mm; 0.25-0.5 mm <sup>2</sup> (24-20 AWG) for fine-stranded conductors with ferrules
<b>Casing</b>	Built-in installation housing to DIN 43880; plastic: polycarbonate; flammability class V0 to UL 94
<b>Degree of protection</b>	IP20
<b>Mounting</b>	Mounting rail 35 to DIN EN 50022
<b>Dimensions (WxHxD)</b>	108 x 89.7 x 62.2 mm (6 DIN rail sub-units)
<b>Weight</b>	220 g
<b>Customs tariff number</b>	8543 7090



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The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification. Please find further detailed information at [www.iciti.de](http://www.iciti.de)

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## Software Framework

The software framework is a web service that can run on an embedded controller, PC or enterprise system. The universal management tool for BACnet, M-Bus, LON, Modbus and other fieldbuses enables the commissioning and control of different systems and devices, wired or wireless. This makes it possible to install devices from different manufacturers with different protocols and to combine them in a simple, intuitive way.

The software framework has an integrated web HMI tool and a user-specific web interface in accordance with the HTML5 standard. HTML5 is supported by all common browsers worldwide. HMI interfaces that are created with this tool are:

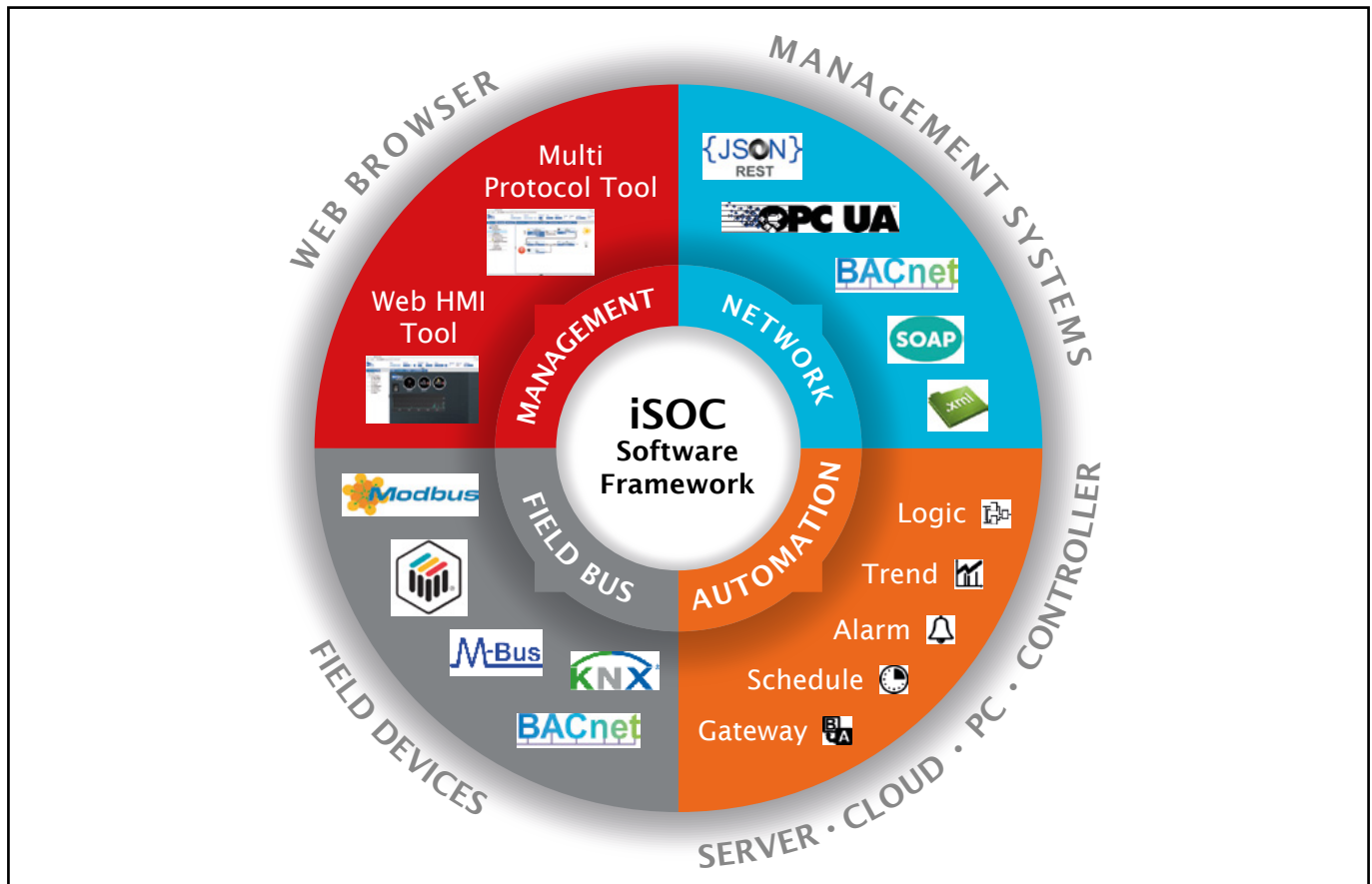
- platform-independent
- high performance
- very easy to develop
- intuitive to use
- expandable at any time
- future-proof

Protocol-independent automation objects are created for:

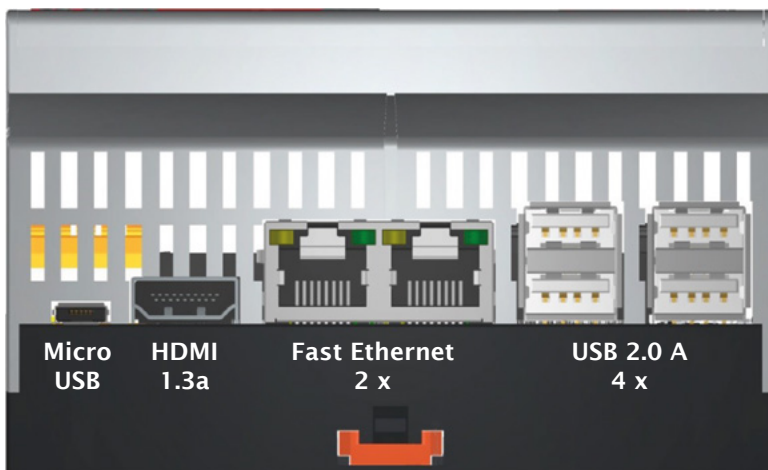
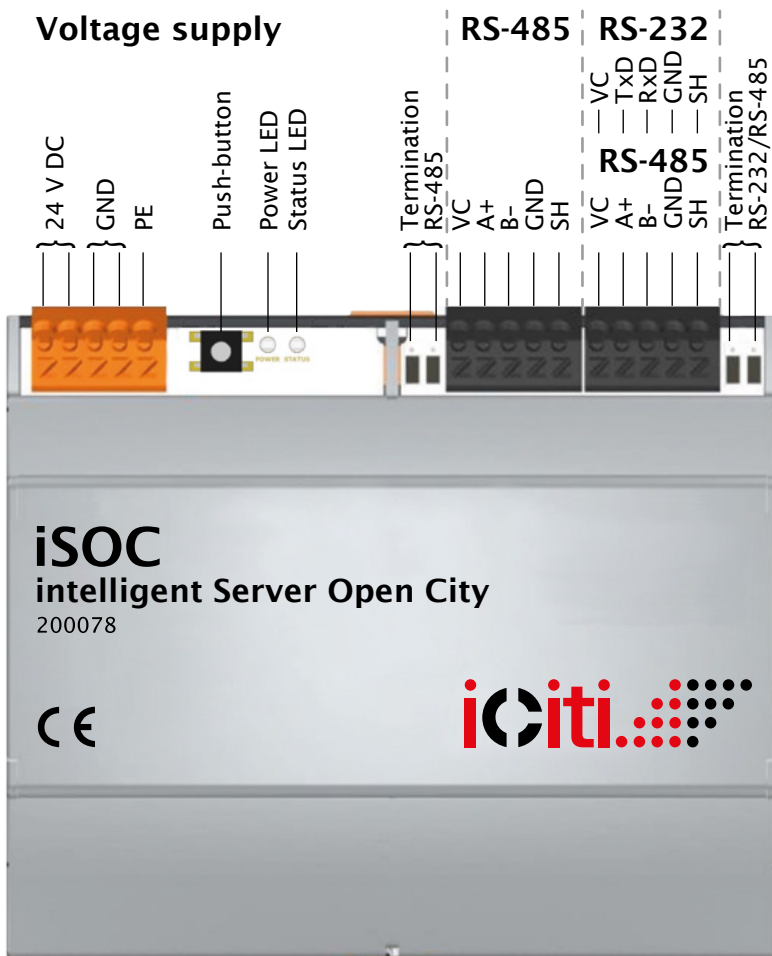
- Alarms (display and management)
- Trends (display and comparison)
- Time control / calendar
- Logic programming according to IEC 61131
- Gateway functions (including data conversion)

The iSOC makes it possible to connect any type of visualisation or SCADA system via JSON/Rest, OPC UA, SOAP, XML or BACnet. The distributed IT architecture of the connected servers can be accessed at any time via the web service. The web service can be hosted on any server under Windows, Android or Linux.

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## Terminal Assignment



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