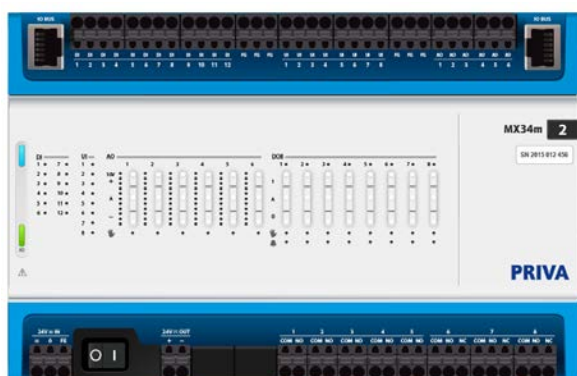


## > PRIVA BLUE ID C-LINE SYSTEM OVERVIEW



Priva Blue ID C-Line is built around a freely-programmable controller for process control and monitoring. The controllers and IO modules are diverse and flexible and can be used in countless environments, for instance in buildings.

### Characteristics

- reliable, modular and well-organised
- easy to install
- service-friendly
- compact construction method and DIN rail layout
- zero configuration networking
- fully IP based
- user-friendly operation with TouchPoint
- native BACnet
- open to many communications protocols
- developed with an eye to sustainability

### Modular and well organized

The Priva Blue ID system has a modular design around the controller. Both hardware lines have a well organised range of modules that reflect current practice.

Depending on the hardware line, there are modules that offer analogue outputs with and without manual override, relay outputs with and without manual override, analogue and digital inputs and serial communication. As a result, a good fit is always possible, so that the space in the panel can be used optimally.

### Simple installation

The modules can simply be clicked onto a DIN rail. Next, connect the modules to each other using the I/O bus cables. Thus also creates the necessary internal connections. You can divide the modules over several rails.

The modules are addressed automatically. Jumpers or DIP switches are therefore not required. This will prevent mistakes.

### Simple wiring

Peripheral hardware wiring can be connected very easily. Wiring can be inserted into the default terminal block or screwed into the optional screw connectors.

### Line-up LED

The module is equipped with a blue line-up LED. If the blue LED is continuously on, the module is in the correct place according to the set configuration.

### Controller

The controller is the intelligent heart of the Priva Blue ID system. It handles all input and output based on control programmes loaded into the controller and modules. The programs come from Top Control (Priva's project design and implementation software).

### Powerful processor

The controller contains a powerful microprocessor which guarantees high performance. The unprecedented processing speed and computing power mesh seamlessly with the requirements of modern and integrated systems. The controller uses a reliable operating system that ensures quality and operational security and a good connection to the ICT infrastructure. And mutual communication between controllers is fast and reliable. The entire system can be accessed via a Web browser.

### Operational safety

If the power fails, the control software remains in the controller. In order to save time and (service) costs you can equip the system with new control software remotely. The controller tests this new control software before switching over to it.

### Memory card

The controller has a slot for a memory card. The memory card is used to store project properties from Top Control.

### Operation using TouchPoint

The system is operated using one or more TouchPoints (touchscreens). You can mount them in the door of the control panel, in the control panel itself or against the wall.

You can easily expand the number of TouchPoints and use them anywhere you want. The system recognises when a TouchPoint is connected; you do not need to install any software.

You can connect a TouchPoint via an Ethernet port and the 24 VDC power supply output of the controller or Mix I/O module. You can also use an external power supply.

## Browsing via PC

TC Manager allows you to control all devices connected to the system from a single location. TC Manager provides a web based visualization of the building to be managed. The system supports the use of logical names for Web pages instead of addresses. In addition, both Windows browsers and Mac browsers are supported.

Operation takes place via well-arranged Web pages. Clear tabs and icons make configuration and operation quick and easy.

## Power supply and grounding

Priva supplies a number of power supplies that are suitable for any situation. The Priva power supply gives you a reliable power supply that precisely fits into your configuration.

## Electrical isolation

The modules are powered by a 24 VDC or 24 VAC supply voltage. The terminals on the modules are electrically isolated from the system neutral. This easily avoids ground loops.

## Supply voltage

The supply voltage is connected to the controller and Mix I/O modules. The internal system power is distributed to the expansion modules via the I/O bus.

## 24 VDC power supply output

The controller and Mix I/O modules have a 24 VDC power supply output. The 24 VDC power supply output can be used to power a TouchPoint. The 24 VDC power supply output must not be used to power field equipment.

## Field equipment

Field equipment must be supplied with voltage by means of a separate power supply.

## Ethernet connections

With the Ethernet connections on the controller you can connect the system to a network. The Ethernet connections do not provide Power over Ethernet (PoE).

## BACnet

As a result of BACnet support you can easily exchange input and output signals from the I/O modules with other systems and devices.

## Interfaces for field bus devices

If one or more field bus devices are being used in a project, you can connect them to the controller for serial communication and for communication via Ethernet.

A communication protocol is required for each field bus device. Product interfaces and universal interfaces are available in TC Engineer for this. Examples include product interfaces for Danfoss frequency controllers and pumps from Grundfos and Wilo, and universal interfaces for BACnet and Modbus.

## Priva Blue ID hardware lines

The Priva Blue ID system consists of the Priva Blue ID S-Line and Priva Blue ID C-Line hardware lines. The Priva Blue ID S-Line is built around the S10 controller. The Priva Blue ID C-Line is built around the C4 controller. In addition to the controller, both hardware lines offer various modules. The controller and the modules together provide the combination of inputs and outputs that you need for your project.

The hardware lines can be used together within a project. The controllers and modules of one hardware line may not, however, be mixed during use or interchanged. For instance, only modules from the S-Line can be used with an S10 controller from the S-Line. With a C4 controller from the C-Line, you can only use modules from the C-Line. You can, however, use an S10 controller with S-Line modules alongside a C4 controller with C-Line modules within the same project.

## Integration with other Priva systems

The Priva Blue ID system works with TC ServeCenter 8.0 and Top Integration.

## Integration with a TC 6 project

A TC 6 project or the information from a TC 6 project can be included in the Priva Blue ID system. This can be done in various ways.

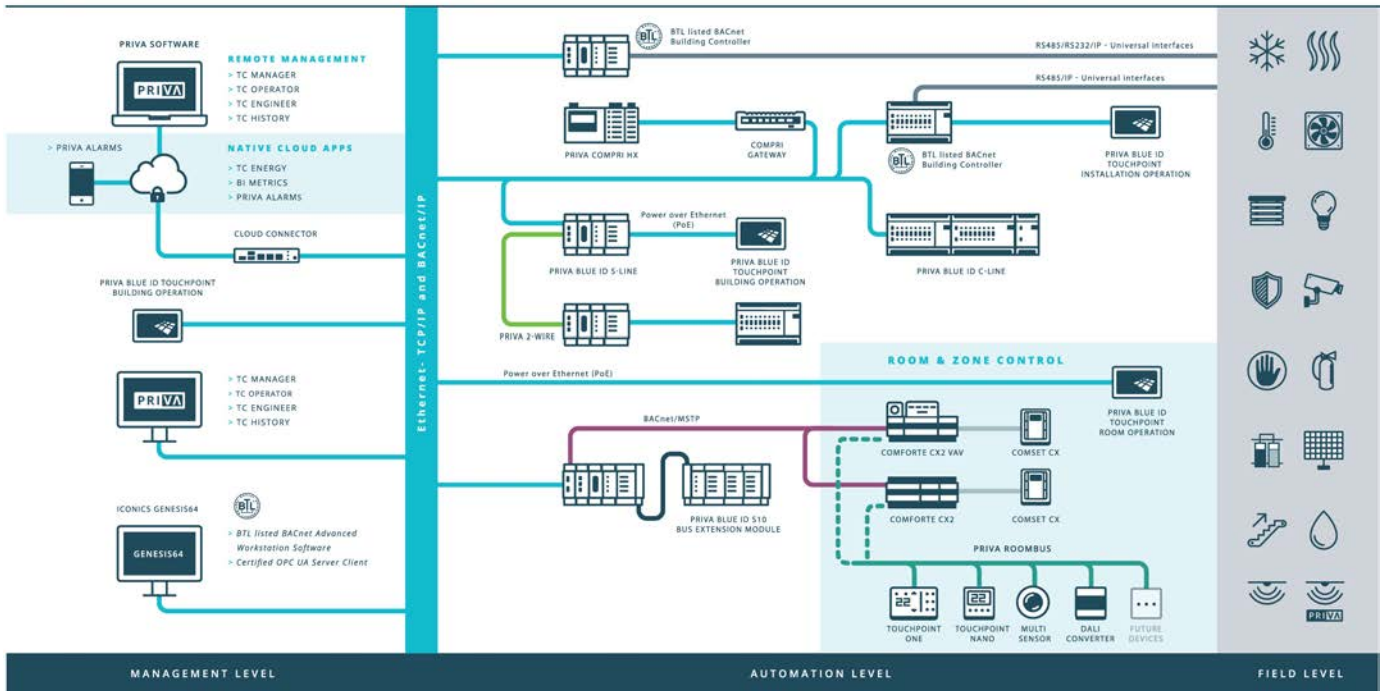
The visualisation and operation of a TC 6 project can be fully integrated with the visualisation and operation of a Priva Blue ID project in TC Manager. This means that an unmodified TC 6 project can be operated alongside a Priva Blue ID project from a single environment. This is of particular importance when expanding or migrating the control system. The TC 6 project is accessed for this combined operation via a Priva Blue ID SX100L Compri Gateway.

A TC 6 project can also be converted into a Priva Blue ID project. In this way, the information (measurement and control configuration) from the TC 6 project remains available, and the engineering can be reused for a Priva Blue ID project. This saves a lot of time when converting HX controllers to Blue ID controllers. On request, the conversion can be carried out by Priva and your Priva partner.

The TC 6 project must be a TC 6.6 project with Compri HX3/4/6/8 or Comforte CX (VAV) hardware. The project must also have been generated and commissioning without errors.

# Network Priva Blue ID

**PRIVA** THE EXTENDED NETWORK POSSIBILITIES OF PRIVA



## System expansion

A system can easily be expanded. For an expansion of the system with more I/Os, you can easily install additional I/O modules. The controller can be expanded software-wise via a licence code if necessary.

## Priva Blue ID C-Line

Maximum system configuration	
Number of controllers	1 x, choice of: <ul style="list-style-type: none"> <li>Priva Blue ID C4 C-MX34 Controller</li> <li>Priva Blue ID C4 C-MX34m Controller with manual override</li> </ul>
Number of Mix I/O modules	1 x, choice of: <ul style="list-style-type: none"> <li>Priva Blue ID C-Line MX34 Mix input/output module</li> <li>Priva Blue ID C-Line MX34m Mix input/output module with manual override</li> </ul>
Number of expansion modules	2 x, choice of: <ul style="list-style-type: none"> <li>Priva Blue ID C-Line UI8 Universal input module</li> <li>Priva Blue ID C-Line UI8s Universal input module with signaling</li> <li>Priva Blue ID C-Line DOR6 Relay output module</li> <li>Priva Blue ID C-Line DOR6m Relay output module with manual override</li> </ul>
TC Manager users	maximum of 5 at the same time

Software-based expansion of controller	Number of inputs and outputs (I/O)
Priva Blue ID C4 C-MX34 Controller 20 Priva Blue ID C4 C-MX34m Controller with manual override 20	0 ... 20
Priva Blue ID C4 C-MX34 Controller 50 Priva Blue ID C4 C-MX34m Controller with manual override 50	0 ... 50
Priva Blue ID C4 C-MX34 Controller 84 Priva Blue ID C4 C-MX34m Controller with manual override 84	0 ... 84

The tables below show the maximum configurations of a project.

Maximum configuration per project	
Operation using Touchpoint <sup>1</sup>	50

<sup>1</sup> Irrespective of the type of operation.

Numbers per project or per building section <sup>1</sup> specified in TC Manager for operation with TC Manager <sup>2</sup>	
Number of controllers (S10 or C4)	20
Number of terminal unit systems (Comforte CX, Comforte CX2, Comforte CX VAV, Comforte CX2 VAV)	600

<sup>1</sup> With the help of the *BuildingSection* start-up parameter, TC Manager can be started with a filter by a specified building section. In this case, the numbers shown in the table will represent the numbers within the specified building section.

<sup>2</sup> Depending on project size and project composition. Please contact your Priva account manager for advice if the project size and project composition are greater than the specified numbers of Priva Blue ID and Comforte CX controllers.

## Priva Blue ID C-Line suite

Priva Blue ID C4 C-MX34 Controller		
5210001	Priva Blue ID C4 C-MX34 Controller	controller with <ul style="list-style-type: none"> <li>• 12 digital inputs</li> <li>• 8 universal inputs</li> <li>• 6 analogue outputs</li> <li>• 8 relay outputs</li> <li>• 4 Ethernet ports</li> <li>• RS485 port</li> <li>• alarm output</li> <li>• 24 VDC power supply output</li> </ul> easy to expand with more I/O via the licence code
5210002	Priva Blue ID C4 C-MX34m Controller with manual override	controller manual override and <ul style="list-style-type: none"> <li>• 12 digital inputs</li> <li>• 8 universal inputs</li> <li>• 6 analogue outputs</li> <li>• 8 relay outputs</li> <li>• 4 Ethernet ports</li> <li>• RS485 port</li> <li>• alarm output</li> <li>• 24 VDC power supply output</li> </ul> easy to expand with more I/O via the licence code

Priva Blue ID C-Line expansion modules		
5211001	Priva Blue ID C-Line MX34 Mix input/output module	expansion module with <ul style="list-style-type: none"> <li>• 12 digital inputs</li> <li>• 8 universal inputs</li> <li>• 6 analogue outputs</li> <li>• 8 relay outputs</li> <li>• 24 VDC power supply output</li> </ul>
5211002	Priva Blue ID C-Line MX34m Mix input/output module with manual override	expansion module with manual override and <ul style="list-style-type: none"> <li>• 12 digital inputs</li> <li>• 8 universal inputs</li> <li>• 6 analogue outputs</li> <li>• 8 relay outputs</li> <li>• 24 VDC power supply output</li> </ul>
5213001	Priva Blue ID C-Line UI8 Universal input module	expansion module with 8 universal inputs
5213002	Priva Blue ID C-Line UI8s Universal input module with signaling	expansion module with 8 universal inputs and indication
5215001	Priva Blue ID C-Line DOR6 Relay output module	expansion module with 6 relay outputs
5215002	Priva Blue ID C-Line DOR6m Relay output module with manual override	expansion module with 6 relay outputs and manual override

Power supply		
5050001	Priva Blue ID PS70 Power supply module	24 VDC, maximum output power of 70 W
5050002	Priva Blue ID PS120 Power supply module	24 VDC, maximum output power of 120 W

Operation		
5060001	Priva Blue ID TouchPoint	operating unit with touchscreen
5060002	Priva Blue ID TouchPoint Flush	operating unit with recessed touchscreen
5060101	Priva Blue ID Wall bracket	frame for mounting TouchPoint on wall
5060103	Priva Blue ID Panel bracket Flush	frame for integrating TouchPoint Flush into panel
5060104	Priva Blue ID TouchPoint Flush Back Cover (for panel mounting)	cover for TouchPoint Flush

SX100.1 and Compri Gateway		
5200011	Priva Blue ID SX100.1	embedded PC for Priva Cloud services and Top Control 8 historical data (TC History, TC History Proxy and TC LAN Manager)
5200012	Priva Blue ID SX100.1L Compri Gateway	Gateway to Compri projects from Priva Blue ID

Priva Blue ID C-Line accessories		
5219001	Priva Blue ID C-Line Click-on mounting frame large (set 5 pcs)	blue plastic sheet for shielding the connections of large modules in a DIN 43870 distribution box
5219002	Priva Blue ID C-Line Click-on mounting frame small (set 5 pcs)	blue plastic sheet for shielding the connections of small modules in a DIN 43870 distribution box
5219010	Priva Blue ID C-Line Number Card set 1 - 4	set of number stickers for affixing the module number to the module
5219101	Priva Blue ID C-Line screw connector set C-MX34/MX34	set of all angled screw connectors required for controllers or Mix I/O modules
5219102	Priva Blue ID C-Line screw connector set UI8	set of all angled screw connectors required for universal input modules
5219103	Priva Blue ID C-Line screw connector set DOR6	set of all angled screw connectors required for relay output modules
5219105	Priva Blue ID C-Line push connector set C-MX34/MX34	set of spare push connectors (2-pin, 3-pin en 4-pin) for all Priva Blue ID C-Line modules
5219110	Priva Blue ID C-Line IO bus cable length 10 cm	10 cm I/O bus cable for connecting modules via the I/O bus
5219111	Priva Blue ID C-Line IO bus cable length 200 cm	200 cm I/O bus cable for connecting modules via the I/O bus
3772039	Angled USB connector	angled connector for USB port (host) on a controller
5110001	Priva Blue ID SDHC card 32 Gb	32 Gb memory card for storing project properties




## General specifications of Priva Blue ID C-Line controllers and modules

System power supply	Requirements
The system power supply for the controllers and Mix I/O modules must meet the following requirements.	
Output voltage	24 VAC $\pm$ 25%; 50/60 Hz $\pm$ 5 % 24 VDC $\pm$ 10%
Insulation	double insulation between input and output
Type of power supply	for UL916, CSA C22.2 No. 205: UL listed / CSA certified Class 2 extra low output voltage power supply

Housing	
IP code	IP20 (IEC 60529)
Flammability class	V-0 (UL 94)
Recycle code	7
Colour	housing: white (RAL9001) and blue (NCS S 1560-R90B) connections and connectors: black (RAL9011)
Type of device	open type equipment for: <ul style="list-style-type: none"> <li>indoor use only</li> <li>pollution degree 2 environment</li> </ul>

Installation and connection	
Installation	in control panel: <ul style="list-style-type: none"> <li>• accessible to authorised personnel only</li> <li>• can be clicked onto horizontally or vertically positioned DIN rail. DIN rail installed directly on a mounting plate or floating with respect to the mounting plate</li> </ul> in DIN 43870 distribution box
Type of DIN rail	35 x 7.5 (1.38 x 0.30 inches) or 35 x 15 mm (1.38 x 0.59 inches) (height x depth), in accordance with IEC 60715
Connector type for power supply and I/O	pluggable terminal block screw connectors (optional)
Permitted core cross section area	solid: 0.2 ... 2.5 mm <sup>2</sup> (25 ... 14 AWG) flexible with ferrule connector: 0.2 ... 2.5 mm <sup>2</sup> (25 ... 14 AWG) flexible with double ferrule connector: 0.2 ... 1.5 mm <sup>2</sup> (25 ... 16 AWG)
Strip length/connector length (terminal block)	solid: 10 mm (0.39 inches) flexible with ferrule connector: 10 mm (0.39 inches) flexible with double ferrule connector: 12 mm (0.47 inches)
Strip length/connector length (screw connector)	8 mm (0.31 inches)
Identification of connections	labelling with an explanatory abbreviation
Maximum length of I/O bus cable between modules	3 m (9.84 ft)
Maximum length of I/O bus (total, including modules)	20 m (65.62 ft)

Environment	
Permitted temperature inside control panel of a working system (without air flow)	0 ... 50 °C (32 ... 122 °F)
Permitted temperature during transport and storage	-20 ... 70 °C (-4 ... 158 °F)
Maximum height	3000 m (9842 ft)
Permitted ambient relative humidity	10%...95% (non-condensing)
Shock resistance	EN 60068-2-27 (Ea)
Vibration resistance	EN 60068-2-27 (Fc)
Installation category	II
Other installation and environmental requirements	do not expose to direct sunlight

Legislation and standards		
Canada / USA		<ul style="list-style-type: none"> <li>• UL 916 (energy management equipment)</li> <li>• UL 61010-1 (measurement and control equipment)</li> <li>• UL 61010-2-201 (measurement and control equipment)</li> <li>• CSA C22.2 No 61010-1-12 (measurement and control equipment)</li> <li>• CSA C22.2 No 61010-2-201-14 (measurement and control equipment)</li> <li>• CSA C22.2 No 61010-1-04 (measurement and control equipment)</li> <li>• CSA C22.2 No 205-12 (signal equipment)</li> </ul>
	EMC	<ul style="list-style-type: none"> <li>• in compliance with 47 CFR Part 15 Subpart B, Class B (FCC Rules) Functioning must meet two conditions:               <ol style="list-style-type: none"> <li>1. The system must not cause harmful interference.</li> <li>2. The system must acknowledge all interference received, including interference that may cause unwanted operations.</li> </ol> </li> <li>• ISM system, in accordance with Canadian standard ICES-001</li> </ul>
Europe		<ul style="list-style-type: none"> <li>• Low Voltage Directive 2006/95/EC:               <ul style="list-style-type: none"> <li>• EN 61010-1 (measurement and control equipment)</li> <li>• EN 61010-2-201 (measurement and control equipment)</li> </ul> </li> <li>• EMC Directive 2004/108/EC:               <ul style="list-style-type: none"> <li>• EN 61326-1 (measurement and control equipment)</li> <li>• EN 61000-6-2 (generic immunity standard)</li> <li>• EN 61000-6-3 (generic emission standard)</li> </ul> </li> <li>• RoHS directive 2011/65/EU</li> </ul>
		in compliance with WEEE directive 2012/19/EU
International	IEC	<ul style="list-style-type: none"> <li>• IEC 61010-1 (measurement and control equipment)</li> <li>• IEC 61010-2-201 (measurement and control equipment)</li> </ul>



## Legislation and standards

International		<ul style="list-style-type: none"><li>• The Priva Blue ID C4 C-MX34 Controller and Priva Blue ID C4 C-MX34m Controller with manual override are BTL-registered with BACnet International.</li><li>• The Priva Blue ID C4 C-MX34 Controller and Priva Blue ID C4 C-MX34m Controller with manual override are BACnet-certified in accordance with ISO 16484-5/6.</li><li>• Priva is a member of the BACnet Interest Group Europe.</li></ul>
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## General specifications of TouchPoints

Housing	Priva Blue ID TouchPoint	Priva Blue ID TouchPoint Flush
Installation	with magnets on metal surface or wall-mounted in frame	flush-mounted <sup>1</sup>
IP code	IP30	IP66
Housing type (NEMA 250)	1	4X, indoor use only
Flammability class	V-0 (UL 94)	
Recycle code	7	
Device type	open device, for use in a pollution degree 2 environment	

<sup>1</sup> For an installation in a door or wall of a control cabinet that must comply with CSA C22.2 no 94.1 or UL 50, the Priva Blue ID TouchPoint Flush Back Cover (for panel mounting) must be mounted.

Environment	
Permitted temperature inside control cabinet during normal operation	0 ... 50 °C
Permitted temperature during transport and storage	-20... 70 °C
Permitted relative ambient humidity	10 % ... 95 % (non-condensing)
Shock and vibration resistance	IEC 61131-2
Installation category	II

Legislation and standards		
Canada / USA		<ul style="list-style-type: none"> <li>UL 508:2005 (industrial control equipment)</li> <li>UL 916:2007 (energy management equipment)</li> <li>UL 60950-1:2011 (information technology equipment)</li> <li>CSA C22.2 No 14-10: 2011 (industrial control equipment)</li> <li>CSA C22.2 No 205-12: 2012 (signal equipment)</li> <li>CSA C22.2 No 60950-1-07 (information technology equipment)</li> </ul>
	EMC	<ul style="list-style-type: none"> <li>complies with 47 CFR Part 15 Subpart B, Class B (FCC Rules) Operation is subject to the following two conditions:               <ol style="list-style-type: none"> <li>This device may not cause harmful interference.</li> <li>This device must accept any interference received, including interference that may cause undesired operation.</li> </ol> </li> <li>digital apparatus, complies with Canadian ICES-003, Issue 4, Class B</li> </ul>
Europa		<ul style="list-style-type: none"> <li>Low voltage directive 2014/35/EU               <ul style="list-style-type: none"> <li>EN 60950-1:2006 (information technology equipment)</li> </ul> </li> <li>EMC directive 2014/30/EU               <ul style="list-style-type: none"> <li>EN 55032:2015, Class A of Class B<sup>1</sup> (multimedia equipment)</li> <li>EN 55024:2010, IDT (information technology equipment)</li> <li>EN 61000-6-2:2005 (generic immunity standard)</li> <li>EN 61000-6-3:2007 (generic emission standard)</li> </ul> </li> <li>RoHS directive 2011/65/EU</li> </ul>
		complies with the WEEE directive 2002/96/EC

<sup>1</sup> The TouchPoint complies with Class B when a ferrite bead (type: Würth Elektronik 74271222 or equivalent) is placed around the network cable and power supply cable, as close as possible to the TouchPoint. Loop the cables through the ferrite bead twice.

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