



## CANnector Range/Bridge

CANnector Range and CANnector Bridge are preconfigured versions of the CANnector S device, enabling users to easily setup range extending or bridge applications for CAN and CAN FD networks without time consuming configuration.

The basic range configuration of **CANnector Range** transmits all 6 CAN buses transparent over a longer distance via Ethernet. Two devices are required for this function (master/slave). In addition, CANnector Range can also be used as a multiple CAN(FD) interface connected to the PC via Ethernet. This allows Ixxat VCI based or D-PDU-API applications being connected to the field buses via a long distance. For this use case only one CANnector Range device is required.

The **CANnector Bridge** can act as Bridge and Gateway. The four provided configurations initialize all 6 CAN interfaces with 125 kbit/s, 250 kbit/s, 500 kbit/s, or 1000 kbit/s and forward all received data as follows: CAN1 ↔ CAN2; CAN3 ↔ CAN4; CAN5 ↔ CAN6. Specific baudrate combinations can be selected easily without the need for setting up a own configuration.

The Range and Bridge functionality is executed stand-alone on the device, a PC is only needed for user specific configurations or visualization/stimulation of data.

Since CANnector Range/Bridge is based on the common CANnector S variant, the device functionality can easily be adapted or enhanced by using the ACT tool – providing extended range/bridge functionality or even logging.



### HIGHLIGHTS

- Up to 6 CAN buses (thereof 2 CAN FD capable)
- Supports CAN listen only (CAN RX)
- Switch-on CAN (self switch on in case of any CAN communication or a defined message)
- Extensive filter and mapping options
- Extendable by own C-Code or Matlab/Simulink models
- Easy cloud connection
- Very low latency in classical gateway applications
- Easy access via USB, LAN, WLAN/WiFi, 4G
- Compatible to the Ixxat CAN@net Generic Ethernet protocol and CAN@net NT protocol
- Plug&Play, but also configurable/programmable
- Standalone operation
- Extended temperature range (-40 °C to 80 °C)
- Galvanic isolation
- DIN rail mountable

### RANGE OPTIONS

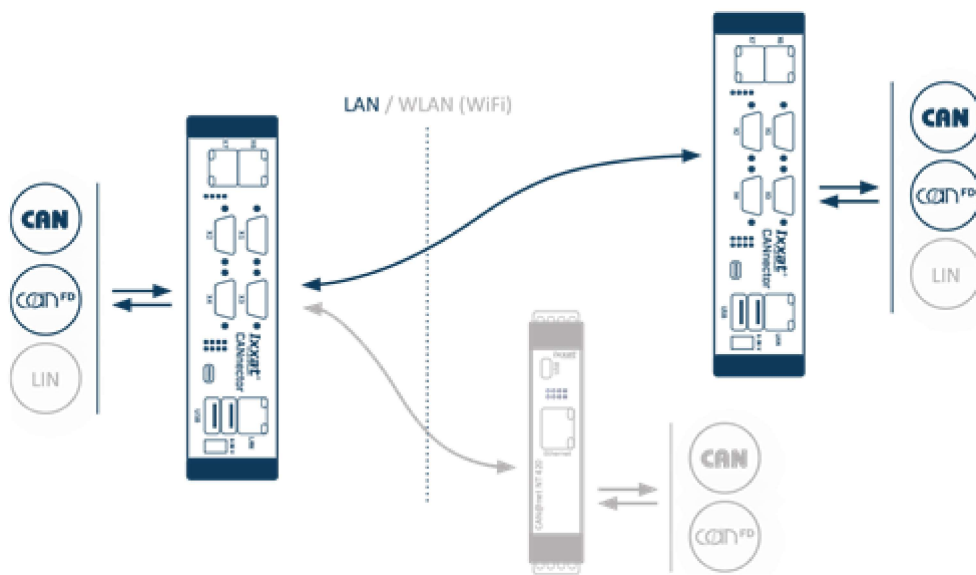
#### Preconfigured range operations

- Bridging of all 6 CAN channels via Ethernet (2 devices requires – master/slave)
- Supported CAN baudrate 250 Kbit/s

- 4 configurations supporting CAN baudrates up to 1000 kbit/s
- Permanent data transmission without trigger or filtering

#### Advanced features via user configuration (using ACT)

- Range extension for CAN, CAN FD and LIN data
- Signal based operation (based on imported bus description files)
- Forwarding individual messages and/or signals
- Modification of message ID and content
- Data manipulation via own C-Usercode or MATLAB/Simulink models
- Possibility to create own Messages based on signals from every CAN bus
- Export of CANdB's in case of the creation of own messages
- Low power sleep mode and switch-on on CAN(FD)
- Parallel data storage on USB memory, PC or cloud
- Remote device management (OPC UA, HMS-HUB)
- LAN/USB/WLAN (optional WLAN module required) access for signal visualization/stimulation



#### BRIDGE OPTIONS

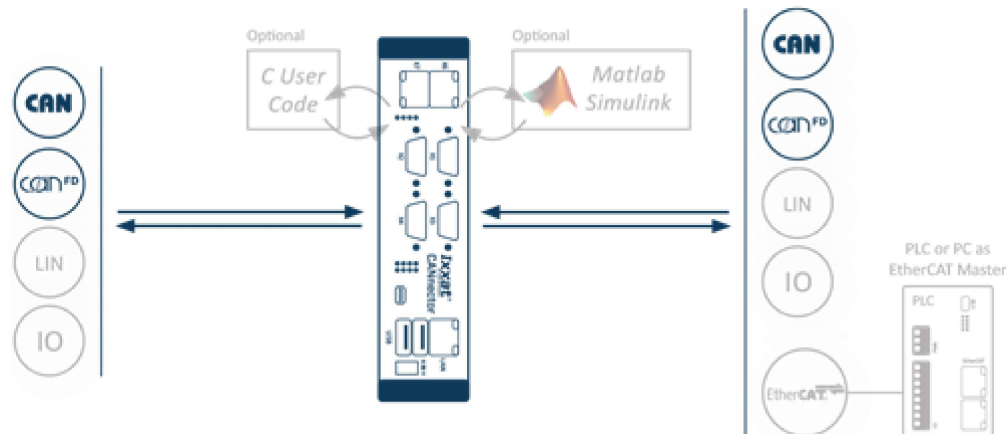
##### Preconfigured bridge operations

- Bridging of all 6 CAN buses
  - CAN 1 to CAN 2 and vice versa
  - CAN 3 to CAN 4 and vice versa
  - CAN 5 to CAN 6 and vice versa
- Supported CAN baudrates 125 kbit/s, 250 kbit/s, 500 kbit/s, or 1000 kbit/s –depending on selection

#### Advanced features via user configuration (using ACT)

- Bridging of CAN, CAN FD, EtherCAT and LIN data
- Signal based operation (based on imported bus description files)
- Forwarding individual messages and/or signals
- Modification of message ID and content
- Data manipulation via own C-Usercode or MATLAB/Simulink models
- Possibility to create own Messages based on signals from every CAN bus
- Export of CANdB's in case of the creation of own messages
- Low power sleep mode and wake-up on CAN(FD)

- Parallel data storage on USB memory, PC or cloud
- Remote device management (OPC UA, HMS-HUB)
- LAN/USB/WLAN (optional WLAN module required) access for signal visualization/stimulation

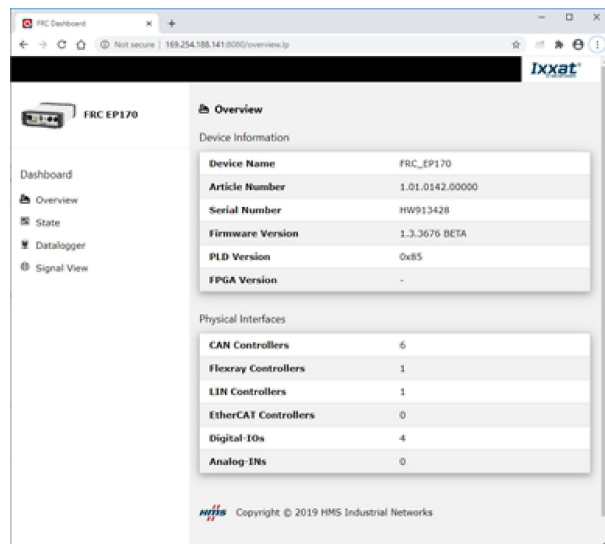


## CONFIGURATION AND OPERATION

CANnector Range and CANnector Bridge are preconfigured and can be used directly without further configuration. However, for customers which require specific functionality – e.g. with message filtering or signal based operation, HMS provides easy to use tools to use the bridge or range extender “your” way.

### Dashboard

With the dashboard, that is accessible with a standard web browser via Ethernet, USB or WLAN (WiFi), the CANnector Range/Bridge and the connected bus systems can be monitored, the different basic configurations can be selected, started and stopped on the device and live data can be visualized.

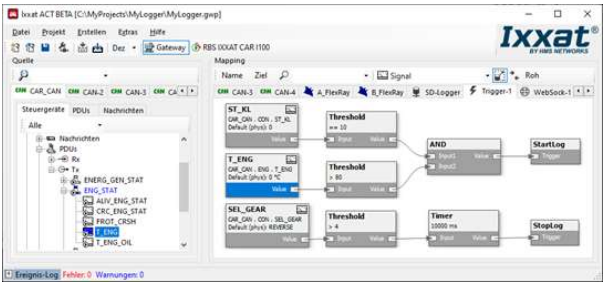


### ACT Tool

ACT is Windows based and allows the easy creation of configurations with or without bus description files via drag and drop. The ACT tool provides further configuration possibilities (e.g. changing message content or signal values).

→ Download Ixxat ACT Setup (for Freeware/Lite/Standard)

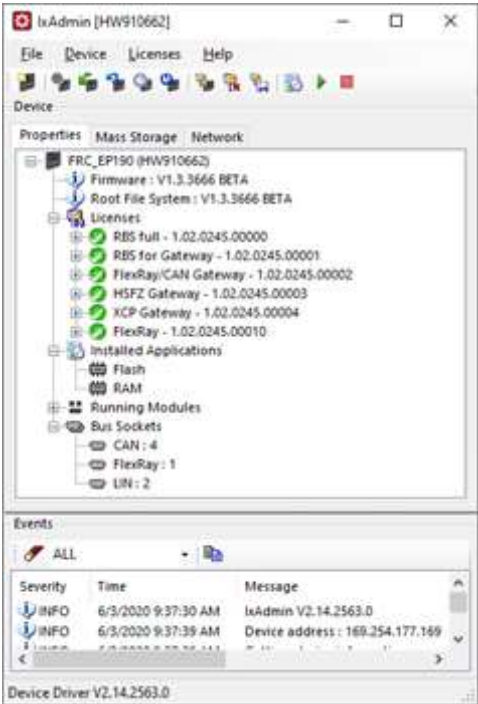
→ Learn more about the ACT features



IxAdmin

IxAdmin is included in the ACT tool. With IxAdmin the different basic configurations can be selected, started, stopped and downloaded to the device. Changing baud rate settings is also possible.

→ Download Ixxat IxAdmin Setup



TECHNICAL SPECIFICATIONS

Dimensions (L x W x H)	196 x 113 x 43 mm
Protection class	IP40
Weight	Approx. 790 g
Operating temperature	-40 °C to +80 °C
Power supply	6-36 V DC
Current consumption	Typ. 420 mA at 12 V (sleep mode < 2 mA)

Housing material	Aluminum, stainless steel
Relative humidity	10-95 %, non-condensing
Host system	Power PC, 256 MByte RAM, 256 MByte Flash
Ethernet	10/100 MBit/s, RJ45
USB	2.0 high-speed device, USB-B 2.0 high-speed device, USB-A
CAN FD transceiver	Microchip MCP2562FD
CAN RX only	Hardware switchable
CAN high-speed transceiver	Texas Instruments SN65HVD251
CAN bus termination resistor	High-speed/CAN-FD: none
LIN transceiver	NXP TJA1020

CONTENTS OF DELIVERY

- CANnector Range or Bridge
- Cables for Ethernet, USB
- Hardware and user manual

Order number

1.01.0091.02000	CANnector Range *
1.01.0091.03000	CANnector Bridge *

→ \* Further versions of the CANnector with additional interfaces and features can be found within the automotive section.

Accessories

Type	Order number	Product image
<b>Sub-D9 Connector with CAN Termination</b>	1.04.0075.03000	
<b>CAN cable</b>	1.04.0076.00180	
<b>Y CAN cable</b>	1.04.0076.00001	
<b>More accessories and detailed information...</b>		

Copyright © 2020 HMS Industrial Networks - All rights reserved.