

FRC-EP190



The Ixxat FRC-EP190 is an advanced communication platform designed to centralize and simplify your communication needs. Equipped with multiple interfaces, including an optional EtherCAT interface, it seamlessly integrates several bus systems into a single device – ideal for logging, gateway and residual bus simulation applications.

This intelligent device operates independently, only requiring a PC for initial configuration or data visualization. The core capabilities, such as transport protocols, are outsourced to the platform and freeing up PC resources. By combining various functionalities, interfaces and expansion options, the FRC-EP190 offers an adaptable solution that can be tailored to a wide array of customer-specific applications.

The Advanced Configuration Tool (ACT) allows for easy device configuration via drag-&-drop, addressing most use cases with its freeware version.

FEATURES AND BENEFITS

- **Advanced connectivity:** Embedded platform with various automotive communication interfaces
- **Multi-channel CAN solution:** 8 x CAN, thereof 4 x CAN FD and 2 x CAN low-speed capable
- **Additional interfaces:** variants with FlexRay, EtherCAT, Industrial Ethernet, LIN, K-Line, RS232, Digital in/out (A/E), Analog in, USB 2.0 device and USB 2.0 host support
- **Low latency:** Near-zero delays in gateway applications
- **High protection:** Up to 2 kV galvanic isolation for secure operations
- **Various access options:** USB and LAN connectivity for flexible access
- **Easy cloud access:** Streamlined data storage and retrieval
- **User-friendly:** Plug-and-play device with custom configuration options
- **Standalone functionality:** Works independently, ensuring reliability
- **Easy Installation:** DIN rail mountable for quick setup
- **Easy data logging:** SDHC slot, up to 32 GByte SD card support

Available variants:

FRC-EP190 Plus CANonly (1.13.0094.10107), FRC-EP190 Max EtherCAT (1.13.0094.10407), FRC-EP190 FlexRay Plus 4 (1.13.0094.10507)

ORDER NUMBER	1.13.0094.XXXXX
CAN channels (high-speed)	8
CAN FD/CAN channels	6
CAN bus interface	4 x D-Sub 9, CiA standard pinning according to CiA 303-1
CAN bus termination resistors	CAN/CAN FD: none; Low-speed: RTH=RTL=2 k Ohm
Galvanic isolation	up to 2 kV DC for 1 sec.
LIN channels	1
Ethernet interfaces	1
Ethernet connector	3 x RJ45 (1 x Ethernet 10/100 Base-T, 2 x fieldbus)
EtherCAT (slave)	Yes, for FRC-EP190 Max EtherCAT (order no. 1.13.0094.10407). Connector X6 provides EtherCAT-Slave-OUT and X7 provides EtherCAT-Slave-IN functionality.
USB interface	1 x USB 2.0 device interface, 1 x USB 2.0 host interface (480 Mbit/s)
USB connector	1 x USB Type-B, 1 x USB Type-A
USB 2.0 host	1
Host system	Power PC, 256 MByte RAM, 256 MByte Flash
Power supply	6 to 36 V DC (via 3-pin Binder connector)
Power consumption	320 mA (12 V DC)
Weight	Approx. 630 g
Housing material	Aluminium
Dimensions	180 x 110 x 50 mm
SDHC slot	1
Operating temperature	-40 °C to +80 °C
Storage temperature	-40 °C to +85 °C
Protection class	IP42
Relative humidity	10-95 %, non-condensing
LED	8 x LEDs, of which 7 are freely configurable
Certification	CE
Additional information	1 x FlexRay A/B channel for FRC-EP190 Max EtherCAT (order no. 1.13.0094.10407) and FRC-EP190 Plus 4 (order no. 1.13.0094.10507)

CERTIFICATES



ACCESSORIES

ORDER NUMBER

Power Cable for FRC-EP170/190	1.04.0089.00001
FlexRay/CAN/IO Breakout Box	1.01.0081.00200
CAN/LIN/K-Line Breakout Cable (1.5 m)	1.04.0089.00200
Remote/Debug Cable	1.04.0089.00301
USB WiFi Extension	1.04.0143.00000

PIN ALLOCATION

Field Bus Interfaces (Back Side)

- X1, X2** CAN high-speed,
CAN low-speed, LIN
- X3, X4** CAN high-speed,
CAN FD, K-LINE

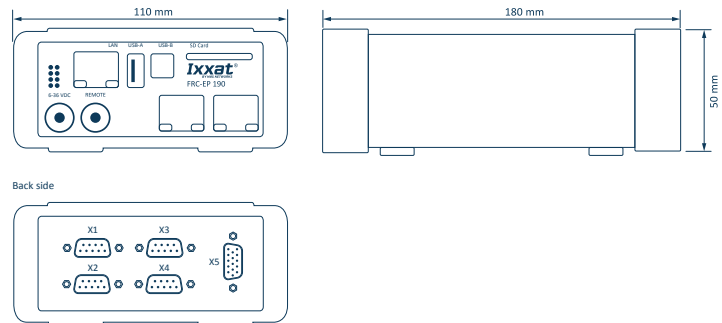
- X5** Digital I/O, Analog-IN,
FlexRay (only selected variants)

EtherCAT Interfaces (only selected variants)

- X6** EtherCAT-Slave-OUT
- X7** EtherCAT-Slave-IN

The detailed pin allocation is dependent on the device variant. Further information can be found in the user manual.

TECHNICAL DRAWING



SOFTWARE SUPPORT

The FRC-EP190 provides various possibilities to manage configurations. HMS provides with Ixxat ACT (Advanced Configuration Tool) an easy to use Windows-based tool enabling customers to configure the device via drag-and-drop. Most use-cases can be solved by using ACT Freeware.

Dashboard

With the dashboard, that is accessible via the IP address and a web browser, the state of the FRC-EP190 and the connected bus systems can be monitored, the different basic configurations can be selected and downloaded to the device, and data can be visualized.

ACT Tool

The engineering tool ACT is Windows based and allows the easy creation of configurations via drag-and-drop. The ACT tool provides further configuration possibilities (e.g. forwarding individual signals, changing message ID and content).

IxAdmin

IxAdmin is included in the ACT. With IxAdmin the different basic configurations can be selected, started and stopped and downloaded to the device. Changing baud rate settings is also possible as well as updating the firmware and managing the connected devices.