Ixxat FRC-EP190 Max EtherCAT

Item number: 1.13.0094.10407

The Ixxat FRC-EP190 Max EtherCAT is a powerful and versatile solution for automotive uses, integrating FlexRay, LIN, EtherCAT and eight CAN channels, thereof four CAN FD and two CAN low-speed capable. It's ideal for logging, gateway, and residual bus simulation tasks – easily configurable with the Ixxat Advanced Configuration Tool (ACT).

Configurable automotive platform (1 x EtherCAT, 1 x FlexRay, 4 x CAN + 4 x CAN FD)

Features and benefits

Go-to solution for demanding network requirements

The FRC-EP190 enables easy integration of multiple bus systems into a single, compact device. This is essential for e-mobility projects and complex industrial applications.

Multi-connectivity with various interfaces

Additional interfaces included: 2 x LIN, 1 x Ethernet (10/100 Base-T), 4 x Digital in/out (A/E), USB 2.0 device and host and a SDHC slot. Further extension options are available.

Embedded platform with own processing power

All applications run on the device, a PC is only needed for configuration or stimulation/visualization of data, as the actual intelligence is outsourced to the embedded platform.

Quick and easy configuration through ACT support

The platform is supported by the Ixxat ACT (Advanced Configuration Tool), a Windows-based tool to easily configure the device via drag and drop. Most use cases can be solved by using ACT Freeware.

Compatibility with advanced standards

Supports industrial protocols, including FlexRay and EtherCAT, facilitating high-speed data transfer and network integration for complex applications – especially suited for automotive engineering.

Improved data management for efficient engineering

The FRC-EP190 series streamlines data management and protocol handling, optimized for automotive testing, logging and gateway operations. Ensuring easy integration and reliable performance.

Overvoltage protection

Galvanic isolation safeguards against overvoltage and protects from potential electrical damage.

Ixxat FRC-EP190 Max EtherCAT

General

Net Width (mm)	110
Net Height (mm)	180
Net Depth (mm)	50
Net Weight (g)	890
Packed Width (mm)	20
Packed Height (mm)	7
Packed Depth (mm)	28
Packed Weight (g)	1113
Operating Temperature °C Min	-40
Operating Temperature °C Max	80
Storage Temperature °C Min	-40
Storage Temperature °C Max	85
Relative Humidity	10 to 95 %, non-condensing
Current Consumption Type Value at Vcc Nom (mA)	420 mA (12 V DC)
Input Voltage (V)	6 V to 36 V DC
Power Connector	3-pole
Isolation	The FRC-EP190 features four interface islands (X1, X2, X3, X4), each galvanically isolated from the others. Within each island, interfaces for CAN FD, CAN high-speed, digital I/O, and LIN are interconnected. The shielding of the cable and/or the metal collar of a D-Sub connector is directly connected to the housing.
Configuration	The Ixxat FRC-EP190 is a Linux platform that is able to work standalone without any connected PC. For the standalone function a configuration is needed, that can be created and downloaded to the device via the PC based Ixxat Automotive Configuration Tool (ACT) and an USB connection.
Content of Delivery	FRC-EP190 device, user manual, power supply cable (2 m, 3-pin Binder socket to 3 x 4 mm banana plugs), USB 2.0 cable (2 m, Type A to Mini Type B), Ethernet cable (2 m), runtime licences for Gateway and RBS, available as download: Advanced Configuration Tool (ACT)

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General

Mounting	Panel mount
Housing Materials	Aluminum
Packaging Material	Cardboard

Identification and Status

Product ID	1.13.0094.10407
Country of Origin	Germany
HS Code	8517620000
Export Control Classification Number (ECCN)	EAR99
Supply Risk Factor ERP	Used in Volume 01

Physical Features

Connectors / Input / Output	3 x RJ45 connectors (1 x Ethernet, 2 x fieldbus), 1 x USB type B port, 1 x USB type A port, 1 x SD card slot, 1 x 7-pin Binder female panel mount connector (remote/debug), 1 x 3-pin Binder male panel mount connector (power), 4 x D-Sub 9 male connectors, 1 x D-Sub HD15 male connector

CAN Features

CAN Mode	CAN high-speed (ISO 11898-2), CAN low-speed (ISO 11898-3)
CAN Transceiver	TI SN65HVD251

CAN FD Features

CAN FD Transceiver	TI SN65HVD251

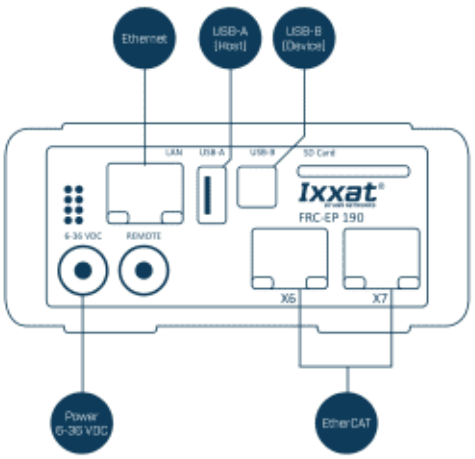
LIN Features

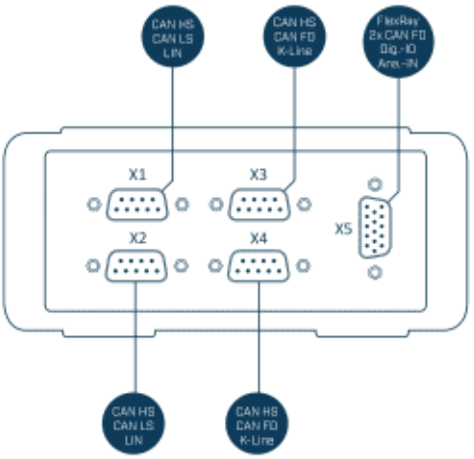
LIN Transceiver	TJA1020

Certifications and Standards

Protection Class IP	IP42
ETIM Classification	EC001604
WEEE Category	IT and telecommunications equipment

Use Case


Ethernet
USB-A
USB-B
Ixxat
FRC-EP 190
X6
X7
Power
EtherCAT


X1
X3
X2
X4
X5