

Eaton TFX remote monitoring system



Enabling smart, connected hydraulics

The TFX gateway is available with an internal or external antenna, offering OEMs and end users multiple machine mounting options.



Imagine a future where heavy equipment components are updated as easily as a smartphone is; where a dashboard shows you the precise position of your machines anywhere in the world, as well as what they're doing and how they're doing; where unplanned downtime due to equipment malfunction is a distant memory. This future is now a reality, and telematics systems are making it possible.

Introducing the Eaton TFX remote monitoring system for smart, connected hydraulics.

The Eaton TFX remote monitoring system provides fleet and equipment managers a comprehensive view into machine location and performance, enabling them to make data-driven decisions that increase uptime and productivity. With the ability to monitor data on anything connected to the CAN bus, the TFX system is easy to integrate with Eaton's other Pro-FX Ready™ products, as well as non-Eaton components.

The Eaton TFX system features over-the-air programming (OTAP) of the Eaton HFX controller, multiple hardware and data plan options as well as complete configurability to pull and visualize the data that matters, allowing users to create a telematics solution perfectly suited to the application—whether single machine or fleet system.

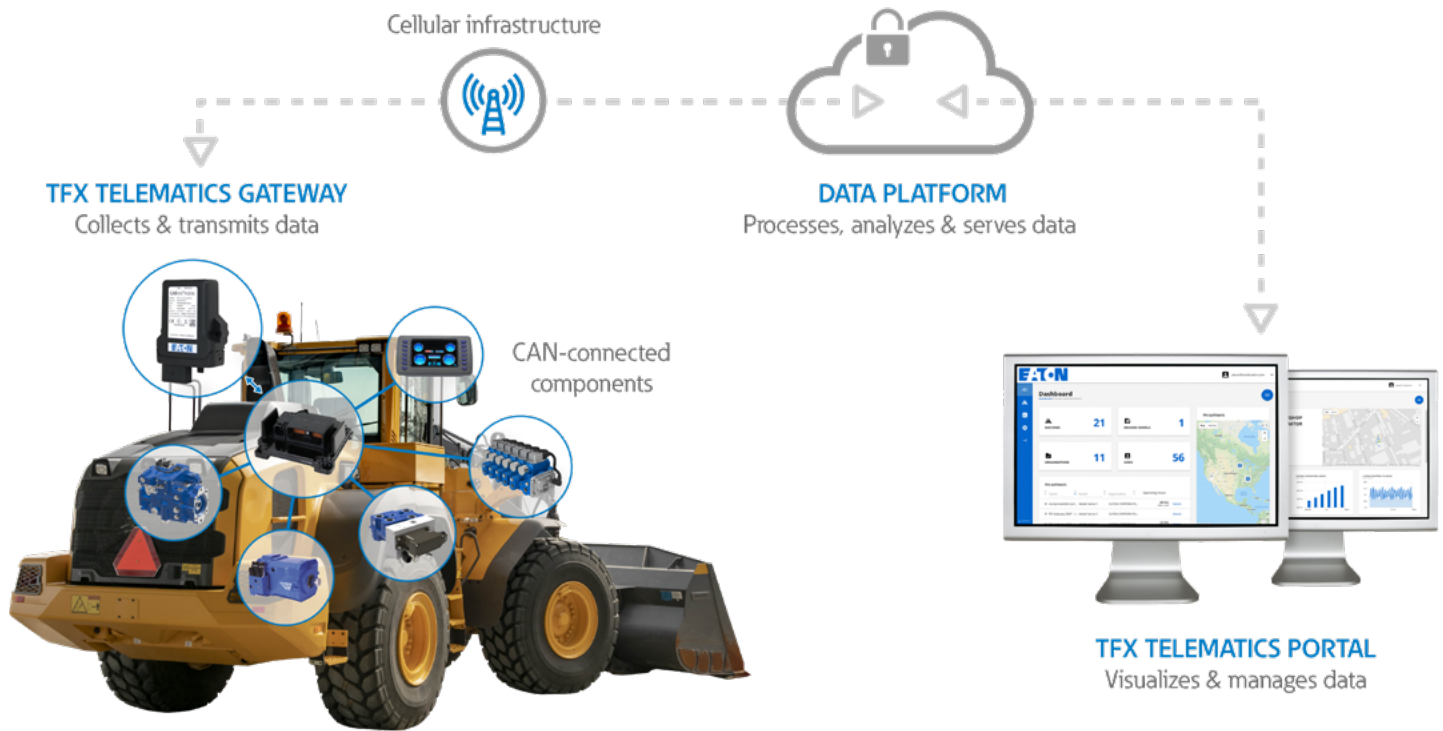
Benefits of telematics

- Prevent unplanned downtime by scheduling maintenance, versus waiting for failure.
- Improve productivity by ensuring machines are running at the correct RPMs, temperatures and other specs.
- Extend machine life by detecting and correcting misuse.
- Prevent losses through asset tracking and geofencing.
- Enable quicker repair diagnosis through remote customer support.

To learn more about the TFX remote monitoring system, contact your Eaton sales manager or distributor.

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Eaton TFX remote monitoring system platform solution

TFX benefits

- Seamless integration with both Eaton and non-Eaton components, providing complete information on machine health.
- Compact design and IP6K7 environmental rating suited for the rugged environment of mobile off-highway equipment.
- Flexible and configurable to meet the needs of a particular machine or an entire fleet.
- Secure development approach that helps manage cybersecurity risks and protect the availability and integrity of the machine.
- Available with a variety of hardware and data plan options that scale to meet the needs of the job.
- Over-the-air programming of the Eaton HFX controller, which allows the controller to be updated remotely.

Applications

- Agriculture
- Construction
- Material handling
- Forestry

Specifications

Data plans	Seasonal (6 months) or yearly; 10, 20 or 50 MB/month
Operating voltage/current	6 to 36 V, 250 mA typical
Antenna	Internal or external
Environmental rating	IP6K7
Cellular	GSM, GPRS or EDGE (2G); UMTS or HSPA (3G)
Temperature range	-40 °C to 80 °C
Processor	STM32 ARM Cortex M4
Clock	168 MHz
Flash	NOR-Flash 16 MB
RAM (volatile memory)	760 KB
RTC	Supercap buffered (backup time > 48 h @ 25 °C)
Nonvolatile memory	8 kB FRAM
SIM	Embedded
CAN	1 CAN 2.0 A/B (J1939 and CANopen)
I/O	1 D-IN/A-IN (KL15), 3 A-IN (0-15 VDC), 1 D-OUT (6-36 VDC/500 mA)
Temperature sensor	-40 °C to 85 °C ±3 °C, 20 Hz
Positioning	GPS, Glonass, Beidou (external antenna), Galileo, ≤ 5 m / 1 Hz
Clamp 15 (ignition)	Yes
Acceleration and gyrosensor	3 axes, ± 16 g, 16 bit
Status lights	2 LEDs
Vehicle connector	Micro timer 2, 14 Contacts

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