

STREAMS FP.MINI-6

Description

The STREAMS Field Processor (FP) is a ruggedized computer designed for use in a suitable roadside enclosure. The FP is designed as part of the STREAMS system to provide local processing and control of field devices - it is not sold as a stand-alone device. The standard FP is a DIN rail-mounted model. Specific housing needs (e.g. rack mounted) are available.

The FP architecture uses a service-device driver model and supports multiple services connecting to multiple, different devices, including those from different manufacturers. Field Processor to server communications over an IP-based field network uses SSL (Secure Sockets Layer) for security. Secure logon facilities are provided through certificate-based technology.

Software maintenance and upgrades are generally carried out over the field network to which the FP is connected. The FP configuration is kept on the server so units can be replaced without performing site-specific configuration.

Benefits

Local processing power at the site of field devices allows:

- a **high level of autonomy** in the field
- **reduced load** on the wide area network (WAN)
- **removes the real time dependency** on communications between STREAMS and ITS devices.

Other benefits include:

- From the FP, all communications are secured by PKI (Public Key Infrastructure) using SSL with certificate-based authentication, providing increased security both for the field devices and for the ITS Applications Servers.
- Use of Linux on the FP keeps licensing costs to a minimum and gives developers a high degree of control over the application.
- Local scripting capability.

Power supply requirements

An external power supply is required and ships with the FP:

- 6 – 28 VDC (rated for extended temperature range)
- Power consumption 4W (idle), 6W (loaded)

Important: Transmax recommends that external power supply and serial port protection be used to avoid damage caused by transient electrical spikes. Please contact Transmax for options.



Physical specifications

- Dimensions: 150 mm W x 150 mm D x 40 mm H
- Weight 0.6kg
- Flexible mounting options include:
 - o DIN mounting bracket
 - o flange mounting.

Technical specifications

x86, 500MHz processor
 256MB onboard DDR RAM
 Up to two Compact flash
 Serial site identifier
 Fanless operation
 Sealed case (IP Rating – IP51)

Interfaces

1 x DB9-M console port
 1 x DB9-M serial site identifier port
 4 x DB9-M serial I/O ports (for field devices, TIA/EIA-232/422)
 1 x RJ45 network interface/LAN ports
 2 x USB ports via a DB15-F connector. Contact Transmax if a USB connection is required as USB is not supported by STREAMS.

Operational specifications

- Operating temperature (-10°C to +75°C) computer suitable for roadside and mobile applications
- Mean time between failures (MTBF) is approximately 100,000 hours

Management and communications

- Secure network connection to host via TCP/IP or PPP
- Gateway to other network devices including FPs via secure TCP/IP or PPP
- Local serial console maintenance port
- Secure Remote Management

Supported field devices

- Variable Speed Limit Sign (VSL)
- Variable Message Sign (VMS)
- Ramp Signal Controller (RSC)
- Changeable Message Sign (CMS)
- Intelligent Vehicle Detector
- Lane Use Management devices
- Intersection Controller

For a more complete list, including specific supplier-supported devices, please contact Transmax on 07 3355 8700 or see our supported devices database at www.transmax.com.au

Standard package contents

- Field Processor
- DIN rail-mounted bracket
- Serial site identifier
- External power supply
- 240V AC mains supply power cable (AS/NZS 3112 10A 3 pin plug, flat earth)
- DC supply power cable (with CPC plug)
- Cat 5E ethernet cable RJ45/RJ45

DIO support

Onboard Digital IO (DIO) support is not available on the FP.MINI-6 Field Processor. The site identifier supports Door Open DIO signalling and Temperature Sensor. For other DIO requirements, Transmax recommends an external PLC be used. Please contact Transmax for further details.

STREAMS support

Supported in STREAMS versions:

- V2008.1 and onwards

Warranty

1 year (return to base). Optional extended warranty periods of 1, 2, 3, or 4 years are also available on request.

Further information

The information contained in this brochure is subject to change. Transmax recommends you discuss your requirements with us prior to placing your order. Please contact us on +61 (0) 7 3355 8700 or email us at info@transmax.com.au.

STREAMS Architecture Model

