



## **OPM V IR Link for Fleet Management Applications.**

**OPM 115 - V**  
**OPM 1000 - V**  
**IR Data Modem**  
Asynchronous RS-232,  
Up to 115.2 KBps  
(1 Mbps for OPM 1000-V)

### **Features:**

- \* High speed data transfer
- \* Transparent to the user
- \* Plug and Play
- \* No software changes required when replacing existing wired connections
- \* Automatic transfer of files even while in motion.
- \* Communication protocol flexibility.
- \* No licensing required
- \* Error free transmission
- \* Wireless access to wired networks
- \* High immunity to RF and light source noise interference
- \* Low power consumption
- \* Security - No information leakage
- \* Low cost

Oplink offers OEM IR communications systems for Fleet Management Applications such as Public or Private Bus Companies and for smaller size vehicles.

The usual problem to solve is providing a cost-effective wireless data link between a vehicle's black box and a base station connected to a PC (which in turn may be connected to a network).

Oplink has proven that the most cost-effective and reliable wireless solution lies in its family of OEM IR communication products for Fleet Management.

## Description:

Oplink's IR communications technology has been adapted for Fleet Management applications data communication.

The OPM V system comprises a mobile unit and a fixed base unit. The mobile unit is designed to be connected to an on-board computer via a serial communications interface. The fixed unit is connected to a PC and can be connected to a wired network .

Data rates are up to 1 Mbps.

The IR communication range can be 10m to 40m when line of sight is maintained between the fixed and mobile unit. The necessary range and field of view required is optimized to get the required performance in each application.

Optional built-in data buffers provide the fastest data transfer for static or moving applications. This is regardless of the data rate limitations that the black box or the PC may have.

For example: The data gathered in the black box of a vehicle is transferred to the buffer contained in the mobile IR unit at 38400 bps before the IR link is established. When the mobile unit is within the range for IR communications the data is automatically transferred at 1 Mbps to the fixed IR unit and stored in its buffer. Afterwards the file is transferred from the fixed unit's buffer to the local PC at 19200 bps (supposing this is the higher limit for communication baud rate the particular software for fleet management used in this case).

This example illustrates how the IR communication can speed up significantly the data transfer that was limited by the wired system without imposing any changes on the existing system. In other words data transfer becomes a swift and automatic procedure.

Many portable units can be addressed from the same base unit. This is managed by the communication software built into the unit.

Very high reliability is achieved thanks to the built-in error detection protocol. If an error is detected, the data is retransmitted.

The OPM V features superior electronic design and innovative optical assembly. These features enables a high immunity to external RF interference and to external interfering light sources, including sunlight radiation.

The system is based on LEDs as the light source, making it safe and free of any health hazards.

The OPM V series of modems are competitively priced, easy to install, and provide very reliable data links.

## Specifications:

Optical as well as electrical specifications are adaptable to specific projects. Consult with Oplink's engineers in order to get the best solution for your needs.

The parameters involved are:

- \* Time available for downloading
- \* Typical size of file being transferred.
- \* Typical distance and angle for IR communication
- \* Protocol specifications or constraints
- \* Electrical interface and power source.

Oplink will provide the specifications upon your request.