FleetData Pty Ltd • ABN 85 084 389 257.
P.O. Box 886 Mt Ommaney QLD, Australia 4074
Telephone: +61-7-3712-0444 • Fax: +61-7-3712-0555
Email: service@fleetdata.com.au • Website: fleetdata.com.au

FD420-GSM & FD420-CDMA
Mobile Tracking and Telemetry Unit

DESCRIPTION

The FD420-GSM Online Tracking Module is an intelligent GPS to GSM device with logging capabilities. The device provides 4 digital inputs for recording specific asynchronous events and 2 digital outputs for controlling specific devices.

When not within range of a GSM network device the FD420-GSM can log up to 32,000 points of tracking information for later retrieval using non-volatile circular buffer memory.

CONTENTS

The FD420-GSM is supplied with the following items:

- FD420-GSM device.
- Interface and power cable.
- This information sheet...
- GPS Antenna, 3V Active.
- 1A 3AG fuse and fuse holder.

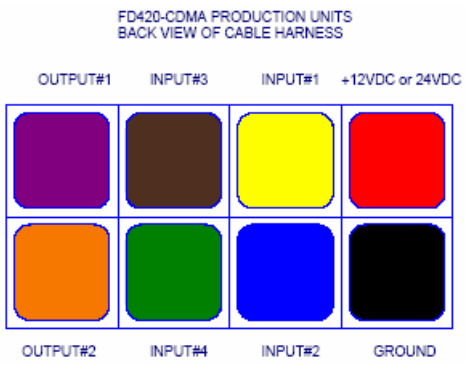
SPECIFICATIONS

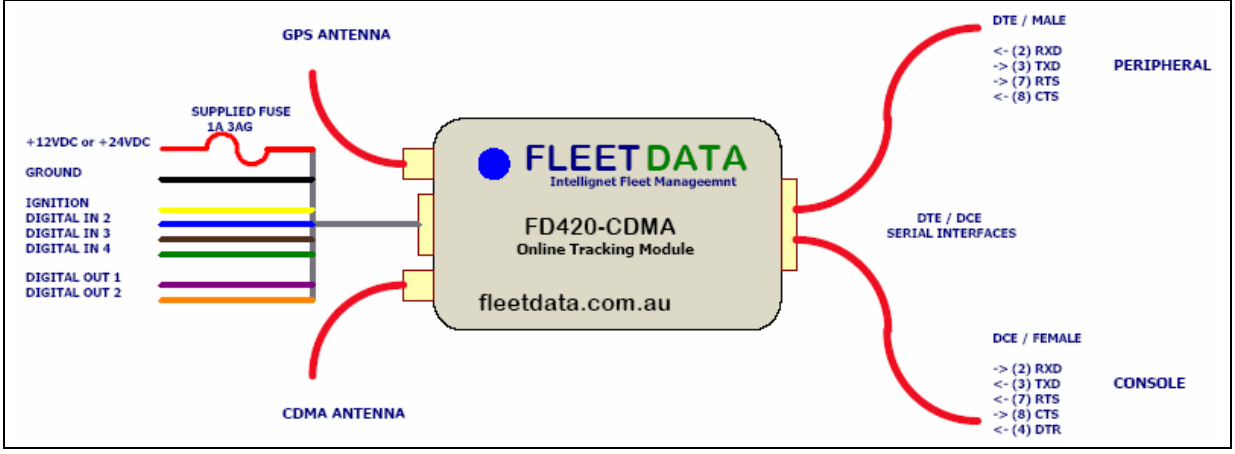
Operating voltage:	12VDC +/-20% or 24VDC +/-20%
Current consumption:	400mA MAX. 20mA when ignition off (if enabled)
Operating frequency:	GSM (or CDMA) Network

FD420-GSM INSTALLATION INFORMATION

FD420-GSM CONNECTION DIAGRAM

Assembled Unit





FleetData Pty Ltd • ABN 85 084 389 257.
P.O. Box 886 Mt Ommaney QLD, Australia 4074
Telephone: +61-7-3712-0444 • Fax: +61-7-3712-0555
Email: service@fleetdata.com.au • Website: fleetdata.com.au

FD420-GSM CONNECTION DETAILS	
WIRE COLOUR	**DESCRIPTION**
POWER	
RED	+12VDC or +24VDC (note 1 & 5)
BLACK	Chassis Ground
INPUTS	
YELLOW	INPUT #1 – 12V/24V Switched Accessories Power (note 2,4)
BLUE	INPUT #2 – Customer use (note 3,4)
BROWN	INPUT #3 – Customer Use (note 3,4)
GREEN	INPUT #4 – Customer Use (note 3,4)
OUTPUTS	
PURPLE	OUTPUT #1 - Customer Use (note 3,4)
ORANGE	OUTPUT #2 - Customer Use (note 3,4)

WARNING: DO NOT CONNECT POWER UNTIL ALL OTHER CONNECTIONS ARE IN PLACE

NOTES:

1. Connection to 12VDC must be fused using supplied 1 amp automotive fuse and fuse holder.
2. Switched Accessory Power must be connected to input #1 if the smart power- save feature is enabled. Please consult your software manual for enabling this feature.
3. The use of these inputs is user selectable. They are general purpose inputs that must be pulled to 12VDC to change their state otherwise they are read as off.
4. The inputs are sampled over a 1 second period, so for a state change to be recorded the event change must be present for at least 1 second.
5. The unit is suitable for connection to either a 12VDC or 24VDC system.

CONNECTING THE ANTENNAS

The supplied GPS antenna must be connected to the FD420-GSM correctly in order to obtain a valid satellite fix. The following must be considered when connecting the antenna.

1. Connect the GPS antenna to the gold FD420-GSM labelled GPS.
2. Connect an appropriate GSM antenna to the gold FD420-GSM labelled MDM.
3. Finger tighten the screw connectors to a positive stop. *Do not over tighten*

GPS ANTENNA PLACEMENT

The position of the antenna mounting is crucial to the optimal performance of the GPS receiver.

The GPS antenna must be mounted in such a way as to ensure it has as much an uninterrupted view of the sky as possible. The rear parcel shelf or front dash board of a sedan may be suitable. The base of the antenna is magnetic thus it can be mounted external to the vehicle. Be careful while laying the cable not to crease, cut, twist or kink the cable as this may break the internal conductors or significantly affect its operation.

FleetData Pty Ltd • ABN 85 084 389 257.
P.O. Box 886 Mt Ommaney QLD, Australia 4074
Telephone: +61-7-3712-0444 • Fax: +61-7-3712-0555
Email: service@fleetdata.com.au • Website: fleetdata.com.au

The antenna plane should be parallel to the geographic horizon and must have a full view of the sky ensuring a direct line-of-sight with as many visible satellites as possible.

DO…

… *do* mount the GPS antenna where it will see the most sky.
… *do* mount the antenna horizontal.
… *do* mount the antenna outside and on the vehicles roof where possible.
… *do* mount the antenna in an area with a good ground plane. A suitable ground plane should provide for at least 15cm of metal in all directions.

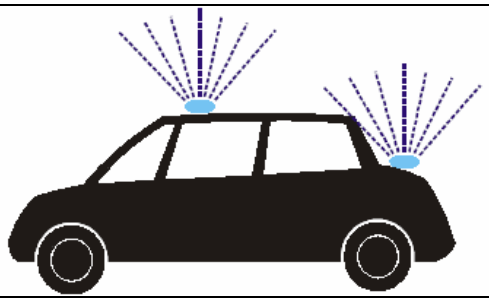
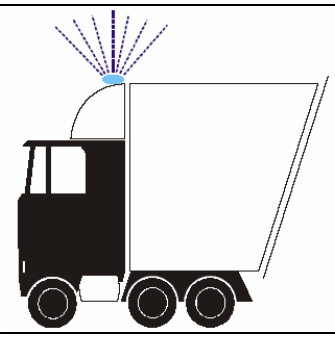
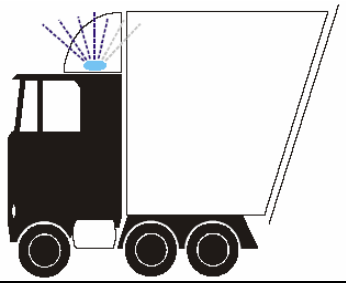
DO NOT…

… *do not* mount the GPS antenna where it will be on an angle. It should be mounted horizontal to see as much of the sky as possible.
… *do not* kink or tightly wrap excess cable or
… *do not* pinch or trap cable when refitting trim to the vehicle.
… *do not* over tighten the GPS antenna. Tightening by hand is normally adequate.
… *do not* place the antenna close to other electronic equipment such as engine management and control systems.
… *do not* place or mount the antenna where it will be covered or blocked by metal.
… *do not* mount antennas where they are close to people (> 30cms).

ADDITONAL NOTES…

… Fibreglass airfoils on trucks and Taxis can attenuate the GPS signal.
… Some automotive windscreens have a metallic coating. GPS reception in such cars may not be possible. Sometimes there is a small section spared for GPS and mobile phone antennas behind the rear view mirror.

EXAMPLES OF ANTENNA PLACEMENT

Recommended Antenna Placement	**Suitable but not ideal Antenna Placement Performance may be degraded.**
	
This placement gives a clear view of the sky and provides the antenna with a good ground plane.	Window and roof reduce GPS signal and obstruct the sky view.
	
	Fibreglass airfoil attenuates the GPS signal.