

Annex B: Frequently Asked Questions

1. Why is the OBU bigger than the IU today and requires three pieces?

In the current ERP system, the in-vehicle unit (IU) communicates with the gantries to process ERP payments. In ERP 2.0, both systems will be combined in the on-board unit (OBU). The OBU will communicate with GNSS to determine the location and process the ERP charges. This removes the need to rely on physical gantries that take up space and are costly to maintain.

Besides overcoming the constraints of physical gantries, GNSS capabilities allow us to collect better aggregate-level traffic data to improve congestion management and transport planning. Motorists will also benefit from having access to more information. However, due to the larger computational power required, the OBU needs to be bigger.

The single-piece OBU is built for outdoor conditions. It cannot be mounted on the dashboard inside a vehicle due to the poor heat dissipation in an enclosed environment, which will affect the OBU's reliability.

Therefore, in vehicles other than motorcycles, the OBU is designed as a three-piece unit with the processing unit mounted away from the dashboard, which is more suitable for indoor warm weather conditions.

With a three-piece unit, motorists have the flexibility of replacing individual parts, instead of the whole OBU, if they encounter any issues in the future.

LTA has also taken into consideration public feedback and developed an option for displaying OBU information on smartphones. Motorists can choose not to install the touchscreen display and access key ERP and traffic information through compatible mobile applications instead.

2. Why can't a smartphone-based payment system replace ERP 2.0 entirely?

An entirely smartphone-based system will not offer the security and features that the current ERP 2.0 is designed to provide. The OBU has been designed with more robust security measures and tested extensively to ensure that it can handle real-time charging transactions and data securely.

Given that there are different models of smartphones in the market, running on different operating systems and offering different security features, a standard issue OBU ensures that ERP transactions can be carried out reliably across different vehicles and vehicle environments.

The OBU also eliminates other operational issues with a smartphone-based system, such as the need to ensure that the mobile application is functioning and that the phone is sufficiently charged and connected to the cellular network throughout the drive.

However, we have taken earlier feedback from motorists on board, and they can choose to use mobile applications to display OBU information instead of installing the touchscreen display.

3. Will a touchscreen display distract drivers and pose safety issues?

We have engaged the industry to ensure that the installation position of the touchscreen display will not obstruct a driver's field of vision. The touchscreen interface is also designed to be enabled only when the car is stationary or travelling at a slow speed but will be disabled when cruising in higher speeds. If preferred, motorists also have the option of displaying OBU information on their smartphones instead.

4. Will ERP gantries be removed when the installation of ERP 2.0 starts?

ERP gantries will remain during the installation period to facilitate a smooth transition for motorists. Thereafter, they will be gradually removed, and ERP charging locations will be clearly indicated by other visual markers/signage, which LTA is currently studying. The OBU will also inform motorists of upcoming ERP charging locations and their applicable ERP charges in a timely manner. More details will be shared when ready.

5. How will my privacy be ensured with the new system?

Strict safeguards for data privacy have been put in place, with ERP2.0 designed to handle charging transactions and data securely. Like all GNSS, GPS and payment systems, ERP 2.0 will collect data from users. LTA will only use anonymised or aggregated data for traffic management and transport planning purposes. For vehicle-specific data, LTA will only use it for payment, charges, and enforcement, such as against non-payment of ERP charges.

LTA also adheres to Government-wide standards on data sharing with other Government agencies. For example, sharing of data to support policy and planning purposes will only be done on an anonymised or aggregated basis, in accordance with the Public Service (Governance) Act. To prevent unauthorised access and improper use of the data, there will be robust security and strict safeguards in place, including penalties under the Act.