Highway Side Unit

WER13-01 Roadside Unit

WER13-01 roadside unit is a new generation of RSU designed by VanJee combined with ONE-POS two-dimensional positioning technology and ONE-CLOCK satellite synchronous timing technology, which can completely eliminate adjacent channel interference.

The complete solution of adjacent lane interference and car following

- High-precision two-dimensional positioning accurately guides RSU transactions. Combined with satellite synchronous timing technology, it can effectively distinguish adjacent channel OBUs, completely solve above problems and improve transaction success rates.

DBF high resolution, high precision positioning

- Multi-target high-resolution, high-precision simultaneous positioning, positioning is not limited by OBU signal strength, antenna pattern, installation position, etc.
- Positioning time: <100us.

Greatly improve vehicle traffic and passing efficiency

- Realizing the linkage of multi-row RSUs through networking technology. OBU is positioned in two dimensions to precisely control the transaction area, realize high-speed passing vehicles and greatly improve the speed and efficiency of vehicle passing.

Highway Side Unit

WER13-01 Roadside unit core technology

ONE-CLOCK
Satellite Synchronous Timing Technology

The absolute time of the antennas in the same row is consistent, and the transaction signals are transmitted synchronously, so that the signals in the transaction overlap area formed between the adjacent lanes can suppress each other, thereby effectively preventing the OBU from receiving the RSU signals of the adjacent lanes.

ONE-POS
2D positioning technology

Precisely control the transaction area, accurately locate the OBU position, and effectively prevent OBU from trading with adjacent lanes RSUs, thereby effectively avoiding adjacent lane interference.

ONE-NET
networking technology

A local area network is formed between the antennas in the front and rear rows to realize the linkage of multiple rows of RSUs and prevent simultaneous transactions in the front and rear rows.

Free-flow segmented charging RSU

WER13-01F Roadside Unit

The WER13-01F roadside unit is the core equipment in the ONE-MATCH accurate restoration route toll system, smart toll station system, and smart service area system. It can accurately determine the location of the OBU through the positioning function and prevent reverse transactions.

Offline operation, independent work

- It can work in an independent way and operate offline and offline when the communication network is abnormal to ensure that the integrity, consistency, authenticity, non-repudiation and security of data are not damaged.

Rich interfaces, high compatibility

- It also supports dual-chip OBU, single-chip OBU and CPC card transaction processing flow.
- Provide at least one RS232, 1 USB, 1 422, 1 Fast Ethernet port (external), 1 Gigabit Ethernet port (internal), support wireless communication and facilitate communication with the host computer and other devices.

Fast transaction with high success rate

- The high-frequency and high-precision scanning function with the positioning function ensures that the OBU and the RSU of vehicle conduct accurate transactions at all timesEffectively avoid the impact of opposite and auxiliary roads.

clock synchronization, parallel processing

- Support Beidou timing clock synchronization.
- RSU supports concurrent communication with multiple OBUs, and can operate 10 PSAM cards at the same time.

Free-flow segmented charging RSU

WER09-01i Roadside Unit

The WER09-01i roadside unit is the core equipment of the gantry end in the ETC segmented billing system. It exchanges information with the OBU or CPC card in DSRC mode, collects the information in the OBU or CPC card, and sends it to the background server in real time.

High success rate of vehicle transactions

- The communication area can be flexibly adjusted, the signal is fully covered, the communication distance is long, and the identification/transaction success rate is high.

High security and good compatibility

- A three-level lightning protection structure has better anti-lightning and surge performance.
- Compatible with single-chip/double-chip electronic tags and composite access cards.
- Communicate with multiple OBUs/CPCs entering the communication area.

Equipment self-check, remote upgrade

- The function of remote online update of the application.
- The status self-checking function of main devices and functions such as transmitting power, working channel, receiving status, PSAM card/PCI password card status, etc., which is convenient for quick troubleshooting.

Powerful, parallel processing

- Using channel separation technology, multi-antenna joint reception, the channel where the ETC roadside unit antenna works can support software settings.
- Realizling parallel processing of multiple RSUs, and can operate 10 PSAM cards at the same time to complete multi-lane and multi-OBU concurrent transactions.