

## Smart Transportation Solution Guide

Enhancing efficiency and safety for various transportation applications



Fleet Management



In-Vehicle System



Railway System



Marine System



### Panel PC Series



Model Name	IKARPC-07A-A9	IKARPC-07A-BT	IKARPC-W10A	S19A-QM87	S24A-QM87
Size	7"	7"	10.1"	19"	24"
Resolution	1024 x 3 (RGB) x 600	1024 x 3 (RGB) x 600	1280 x 800	1280 x 1024 (5:4)	1920 x 1080 (16:9)
Brightness (cd/m <sup>2</sup> )	500	500	350	300	300
CPU	Freemium™ i.MX 6 Cortex™-A9 (quad-core, 1.0 GHz)	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)	Intel® mobile Core™ i5-4400E (2.7GHz, 37W)	Intel® mobile Core™ i5-4400E (2.7GHz, 37W)
System Memory	On-board 1 GB SDRAM	On-board 2 GB SDRAM	On-board 2 GB DDR3	2 x 204-pin DDR3 SO-DIMM Pre-installed one 4 GB DDR3 SO-DIMM	2 x 204-pin DDR3 SO-DIMM Pre-installed one 4 GB DDR3 SO-DIMM
WLAN	On-board Wi-Fi 802.11a/b/g/n 2T2R	PCIe Mini Wi-Fi 802.11b/g/n 1T1R	PCIe Mini Wi-Fi 802.11b/g/n 1T1R	N/A	N/A
Bluetooth	Bluetooth 4.0 + HS			N/A	N/A
WWAN	PCIe Mini, WCDMA/HSDPA/HSUPA			N/A	N/A
RFID	13.56 MHz ISO4443 A/B, read-write capable, ISO 14443A (MIFARE), ISO 14443B (FelCa)	N/A	N/A	N/A	N/A
GPS	Yes	Yes	Yes	N/A	N/A
Safety/EMC	CE/FCC/E-Mark	CE/FCC/E-Mark	CE/FCC/E-Mark	CE/FCC/DVN, IEC 60945 4th, IACS-E10 compliant	
Dimensions (WxHxD)	210 mm x 154 mm x 28 mm	210 mm x 154 mm x 28 mm	277 mm x 186 mm x 27 mm	463 mm x 113 mm x 349 mm	592 mm x 113 mm x 374 mm
OS	Android 4.2.2 / Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E				

### Embedded System Series



Model Name	SBOX-100-QM87	IVS-100-BT	IVS-200-ULT2	IRS-100-QM87	
CPU	Intel® mobile Core™ i5-4400E (2.7GHz, 37W)	Intel® Atom™ processor E3826 (dual-core, 1.46 GHz, 7W)	Intel® i5-5350U (dual-core, 1.8 GHz, 15W) or Intel® Celeron® 3755U (dual-core, 1.7 GHz, 15W)	Intel® Core™ i5-4402E (1.6GHz, 25W) Intel® Celeron® 2002E (1.5GHz, 25W)	
Chipset	Intel® QM87	SoC	SoC	Intel® QM87	
System Memory	2 x 204-pin DDR3 SO-DIMM slot Pre-installed 4 GB DDR3 SO-DIMM	2 x 204-pin DDR3 SO-DIMM slot Pre-installed one 2 GB DDR3 SO-DIMM	2 x 204-pin DDR3 SO-DIMM slot Pre-installed one 4 GB DDR3 SO-DIMM	2 x 204-pin DDR3 SO-DIMM slot Pre-installed one 4 GB DDR3 SO-DIMM	
I/O	1 x RS-232, 4 x RS-232/422/485 2 x USB 3.0 2 x GbE LAN 2 x CAN-bus	2 x RS-232, 4 x RS-422/485 4 x USB 3.0 2 x GbE LAN 4-ch digital input/4-ch digital output 1 x CAN-bus/OBD-II	2 x RS-232/422/485 2 x USB 3.0 4 x GbE LAN	2 x RS-232/422/485 2 x USB 3.0 2 x GbE LAN 4-ch digital input/4-ch digital output	
Display	1 x VGA, 1 x DVI-D, 1 x HDMI	1 x VGA, 1 x HDMI	1 x VGA, 1 x HDMI	1 x VGA, 2 x DisplayPort	
Hard Drive	2 x 2.5" SATA 6Gb/s SSD bay with RAID 0/1 function	1 x 2.5" SATA 6Gb/s HDD/SSD drive bay	1 x 2.5" SATA 6Gb/s SSD removable drive bay	2 x 2.5" SATA 6Gb/s SSD drive bay (hot-swappable bays)	
Power Input	Terminal block: 18 V-36 V DC with isolation	Cigarette lighter power cable, DC 9 V-30 V	DC jack: 9 V-36 V DC	DC jack: 9 V-36 V DC	
Operating Temperature	-15°C ~ 55°C with air flow (SSD)	-20°C ~ 60°C with air flow	-20°C ~ 60°C with air flow (SSD)	-25°C ~ 70°C with air flow (with industrial SSD/CF) meet EN 50155 T3	
Safety/EMC	EMC/CE/FCC/DVN, IEC 60945 4th, IACS-E10, IEC 61174 compliant	CE/FCC/E-Mark	CE/FCC/E-Mark	CE/FCC Class A Compliant with EN 50155	
Dimensions (WxHxD)	290 mm x 225 mm x 75 mm	200 mm x 150 mm x 76 mm	250 mm x 148 mm x 59.3 mm	290 mm x 225 mm x 69 mm	
OS	Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E				

ICPA has for decades been dedicated to industrial automation. Now ICPA expands the focus to transportation applications, including railway, vehicle, and marine intelligent solutions.

In the era of smart city, transportation is not the movement of people or goods from A to B anymore. Instead, smart transportation helps enterprise and people to improve efficiency during the journey from varied data acquisition, analysis, and precise prediction. Furthermore, with real-time streaming NVR (Network Video Recorder) logs, critical moments can be recorded when accident happens, therefore enhancing safety of drivers and passengers on the move.

In this year, ICPA will introduce EN50155 certified railway PIS (Passenger Information System) and NVR embedded system, E-Mark certified in-vehicle fleet management and NVR system, and DNV certified marine monitor, panel PC and embedded systems, fulfilling varied intelligent transportation requirements.







# Marine System Solutions

## Maritime remote management

It is difficult to send out technical support for marine management application due to the location limitation. The only way to solve the urgent issue is remote troubleshooting. iRIS can centralize computer information from the equipment room up to the bridge or any other control rooms where technicians can see the information on their displays.

## Isolated 2.5 kV protection on the RS-232/422/485 and CAN 2.0B

ICPA's marine system is protected from any stray electrical signals on the ship. Electric surges that were generated from other electronic devices often pass through serial lines to the marine systems, causing serious malfunction.



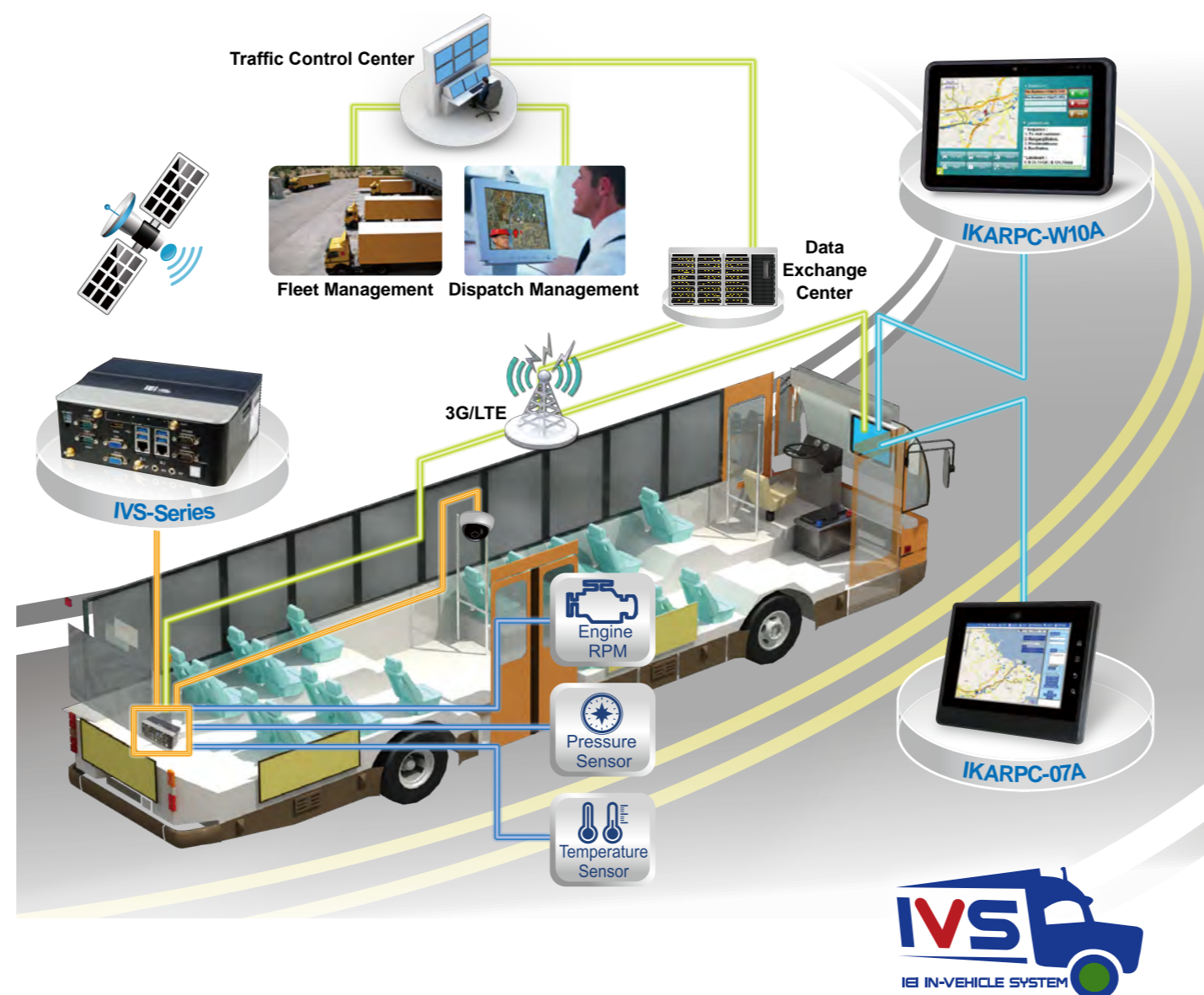
# In-Vehicle System Solutions

## Fleet management system

ICPA has a total solution for multi-vehicle monitoring and dispatching system, allowing enterprises to track vehicles through the system, and to prevent loss of goods in transit. We combine logistics and fleet management with our IoT solution to help enterprises on tracking their goods in real time and into safety.

## Combining all communication systems

Logistics industry's commonly used satellite positioning systems, electronic maps, Internet access, mobile communication systems with 3.75G/Wi-Fi/Bluetooth/GPS/RFID are all combined together in our solutions for logistics, manufacturing and passenger transportation industries.



# Railway System Solutions

## Railway NVR system

A variety of advanced technologies are now used in railway environments, such as control unit, passenger information system (PIS) and network video recorder (NVR). Among these technologies, using IP cameras for surveillance application is getting popular. The IP cameras can provide real time video monitoring to ensure passengers' safety.

## EN 50155 compliant embedded system

IEI railway system (IRS) series is compliant with the EN 50155 standard and meets the requirements for railway environments. The IRS series is equipped with M12 connectors allowing peripheral devices to securely connect with the system. The IRS-100 also supports RAID function to prevent data loss. In addition, powered by the high-performance Intel® Core™ i CPU, the IRS-100 has multi-function capability, making it not only a surveillance system but also a entertainment system.

