

The Comprehensive IO BOX IPC

ARK-3390



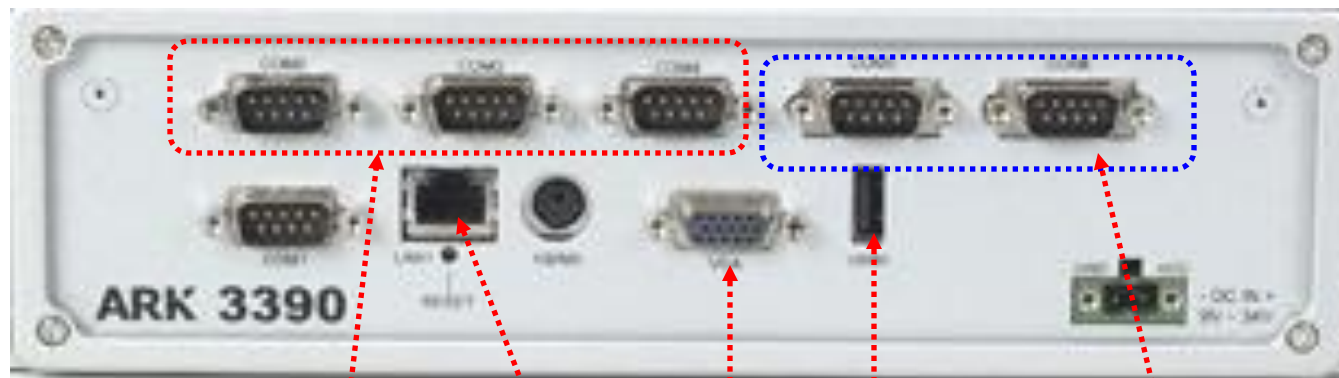
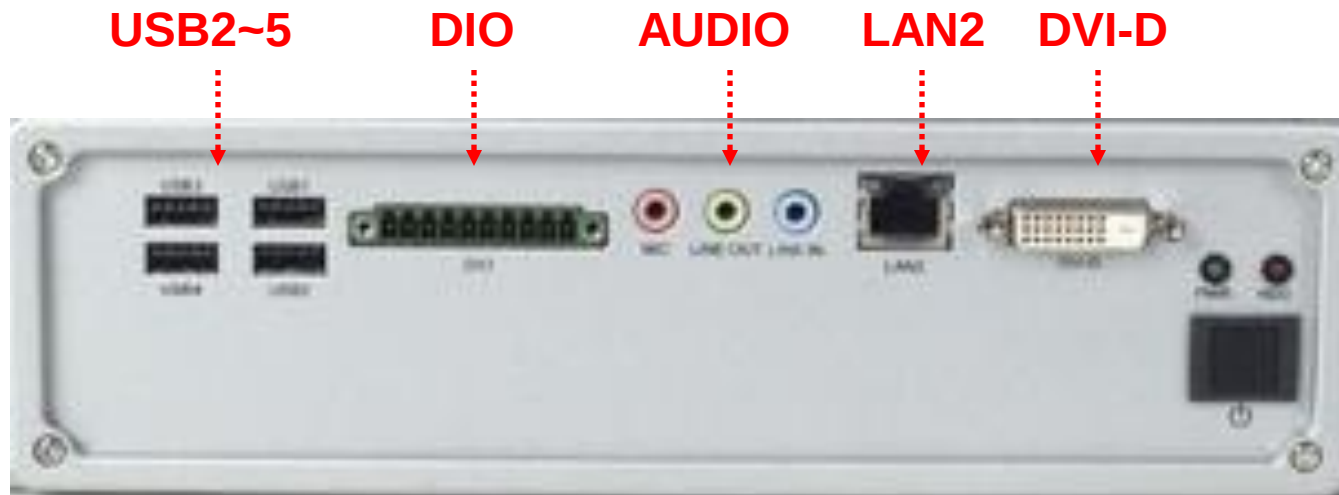
Trusted ePlatform Services

ADVANTECH

Full Functions Box IPC for Industrial Application

- **Intel® Core™ 2 Duo Box IPC**
- **Multiple Serial Ports with Isolation**
- **Dual Giga LAN for extend Internet application**
- **Mini PCI extension slot for WLAN module application**
- **Dual independent displays, CRT & DVI**
- **8 Bits Digital IO for further signal control**

ARK-3390 IO Interface



COM2~4
RS-232/422/485

LAN1

VGA

USB1

COM5~6
RS-422/485
Isolation 7.5kV

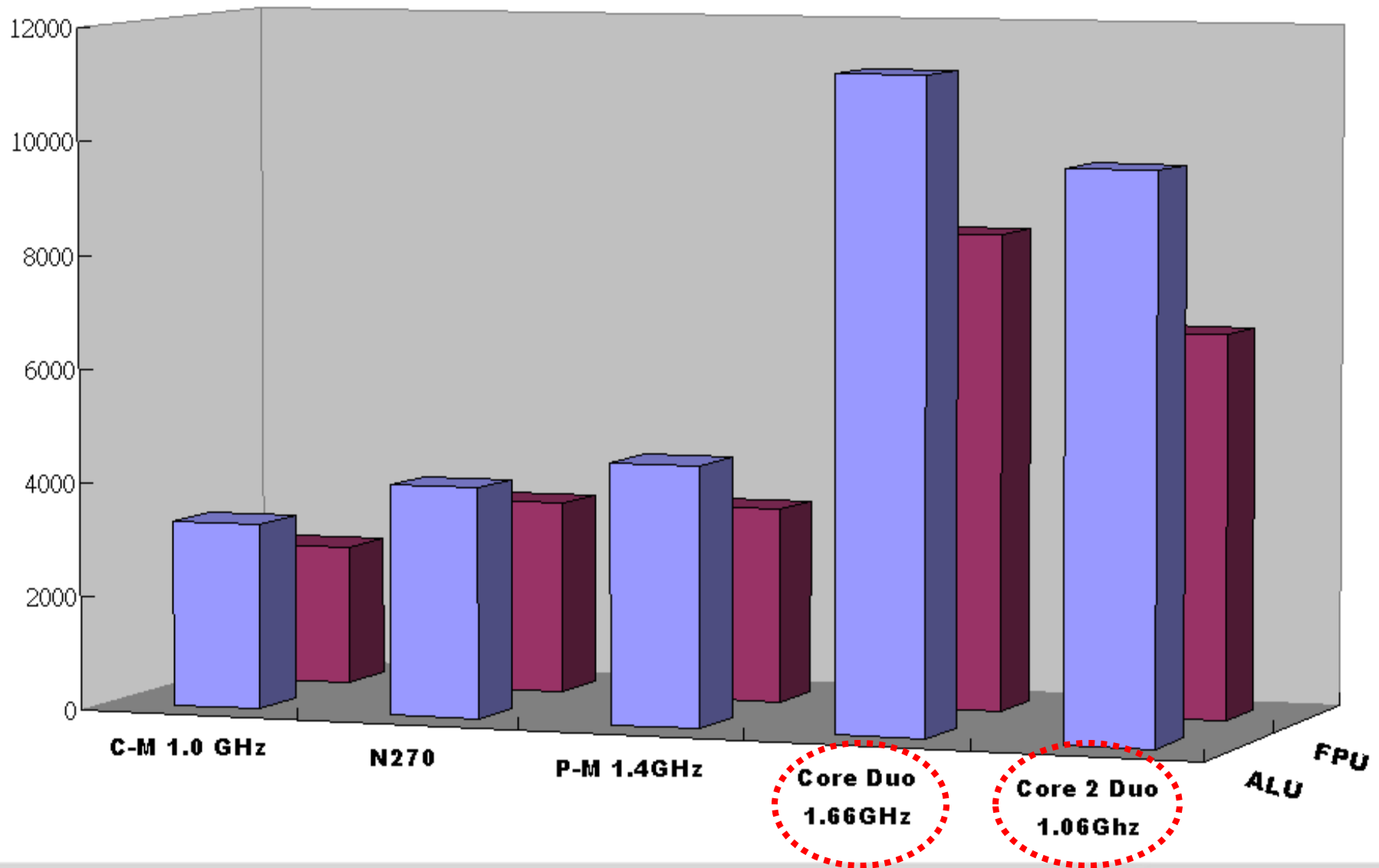
ARK-3390 Specifications

Processor	Intel® Core™ 2 Duo ULV 1.06 GHz	Intel® Core™ Duo LV 1.66 GHz	Intel® Celeron™ M ULV 1.06 GHz
System Chip	Intel 945GME + ICH7-M		
Display	CRT & DVI		
Serial Ports	1 x RS-232 3 x RS-232/422/485 with HW Auto Flow Control 2 x RS-422/485 with Isolation (7.5kV)		
USB	5 x USB2.0 Compliant		
LAN	2 x 10/100/1000 Base-T Ethernet Controllers		
Digital IO	8 Bits DIO with Phoenix connector		
Expansion Slot	1 x Mini PCI		
Audio	LINE_IN/LINE_OUT/MIC		
PWR	DC 9V ~ 34V wide range power input		

ARK-3390 Gallery



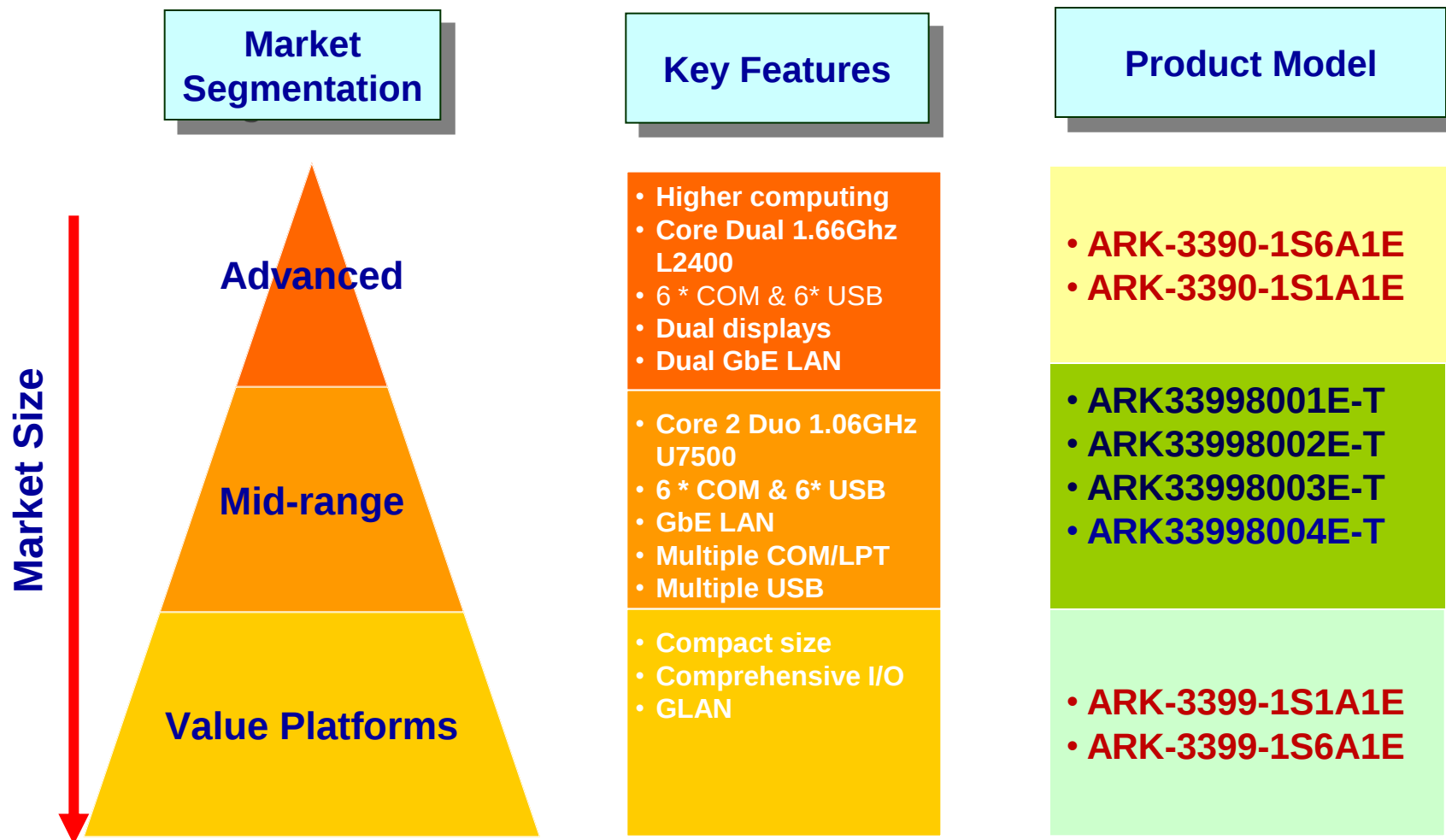
CPU Performance Table



Why ARK-3390 ..

- **Compact size but comprehensive functions ..**
 - compact size with rich IO
- **Various mounting kits selection ..**
 - VESA Mount, Wall Mount, and Desk Mount ..
- **Serial ports with auto flow control ..**
 - Five serial ports (RS- 422/485) with auto flow control and good for automation application
- **RS-422/485 with isolation (7.5kV)**
 - Two RS-422/485 with isolation (7.5kV) protection is good for factory device controller application
- **MiniPCI expansion slot ..**
 - easily install with WLAN card or other add-on cards
- **Internal USB port for GPRS/HSDPA**

ARK-3390 series market segment



Product Features Focusing

Serial Port :
Auto Flow Control
RS-422/485 w/ isolation

Expansion:
Mini PCI

Digital IO:
8 bits DIO

Compact Size



Rich IO

Dual Display:
Dual DVI
independent display

Internal USB:
Internal USB for
GPRS/HSDPA

Flexible Mounting kits:
VESA mount &
DIN Mount

SUSI Utility Support

- Support SUSI 3.0 (download link: <http://www.advantech.tw/ess/download.aspx>)
- Customer could access
 1. GPIO
 2. Watchdog timer
 3. I2C
 4. SMBus
 5. Hardware monitor



EmbCore Module



WLAN Module

968EMW0016

1. 802.11 a/b/g
2. Up to 54 Mbps
3. 64/128-bit WEP encryption

Antenna

1750003222

Internal wire

1700001854



HSDPA 3.5G

968EMC0018

1. 850/1900/2100 MHz for HSDPA/UMTS Tri-band network
2. 850/900/1800/1900 MHz for EDGE/GPRS/GSM network
3. USB 2.0 internal bus

Antenna

1750004421

Internal wire

1700006712

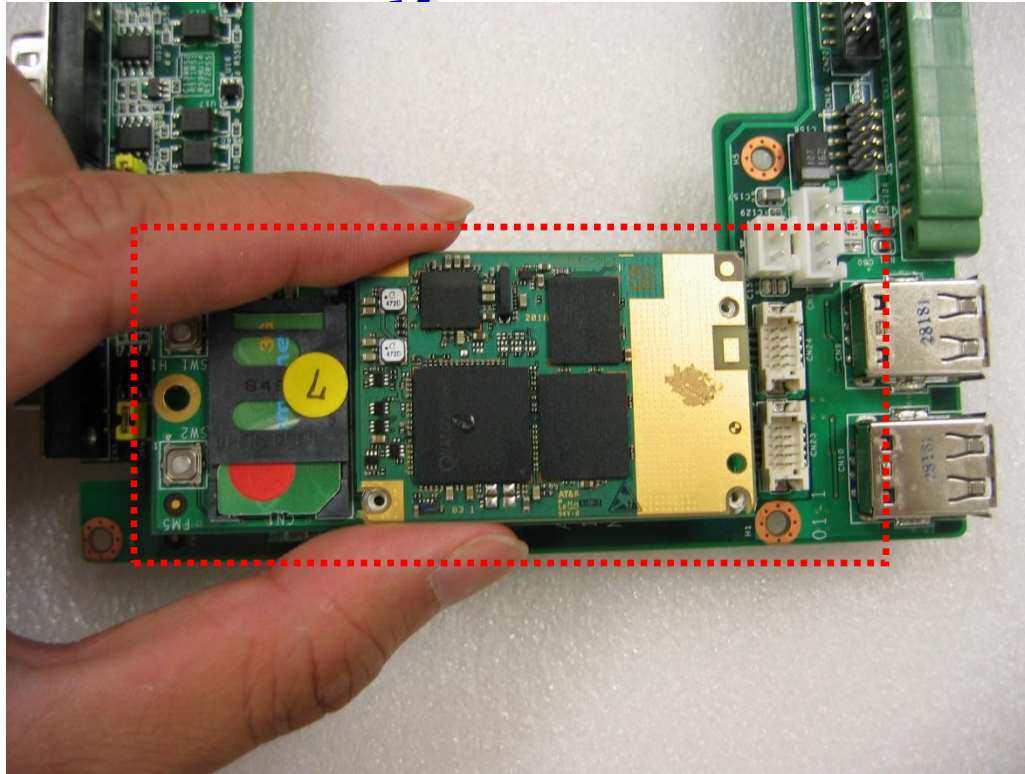


HSDPA Carrier Board

9698010100E

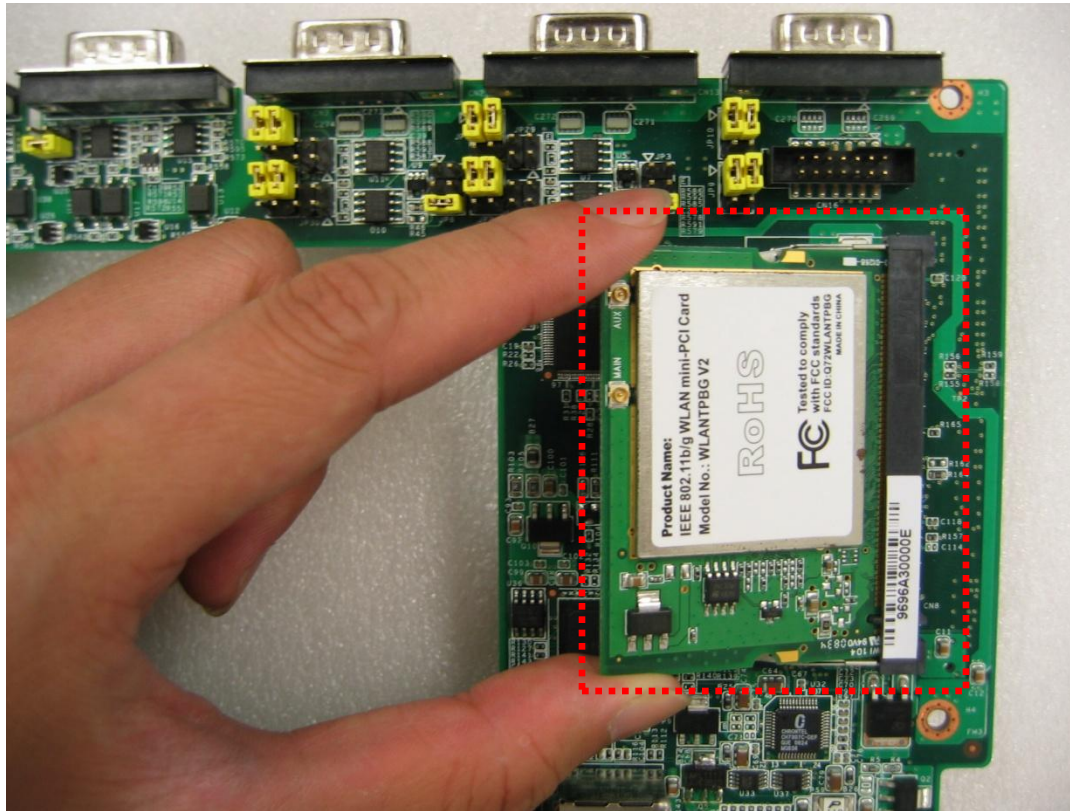
1. ASS'Y AMO-0101
A101 for ARK-1388
ROHS

HSDPA Assembling



- Client should place USB interface carrier board, 9698010100E, and HSDPA module, 968EMC0018. together

WLAN Assembling



- Assemble WLAN module in the MiniPCI slot. The recommend one is 968EMW0016.

Target Markets

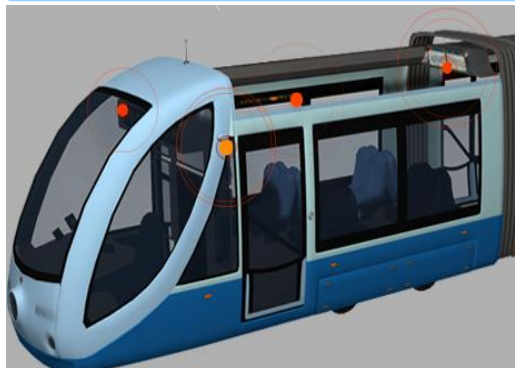
Applications

1. KIOS
2. POI
3. FIDS

**General
Embedded
Controller**

**In-vehicle
Box IPC**

Scenarios



Key Features

1. 4*serial port(RS-232/422/485)
2. Dual Displays
3. GbE LAN
4. GPS Module

1. 6* serial port(RS-232/422/485)
2. 6* USB 2.0
3. Dual GbE LAN
4. DIO

1. WLAN
2. GPRS/HSDPA
3. Wide Range PWR input
4. GPS

Application Scenario – In-vehicle Signage



- RS-232/422/485 port
- LED control



- VGA/DVI Dual Display
- Passenger information display



- RS-232/422/485
- LED indicator

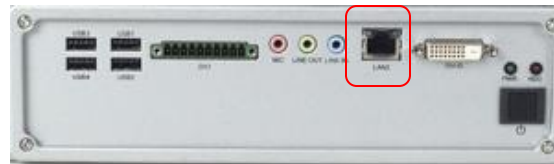
Gate Way controller

Application:

Client installed ARK-3390 in the gate way control system in MRT station. **6 COMs** controls LED indicators and card reader; All data is transmitted to data center via **GLAN**; and **GPIO** controls gate open/close.



- Digital I/O for
 - Gate control



- Dual GLAN for
 - Data transmission

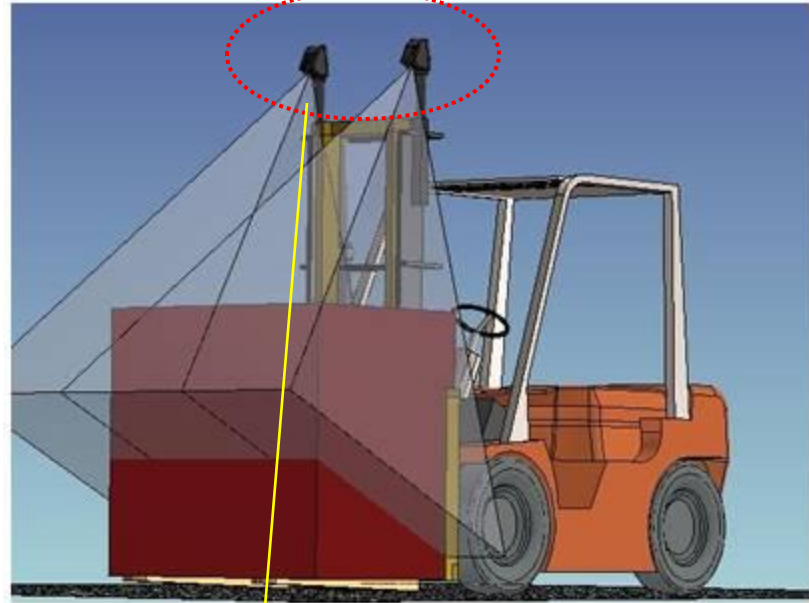


- Serial ports for
 - LED indicator
 - Card reader

Application Story- Warehouse Management

Application:

Client installed ARK-3390 on forklifts which set up **two USB** interface high seed cameras. All cargo dimension and information would be passed to data center via **Mini PCI WLAN** module.



- Mini PCI expansion
- 802.11 a/b/g Wireless module for data transmission



- 5 USB2.0 ports
- high resolution cameras

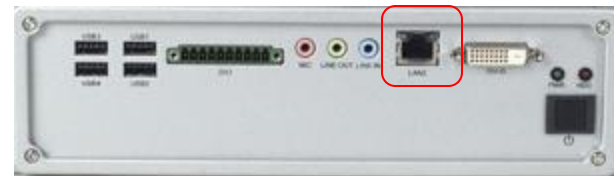
Bus Video Surveillance Application

- **Application:**

Client installed ARK-3390 embedded with **Core 2 Duo** processor on bus which set up two IP Camera via **Dual GLAN** and transmit data thru **Mini PCI WLAN**.



- Mini PCI expansion
 - 802.11 a/b/g Wireless module for data transmission



- 2 GigaLAN ports
 - IP cameras

Lawforce Vehicle Application

- **Application**

Police car embedded with

1. GPS
2. 3.5G HSDPA Modem
3. WLAN Module
4. ISO-7637-2 compatible PWR Module



WLAN Module

- 802.11 a/b/g



HSDPA 3.5G

- 3.5G HSDPA modem



GPS

- 20 Satellite tracking ch.

Selling Point of ARK-3390

- **Comprehensive IO interface for Factory Automation or Manufacturing Automation**
 - serial ports with isolation and auto flow control
- **Perfect platform choice of in-vehicle application**
 - MiniPCI expansion slot for Wireless LAN module
 - Internal USB header for 3.5G HSDPA Modem (Siemens)
- **Good replacement for ARK-3380/83/84/89 B1 version**
 - comprehensive IO design in one model
 - better computing performance

Peripherals List

Memory

96SD2I-1G667-AP	1G SO-DDR2-667 200PIN 64X8 I-GRD PRO(G)
96SD2I-512M667-AP	512M SO-DDR2-667 200P 64X8 I-GRD PRO(G)
96SD2-2G667NN-TR1	2G SO-DDR2-667 200PIN 128X8 MIC(G)

SATA HDD

96ND40G-ST-SG5K	SEAGATE 40G 2.5" SATA 24X7 75C 5KRPM(G)
96ND80G-ST-SG5K2	SEAGATE 80G 2.5" SATA 24X7 75C 5KRPM(G)

Compact Flash

968EMS0034	Advantech SQFlash 4G CF IND GRD EXT TEMP
968EMS0033	Advantech SQFlash 2G CF IND GRD EXT TEMP

Windows OS

2070004489	XPE FP2007 ARK-3399 V3.01 ENG_CHT_CHS_JPN
2070004669	XPE FP2007 ARK-3399 V3.5 ENG
2070004569	XPE FP2007 ARK-3399 V3.01 ENG_French_German_Ital

Optional Kits

Mounting Kits	
1960025333N00N	VESA Mount Kits for ARK-338X/339X/4000/1000
Digital IO Connector	
1652003235	PLUG-IN BLOCK 10P 3.5mm 90D(F)MC421-35010ZY
WLAN Module	
968EMW0016	PURCH 802.11a/b/g Mini-PCI card
9680002095	WLAN Card Realtek WMG2502
1750003222	802.11b/g 5dBi Dipole Antenna
PWR Kits	
1757000222	AC 65W ADAPTER DC19V/3.42A FSP (ARK-338X)