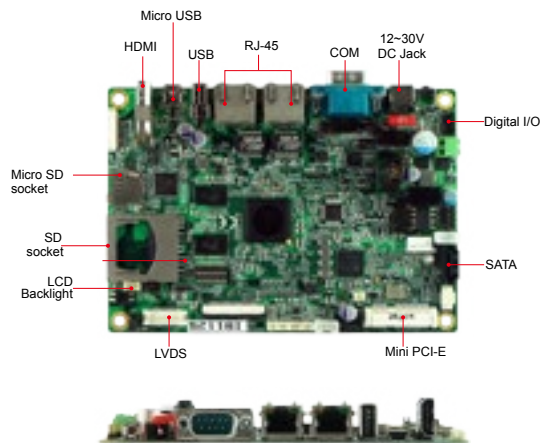


# IB112

Freescall i.MX536 Industrial-Grade  
Cortex-A8 Single Board Computer

RISC SBC



## Features

- Freescale ARM Cortex-A8, 800MHz industrial-grade processor
- 1GB DDR3 memory on board
- Supports USB-OTG
- Supports SD card/ MicroSD card
- Rich I/O for high expansion capability
- Watchdog timer, Digital I/O

## Specifications

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form Factor                  | 3.5" Disk-Size SBC, 102mm x 147mm (4" x 5.8")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| MPU Type Operating Frequency | Freescall Industrial-Grade i.MX536:<br>1GHz Cortex™-A8<br>65nm, LP/GP<br>19x19 0.8mm (TE-BGA)                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| System Memory                | 1GB DDR3-800 on board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Data Memory                  | Optional 8GB/16 GB eMMC<br>MicroSD slot supports up to 32GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Display                      | SiI9022A HDMI transmitter / LVDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Video codec                  | Decode: 1080p, 30fps<br>Encode: 720p, 30fps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| LAN                          | 1st LAN : 10/100 Base-T Ethernet<br>2nd LAN : 10/100 Base-T Ethernet (IB112S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| USB                          | USB 4x Host via USB HUB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Touch Controller             | Via DA9053 (Resistive Touch Controller)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Audio                        | Pin header for speaker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Watchdog                     | By hardware                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| NVRAM                        | 32KB (in IB112F, IB112S)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Edge I/O                     | <ul style="list-style-type: none"><li>• 1x 1st 10/100 LAN / 1x 2nd 10/100 LAN (IB112S)</li><li>• 1x USB (USB Host, A-type) / USB OTG x1 (mini USB B-type) Default: Device mode</li><li>• 1x COM2 RS-232</li><li>• 1x SD / 1x MicroSD</li><li>• 1x 12~30V DC-in jack</li><li>• 1x Boot switch (Boot sequence - eMMC/MicroSD)</li><li>• 1x HDMI Type A connector</li></ul>                                                                                                                                                                               |
| Headers & Expansion Slots    | Headers: <ul style="list-style-type: none"><li>• 8x GPIO (IB112F, IB112S)</li><li>• COM (RS232) x 2 (COM1 / COM3 debug port)</li><li>• Audio pin header (1x MIC, 1x speaker)</li><li>• 2x USB 2.0 (2mm pitch)</li><li>• FPC connector for 4-wire Resistive Touch x1</li><li>• 2x CAN (Pin header in IB112S, IB112T)</li><li>• 1x 18 bit LVDS connector</li><li>• 1x VGA pin header (in IB112F, IB112S)</li></ul> Slots: <ul style="list-style-type: none"><li>• 1x SATA connector</li><li>• 1x Full Size Mini PCIe(x1) socket (USB I/F only)</li></ul> |
| Power                        | 12~30V DC-in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating Temperature        | -20°C ~ 70°C (-4°F ~ 158°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Communication Devices        | WiFi / GPRS / 3G Module (Optional)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Software Support             | Ubuntu Linux 10.04 (kernel 2.6.35)/ Android 2.3/ Windows CE7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

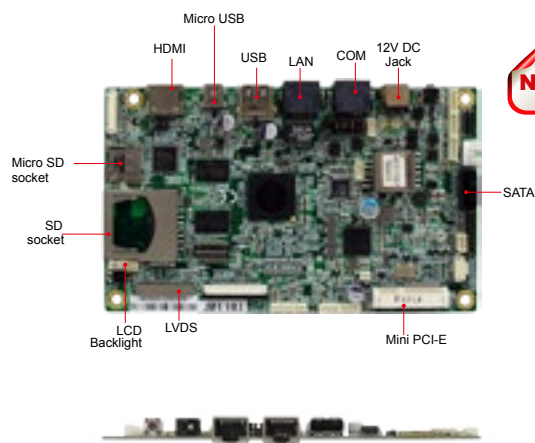
## Ordering Information

|        |                                                                                                                                                                                        |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IB112  | 3.5-inch SBC w/ Industrial-Grade Freescall i.MX536 (800Mhz), 1GB DDR3, 10/100 LAN, SD, Micro-SD, 3 COM ports, Mini-PCIe(x1) slot                                                       |
| IB112F | 3.5-inch SBC w/ Industrial-Grade Freescall i.MX536 (800Mhz), 1GB DDR3, 10/100 LAN, SD, Micro-SD, 3 COM ports, Mini-PCIe(x1) slot, HDMI, GPIO x8, VGA, 32K NVRAM, SATA                  |
| IB112S | 3.5-inch SBC w/ Industrial-Grade Freescall i.MX536 (800Mhz), 1GB DDR3, 10/100 LAN, SD, Micro-SD, 3 COM ports, Mini-PCIe(x1) slot, HDMI, GPIO x8, CAN x2, 2nd LAN, 32K NVRAM, 16GB eMMC |
| IB112T | 3.5-inch SBC w/ Industrial-Grade Freescall i.MX536 (800Mhz), 1GB DDR3, 10/100 LAN, SD, Micro-SD, 3 COM ports, Mini-PCIe(x1) slot, HDMI, CAN x2, 8GB eMMC                               |

# IB110

Freescall i.MX535 Consumer-Grade  
Cortex-A8 Single Board Computer

RISC SBC



## Features

- Freescale ARM Cortex-A8, 1GHz consumer-grade processor
- 1GB DDR3 memory on board
- Supports USB-OTG
- Supports SD card/ MicroSD card
- Rich I/O for high expansion capability
- Watchdog timer, Digital I/O

## Specifications

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form Factor                  | 90mm x 150mm (3.5" x 5.9")                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| MPU Type Operating Frequency | Freescall Consumer-Grade i.MX535<br>1GHz Cortex™-A8<br>65nm, LP/GP<br>19x19 0.8mm PoP (Consumer)                                                                                                                                                                                                                                                                                                                                                                               |
| System Memory                | 1GB DDR3-800 on board                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data Memory                  | MicroSD slot supports up to 32GB                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Display                      | SiI9022A HDMI Transmitter / LVDS / TTL                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Video codec                  | Decode : 1080p, 30fps<br>Encode : 720p, 30fps                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| LAN                          | 10/100 Base-T Ethernet                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| USB                          | USB 4x Host via USB hub                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Touch Controller             | Via DA9053 (Resistive Touch Controller)                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Audio                        | Pin header for speaker                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Watchdog                     | By hardware                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Edge I/O                     | <ul style="list-style-type: none"><li>• 1x 10/100 LAN (RJ45)</li><li>• 1x USB (USB host, A-type)</li><li>• 1x USB OTG (mini USB B-type) Default: device mode</li><li>• 1x COM2 RS-232(RJ45 connector)</li><li>• 1x SD</li><li>• 1x MicroSD</li><li>• 1x 12V DC-in jack</li><li>• 1x Boot switch (Boot sequence: eMMC/MicroSD)</li><li>• 1x HDMI Type A connector</li></ul>                                                                                                     |
| Headers & Expansion Slots    | Headers: <ul style="list-style-type: none"><li>• 8x GPIO (IB110H, IB110F)</li><li>• 2x COM (RS232) (COM1 / COM3 debug port)</li><li>• Audio pin header (1x speaker)</li><li>• 2x USB 2.0 (2.0mm pitch)</li><li>• 1x FPC connector for 4-wire Resistive Touch</li><li>• VGA, 18-bit TTL panel and LVDS header (IB110F)</li></ul> Slots: <ul style="list-style-type: none"><li>• 1x SATA connector (IB110F)</li><li>• 1x Full Size Mini PCIe(x1) socket (USB I/F only)</li></ul> |
| Power                        | 12V DC-in                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Operating Temperature        | 0°C ~ 60°C (32°F ~ 140°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Communication Devices        | WiFi / GPRS / 3G module (optional)                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Software Support             | Ubuntu Linux 10.04 (kernel 2.6.35)/ Android 2.3/ Windows CE7                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Ordering Information

|        |                                                                                                                                                                                          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IB110  | RISC SBC w/ Consumer-Grade Freescall i.MX535 (1Ghz), DDR3 1GB, 10/100 LAN, SD, Micro-SD, 3 COM ports, Mini-PCIe(x1) slot                                                                 |
| IB110F | RISC SBC w/ Consumer-Grade Freescall i.MX535 (1Ghz), DDR3 1GB, 10/100 LAN, SD, Micro-SD, 3 COM Ports, Mini-PCIe(x1) slot, HDMI, GPIO x8, SATA, VGA, 18-bit TTL Panel header, LVDS header |
| IB110H | RISC SBC w/ Consumer-Grade Freescall i.MX535 (1Ghz), DDR3 1GB, 10/100 LAN, SD, Micro-SD, 3 COM ports, Mini-PCIe(x1) slot, HDMI, GPIO x8, 8GB eMMC (option)                               |