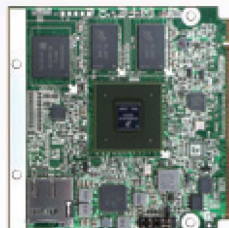


# PQ7-M640F

To save valuable customers' development time to market, not only the RISC-based boards, but also the following ECO system which Portwell can provide should be taken into consideration: full functions of CPU Module + Carrier board (Q7, Q7+), ready BSP for Android 4.0 & Linux 3.0.x, QT5 & GTK+ Middleware and advanced Utility (Remote Management, Diagnostic Tool) supported.



Qseven module based on Freescale™ i.MX6 family, ARM™ Cortex-A9, Solo / Dual / Quad core processor with onboard 1GB DDR3 (up to 2GB), PCIe 1-lane interface, VGA, HDMI, single LVDS 1-ch or dual LVDS (18/24-bit) 2-ch and CAN Bus.

Portwell PQ7-M640F (6Q, 6D, 6S) is design as CPU module with series of Qseven form factor. It is based on embedded Freescale™ i.MX6 processor, an ARM® Cortex®-A9 processor, Single-, Dual- and Quad-Core. In connection with external standard IO device, a 80-pin Carrier board PQ7-C100ARM is suggested for the following expansion purpose: 3x UART, 2x I2C, 1x Keypad, 1x CAN bus, interfaces of 1x RGB parallel LCD, 1x MIPI-DSI, 2x MIPI-CSI for camera, 1x SPDIF, 1x ESAL audio and 4x PWM.

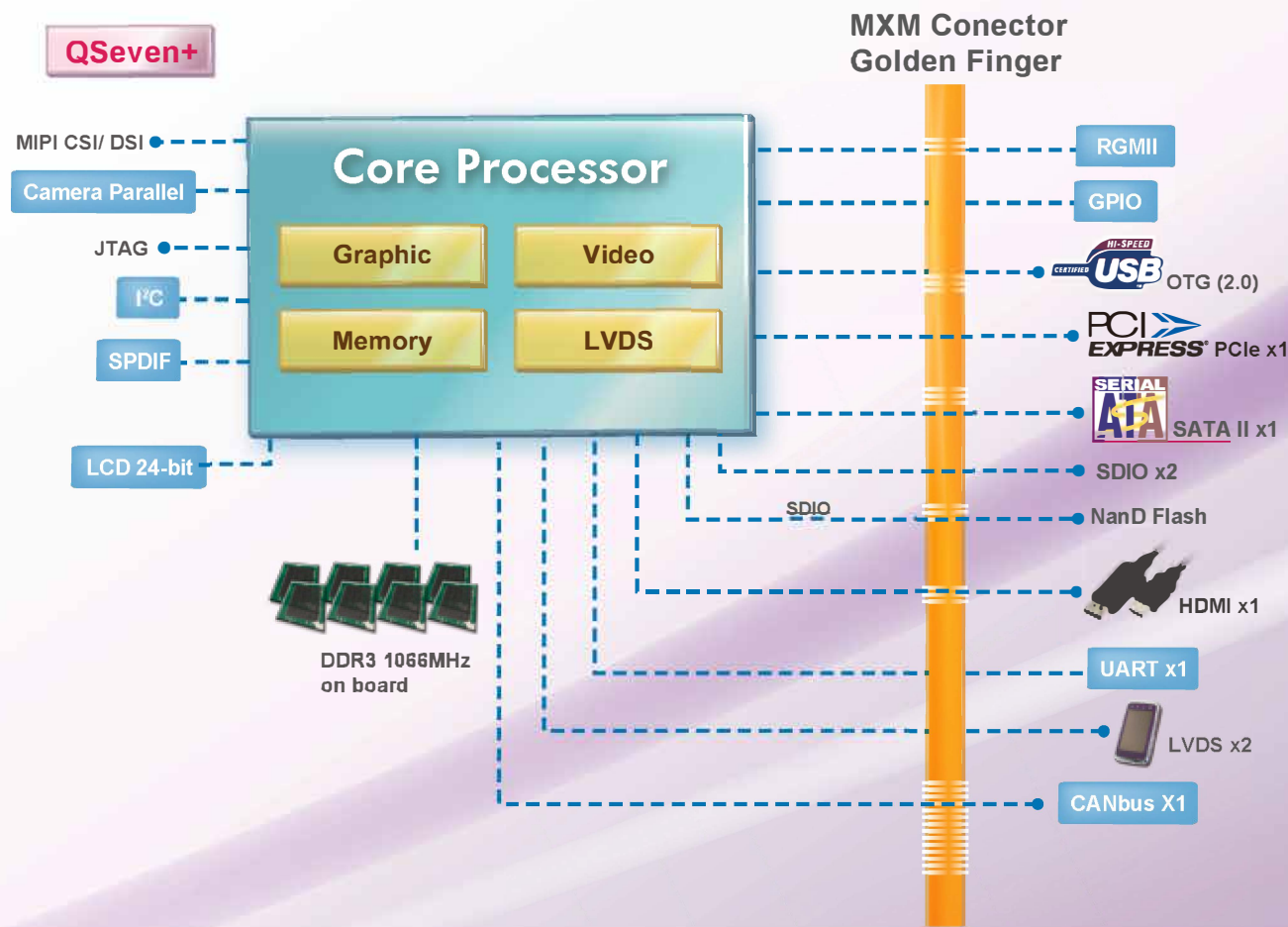
## FEATURES

- Ultra low power consumption: 2W (Single core) ~ 6W (Quad core)
- Longevity support more than 10 years
- Support Q7+ function (3x UART, CAN, MIPI interface, 2nd LCD interface, GPIO)
- Built-in H/W Graphics accelerators, Open GL ES2.0, Open VG1.1 supported
- 4x independent displays supported. Multi-format of encode & decode.
- Portwell ARM ECO system to save customers' development time to market.

## ORDERING GUIDE

AB1-3A50Z	PQ7-M640F, CPU Module board (Quad core)
AB9-3243Z	PQ7-C100ARM, I/O carrier board
By project	PQ7-M620F, CPU Module board (Dual core)
By project	PQ7-M610F, CPU Module board (Single core)





### Processor Core

- ◆ Freescale™ i.MX6 Family, ARM™ Cortex-A9, Single/Dual/Quad core processor

### Highlights

- ◆ More than 10 years longevity support
- ◆ Ultra low power 2W~6W
- ◆ Rich connectivity for expansion such as 1x CAN bus, interfaces of 1x MIPI-DSI, 2x MIPI-CSI for camera, 1x SPDIF, 1x ESAA audio and 4x PWM.

### Memory

- ◆ Onboard DDR3 1GB support up to 2GB

### Platform Thermal Design Power

CPU	i.MX6 Solo 2W	i.MX6 Dual 4W	i.MX6 Quad 6W
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