Introduction
The rBOX630 cost-effective DIN-rail fanless embedded system utilizes the low power RISC-based module (i.MX 6) processor and is designed to withstand temperatures ranging from -40°C to +70°C for using in harsh environment and industrial automation applications.

The rBOX630 features 4 RS-232/422/485 serial ports, dual LANs, 8 digital input channels, 8 digital output channels, 2 CAN bus and 1 eMMC onboard 8 GB & 1 x SDHC socket for storage expansion (easy to access) in a compact, IP30 protected, industrial-strength robust case. Two power paths input minimize the risk of data loss in the event of a single power failure. Its vertical DIN-rail form factor makes it easy to install the system in a small cabinet. Because of ARM’s low power consumption architecture, rBOX630 generate little heat while being operated. The ready-to-run rBOX630 is specially designed for industrial machine, automatic parking lot, traffic cabinet and more.

Hardware Specifications

<table>
<thead>
<tr>
<th>Standard Color</th>
<th>Silver-Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Extruded aluminum and heavy-duty steel, IP30</td>
</tr>
<tr>
<td>CPU</td>
<td>i.MX 6, Cortex-A9 RISC CPU, 800MHz</td>
</tr>
<tr>
<td>System Board</td>
<td>Q7M120</td>
</tr>
<tr>
<td>System Memory</td>
<td>1 x DDR3-1600 onboard, 1GB</td>
</tr>
<tr>
<td>System I/O Outlet</td>
<td>4 x RS-232/422/485 (COM 1-4)</td>
</tr>
<tr>
<td></td>
<td>COM 1-4 with TX/RX/RTS/CTS signals</td>
</tr>
<tr>
<td></td>
<td>RS-232/422/485 interface select by software</td>
</tr>
<tr>
<td></td>
<td>1 x 10/100/1000 Mbps Ethernet</td>
</tr>
<tr>
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<td>1 x 10/100 Mbps Ethernet</td>
</tr>
<tr>
<td></td>
<td>Magnetic isolation protection 1.5 KV</td>
</tr>
<tr>
<td>ISOLATION</td>
<td>EN60950</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>Ext. Temp</td>
</tr>
<tr>
<td>VOLTAGE</td>
<td>12~48 VDC</td>
</tr>
<tr>
<td>BATTERY</td>
<td>Enterprises</td>
</tr>
<tr>
<td>FLASH MEMORY</td>
<td>8GB eMMC on board</td>
</tr>
<tr>
<td>CONSOLE PORT</td>
<td>DB9 connector</td>
</tr>
<tr>
<td>RTC</td>
<td>Battery onboard</td>
</tr>
<tr>
<td>Alarm Contact</td>
<td>One relay output with current 0.5A@30 VDC</td>
</tr>
<tr>
<td>FANLESS DESIGN</td>
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</tr>
<tr>
<td>RISC-BASED MODULE</td>
<td>RISC-based module (i.MX 6) processor</td>
</tr>
<tr>
<td>1GB DDR3 SDRAM ONBOARD</td>
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</tr>
<tr>
<td>8GB eMMC ON BOARD</td>
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</tr>
<tr>
<td>COMPLETED INDUSTRIAL AP DEVELOPMENT SOFTWARE</td>
<td>Completed industrial AP development software</td>
</tr>
<tr>
<td>12-48 VDC RANGE POWER INPUT</td>
<td>12-48 VDC wide range power input with terminal block</td>
</tr>
<tr>
<td>READY-TO-RUN EMBEDDED LINUX OPERATING SYSTEM</td>
<td>Ready-to-run embedded Linux operating system</td>
</tr>
<tr>
<td>WIDE OPERATING TEMPERATURE RANGE</td>
<td>Wide operating temperature range from -40°C to +70°C</td>
</tr>
</tbody>
</table>

Features
- Fanless design
- RISC-based module (i.MX 6) processor
- 1GB DDR3 SDRAM onboard
- 8GB eMMC on board
- Completed industrial AP development software
- 12-48 VDC wide range power input with terminal block
- Ready-to-run embedded Linux operating system
- Wide operating temperature range from -40°C to +70°C
Hardware Specifications

System I/O Outlet
Wireless 1 x Mini card socket (supports USB interface) with 1 x SIM Socket by outside access and is easy plug/pull.
1 x Mini card socket (supports USB&POE interface) with 1 x SIM Socket by inside access.

Watchdog Timer
WDT 1: one step is 1 sec, 255 levels

LEDs
System Power, Alarm, Ready/Active, COM (TX, RX), Wireless
Alarm DC PWR1 or PWR2

Storage
1 x eMMC 8 GB onboard (for boot disk)
Supports 1 x SDHC Card (easy-to-access, for store only)

Installation
DIN-rail, wall mount

Power Supply
Power Input 2 power paths with terminal block
Power Input Range 12-48 VDC
Power Input Rating 12-48 VDC, 0.74-0.23A
Power Protection DC Version:
OVP (Over voltage protection)
UVP (Under voltage protection)
Reverse protection

Operating Temperature
-40°C to +70°C (-40°F to +158°F)

Humidity
10% - 95%

Vibration Endurance
5G @ 10-150Hz, amplitude 0.35ms

Weight (net/gross)
0.9 kg (2 lb)/1.3kg (2.87 lb)

Dimensions
55 mm (2.16") (W) x 155 mm (6.10") (D) x 110 mm (4.33") (H)

OS Linux
Host OS/ Development OS : Ubuntu 12.04 Yocto Dora LTS
Kernel : 3.0.35 (with Freescale and Axiomtek hardware modified patch)

Certificate
FCC Part 18
Heavy Industrial CE

Ordering Information

Standard
rBOX630-8E-FL-DC (P/N:NE26M630101)
Robust DIN-rail fanless embedded system with Q7-RISC module (i.MX 6), 4 COM, 2 CAN and DIO
(-40°C to +70°C)

Optional
826M1000040E Wall mount kit
Wireless (3G/GPS or Wi-Fi) module

Packing list
1 x CD
8 x Screws
1 x Din-rail kit
1 x Console cable
1 x 8-pin terminal block for CANbus port
1 x 8-pin terminal block for power port
1 x 18-pin terminal block for DIO port

Dimensions

* All specifications and photos are subject to change without notice.
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