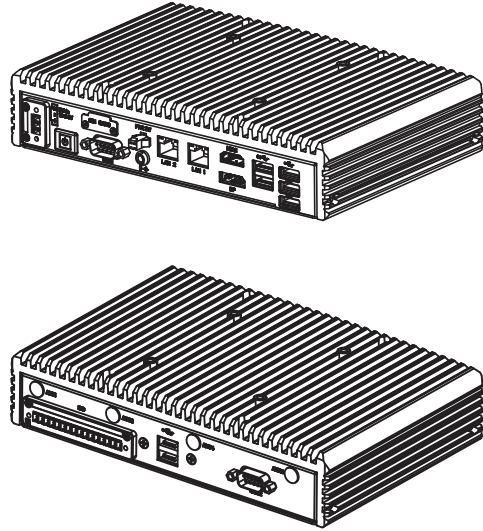# BS-U830

Quick Reference Guide

Ver. Q5

Packing Checklist

If you discover any item below damaged or lost, please contact your vendor immediately.
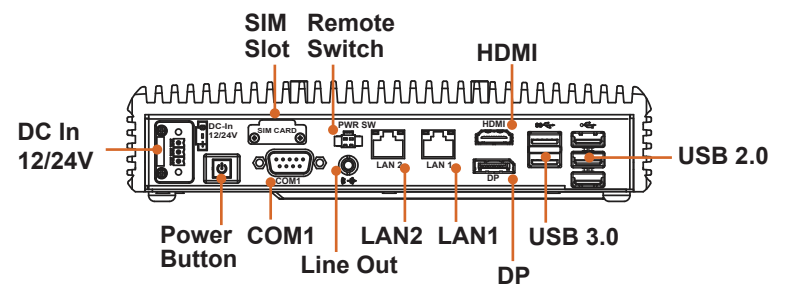
☑	BS-U830	x 1
☑	Power Adaptor	x 1
☑	This Quick Reference Guide	x 1
☑	Driver / Manual DVD	x 1
☑	Mini Jumper (2.0 mm)	x 4
☑	HDD Thermal Pad	x 1
☑	M2 screw for mPCIe / M.2 module	x 3

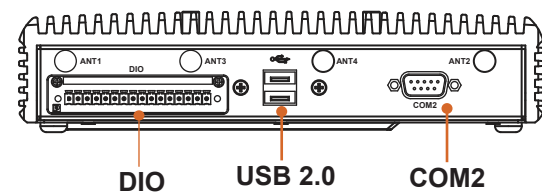---

Specifications

System

CPU Support	Intel® Elkhart Lake Atom® / Celeron® SoC CPU Intel® Celeron® J6412 / Atom® x6212RE / Atom® x6425RE
Memory Support	1 x DDR4 SO-DIMM sockets (up to 32GB) (non-ECC)
Storage Support	1 x 2.5" 7mm SATAIII HDD / SSD drive space
Power Supply	Supports DC 12/24V power input (3-pin lockable terminal block)
O.S. Support	Windows® 10 64bit / Windows® 11 / Ubuntu 20.04 64bit
Expansion Slots	1 x full-sized mPCIe slot (with PCIe and USB signals) 1 x M.2 slot M-Key NVMe (PCIeX2), supports 2280 size only 1 x M.2 slot E-Key for wireless module
Dimensions (WxHxD)	217.5 x 140.6 x 49 mm (w/o root foot) 217.5 x 140.6 x 50 mm (with root foot)
Weight	2 Kg
Certifications	FCC/CE

I/O Ports (Front Side)

USB	3 x USB 2.0 / 2 x USB 3.0
Display	1 x DP, 1 x HDMI
LAN	2 x 2.5GbE LAN, supports Wake-On-LAN
Sound	1 x Line Out
Serial Port	COM1: RS-232/422/485, support 5V/12V by jumper selection
SIM Slot	1 x Micro SIM slot
Power On / Off	1 x Power Button with Power LED 1 x 2-Pin Remote Switch
Power Input	3-Pin DC In terminal block (lockable)

I/O Ports (Rear Side)

Serial Port	COM2: RS-232/422/485 for NORMAL Sku only
PoE	2 x PoE with GbE LAN for PoE Sku only
USB	2 x USB 2.0
DIO	6 in / 6 out (including 5V x2 & GND x2)
Antenna Holes	**Normal Sku:** 4 x Antenna holes for reservation **PoE Sku:** 2 x Antenna holes for reservation

Environment

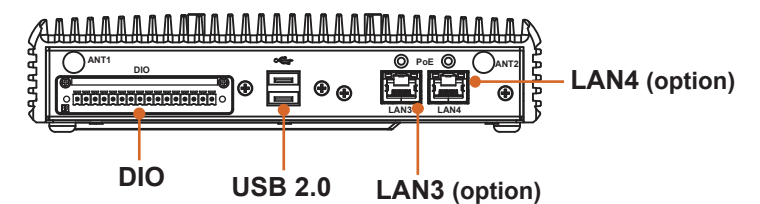|	
Operating Temp. (Ambient with airflow)	**SSD:** -40°C ~60°C (-40°F~140°F) for Atom Sku **HDD:** -40°C ~40°C (-40°F~104°F) for Atom Sku **SSD:** 0°C ~50°C (32°F~122°F) for other Skus **HDD:** 0°C ~40°C (32°F~104°F) for other Skus
Storage Temp.	-40°C ~85°C (-40°F~185°F)
Humidity	20% ~ 90%

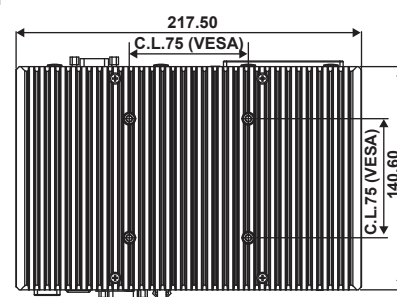# System View

Front View
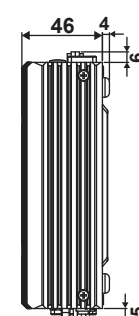

Rear View (Normal Sku)

Rear View (PoE Sku)

Top View   **Side View**   Unit: mm
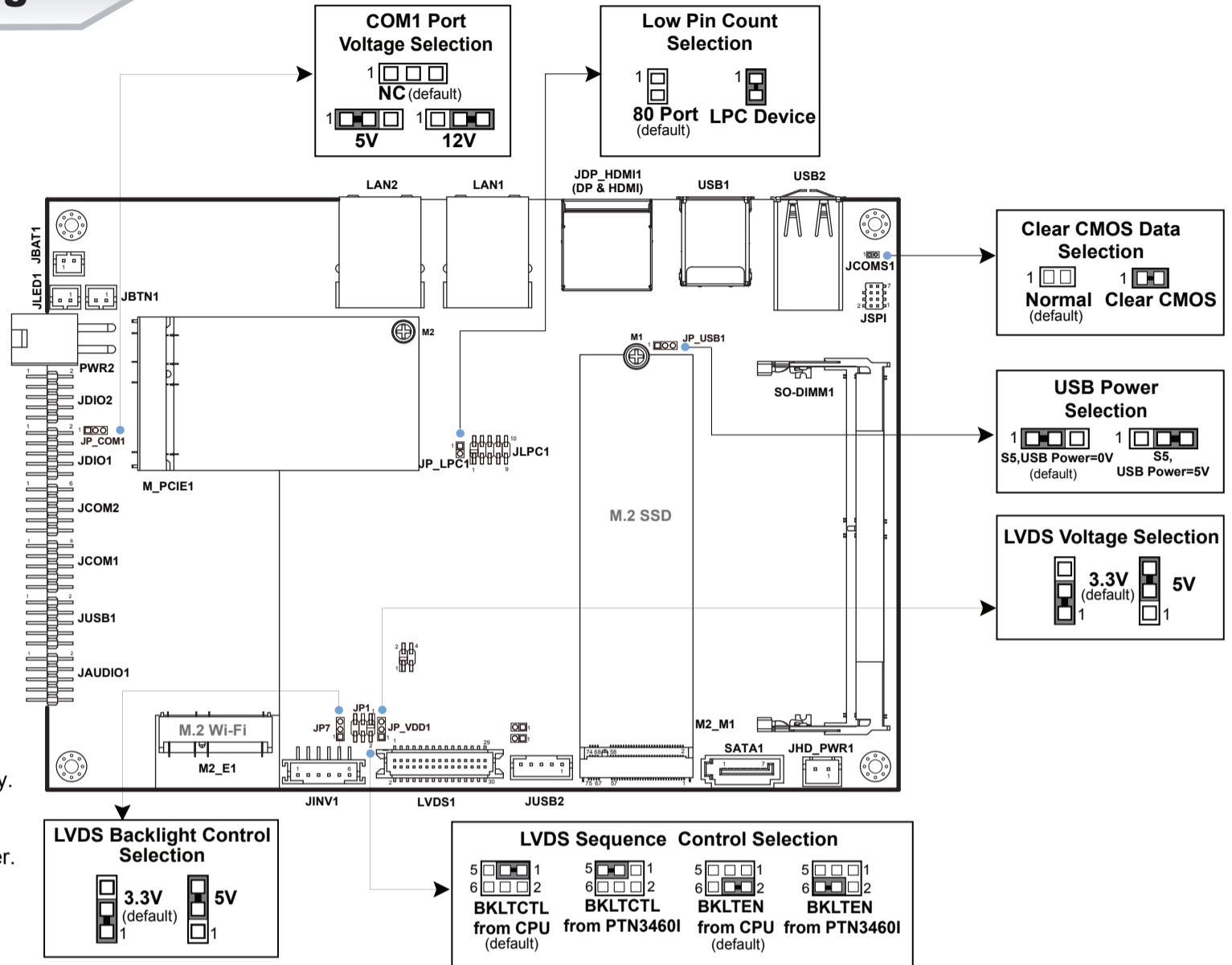
BS-U830

Fanless Embedded PC with Intel® Celeron® / Pentium® / Atom® SoC Processor

Jumper Setting

COM1 Port Voltage Selection
1 □□□ **NC** (default)
1 □□□ **5V**   1 □□□ **12V**

Low Pin Count Selection
1 □□ **80 Port** (default)   1 □□ **LPC Device**

Clear CMOS Data Selection
1 □□ **Normal** (default)   1 □□ **Clear CMOS**

USB Power Selection
1 □□□ **S5,USB Power=0V** (default)   1 □□□ **S5, USB Power=5V**

LVDS Voltage Selection
□ **3.3V** (default) 1   □ **5V** 1

LAN2 LAN1 JDP_HDMI1 (DP & HDMI) USB1 USB2

JLED1 JBAT1 JBTN1 PWR2 JDIO2 JP_COM1 JDIO1 JCOM2 JCOM1 JUSB1 JAUDIO1

M_PCIE1 M2 JP_LPC1 JLPC1 M1 JP_USB1 JCOMS1 JSPI SO-DIMM1

M.2 SSD

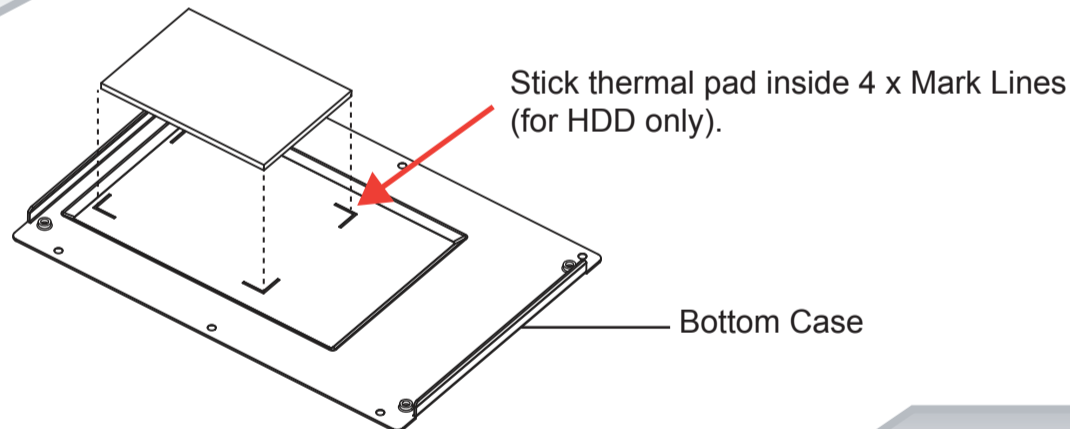M.2 Wi-Fi JP7 JP1 JP_VDD1 M2_M1 SATA1 JHD_PWR1

M2_E1 JINV1 LVDS1 JUSB2

CAUTION!

Danger of explosion may occur if the battery is replaced incorrectly. Replace batteries only with the same or equivalent type recommended by the manufacturer. Dispose the used batteries according to the manufacturer's instructions.

LVDS Backlight Control Selection
□ **3.3V** (default) 1   □ **5V** 1

LVDS Sequence Control Selection
5 □□□ 1 / 6 □□□ 2 **BKLTCTL from CPU** (default)
5 □□□ 1 / 6 □□□ 2 **BKLTCTL from PTN3460I**
5 □□□ 1 / 6 □□□ 2 **BKLTEN from CPU** (default)
5 □□□ 1 / 6 □□□ 2 **BKLTEN from PTN3460I**

HDD Thermal Pad Usage

Stick thermal pad inside 4 x Mark Lines (for HDD only).

Bottom Case

Safety Precaution

The following messages are safety reminders on how to protect your system from damages, and thus help you extend the life cycle of the system.

1. Check the Line Voltage
   - The operating voltage for the power supply should cover the range of 12V / 24V DC; otherwise, the system may be damaged.

2. Environmental Conditions
   - Place your BS-U830 on a sturdy, level surface. Be sure to allow enough room on each side to have easy access.
   - Avoid moving the system rapidly from a hot place to a cold place or vice versa because condensation may come from inside of the system.
   - Place BS-U830 against strong vibrations, which may cause hard disk failure.

3. Handling
   - Do not turn the system upside down. This may cause the hard drive to mal-function.
   - Do not allow foreign objects to fall into this product.
   - If water or other liquid spills into this product, unplug the power cord immediately.

4. Good Care
   - When the outside of the case is stained, remove the stain with neutral washing agent with a dry cloth.
   - If dust has been accumulated on the outside, remove it by using a special made vacuum cleaner for computer.

CAUTION!

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries accordingto the manufacturer's instructions.

WARNING!

Some internal parts of the system may have high electrical voltage. Therefore we strongly recommend qualified engineers open and disassemble the system.