Bolt

Allxon swiftDR OOB Enabler

A hardware module that embeds Nuvoton NUC980DR63YC microprocessor to provide disaster recovery functions across edge systems. Bolt also offers a wide range of interfaces for custom hardware application development.



Features

- ARM9 microprocessor embedded
- Built-in Allxon **Out-Of-Band (OOB)** service agent, capable of supporting both **public** and **local** network environment architectures
- Includes a **fully secure** central portal for remote device management
- Supports **complete power control** over the edge system when the system is unresponsive
- Supports **Cloud Serial Console** via UART interface
- USB 2.0 high speed host/device
- Supports I²C / UART / Digital Input
- Supports 4G LTE, Wi-Fi

Functions

Out-Of-Band Edge AI Device Management		
Basic Function	Allxon swiftDR for Power Cycling	• Power Switch • Force Shutdown • Reset • Power ON/OFF Detection • Power ON/OFF Scheduling • Device Always ON
Extend Function	Allxon swiftDR for Cloud Serial Console Allxon swiftDR for Thermo-Guard [1] Allxon swiftDR for Remote SSD Backup & Recovery [1] Allxon swiftDR for Tamper Detection [1]	

[1] Additional peripherals are required to utilize this feature.

© 2025 Allxon. All rights reserved.

Specification

I/O Interface	
OOB Power Supply [1]	• 2 Set Power Input (+5V standby/GND)
Power Control	• 1 set power switch (PWR_SW/GND) • 1 set power reset (RST_SW/GND) • 1x power ON/OFF detection (PWR DEF)
Reset Button	• 1x OOB Enabler Reset Button • 1x Factory Network Reset Button
Network	• 1x 10/100 Mbps RJ45 LAN Port • 1x Nano SIM slot for 4G Module • 1x Full-size mini PCIe Socket
LED Indicator Lights	• OOB Enabler power ON/OFF indicator • Ethernet indicator
External I/O	• 1 set UART for Auto-link between In-Band & Out-Of-Band • 1 set UART for Cloud Serial Console • 1x Micro USB for backup power input • 7x GPIO, 1 set I^2C, 1x RSV_3V3
Network	
Ethernet	10/100 Mbps RJ45 Port
Wireless	• 4G LTE [2] • Wi-Fi [3]
Protection	1.5 KV magnetic isolation
Power Requirement	
Input Voltage	5V Standby Power from Host System
Power Consumption	< 0.5 W (without additional peripheral connected)
Mechanical	
Dimensions	58.00 x 55.00mm (without bracket) 121.11 x 68.73mm (with bracket)
Environment	
Operating Temperature	-40 to 75°C (-40 to 163°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Humidity	5 to 95% (non-condensing)
Certification	CE / FCC, RoHS & REACH compliant

[1] To use the Wireless module, please ensure that the supplied current > 1000mA..

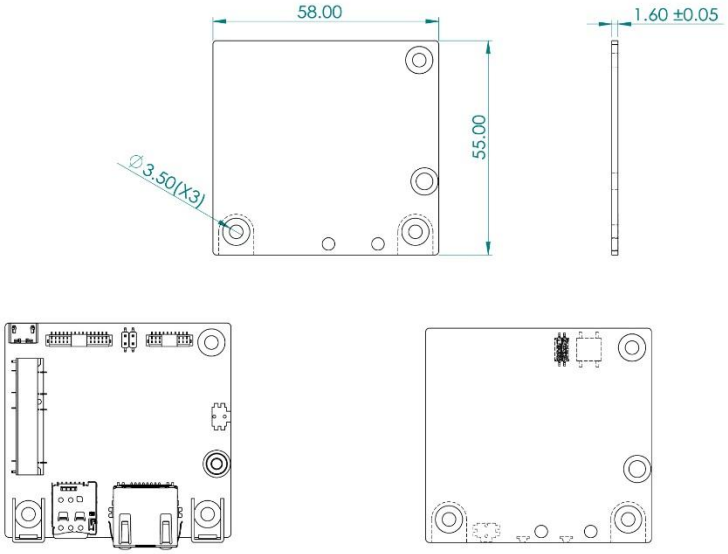
[2] 4G LTE module support Quectel EC21 series, EC25 series, EG25-G.

[3] If you need to use Wi-Fi functionality, please contact us.

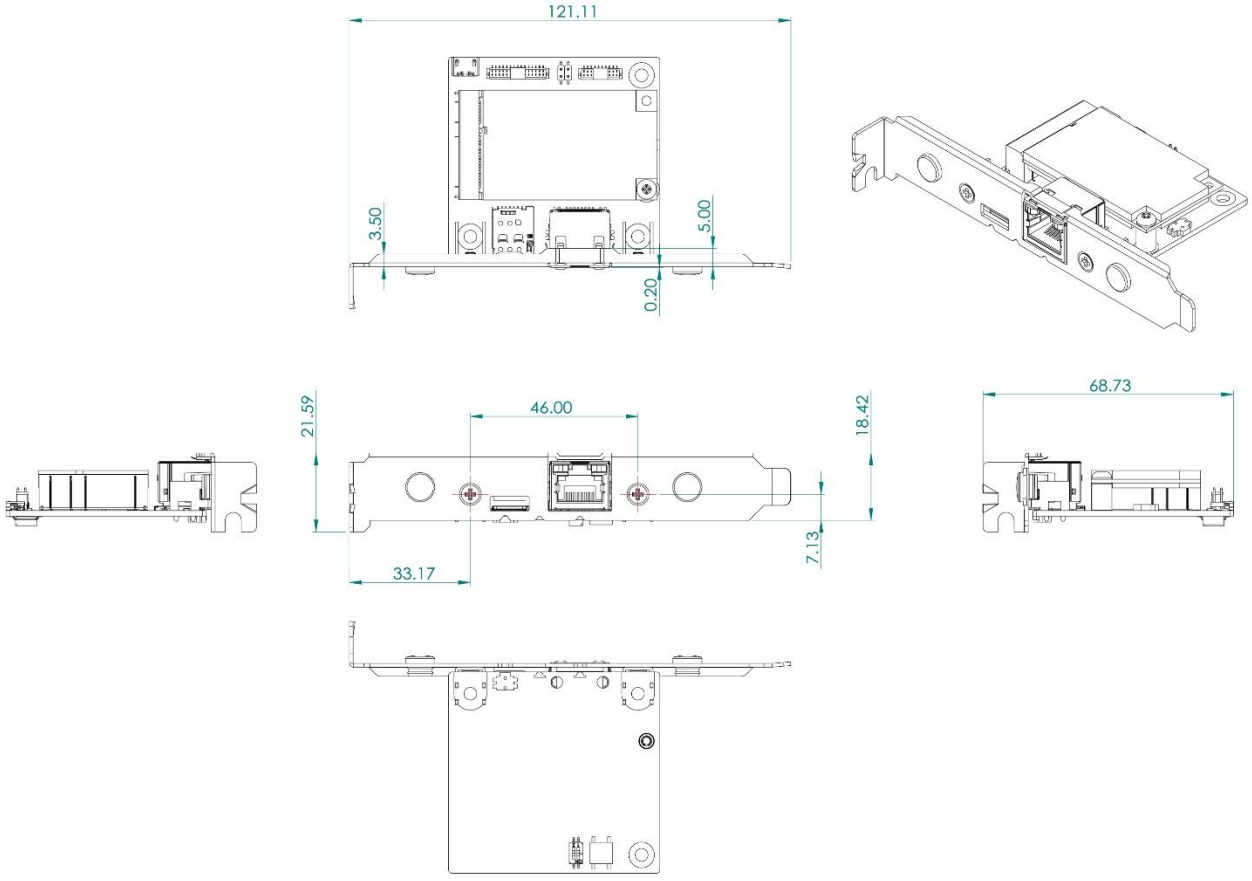
© 2025 Allxon. All rights reserved.

Dimensions

- 58.00 x 55.00mm (without bracket)



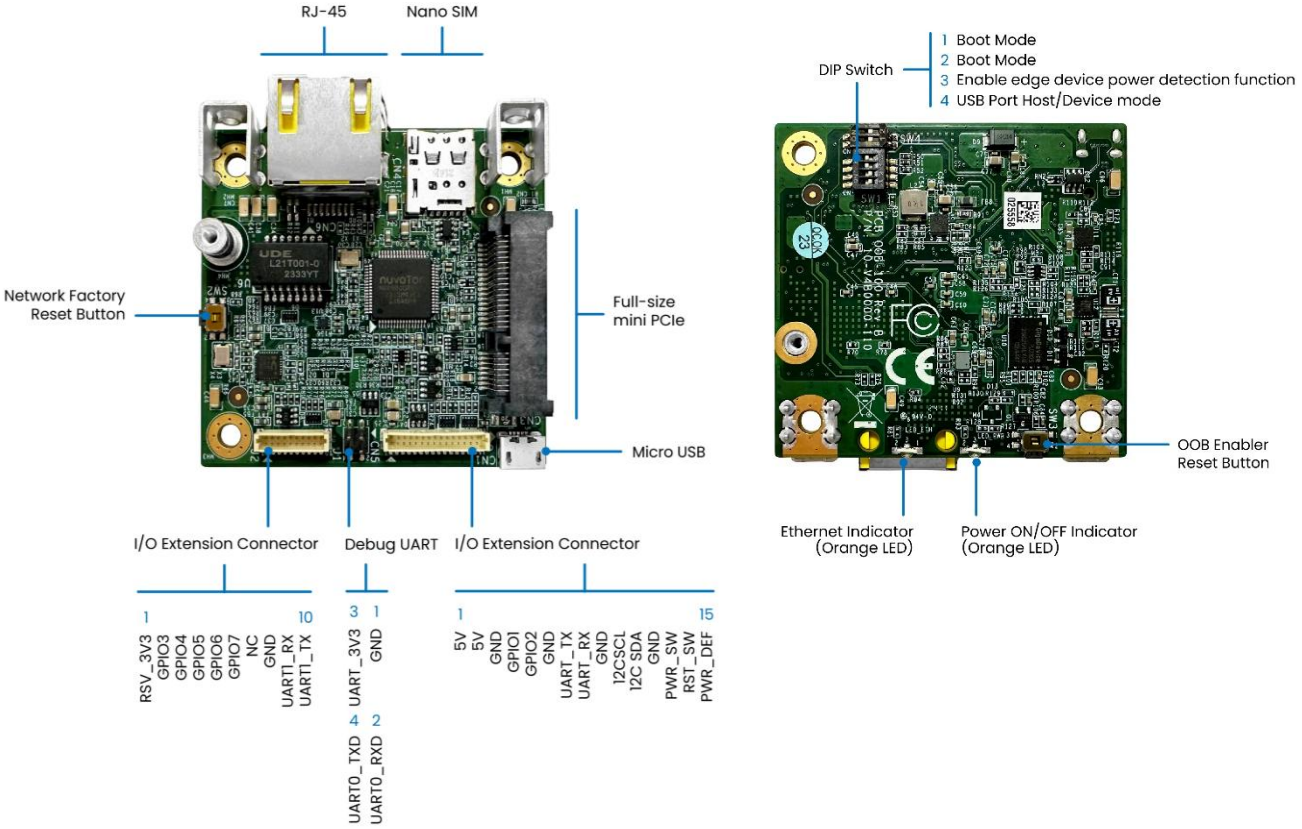
- 121.11 x 68.73 mm (with bracket)



© 2025 Allxon. All rights reserved.

Connection Diagram

Main board

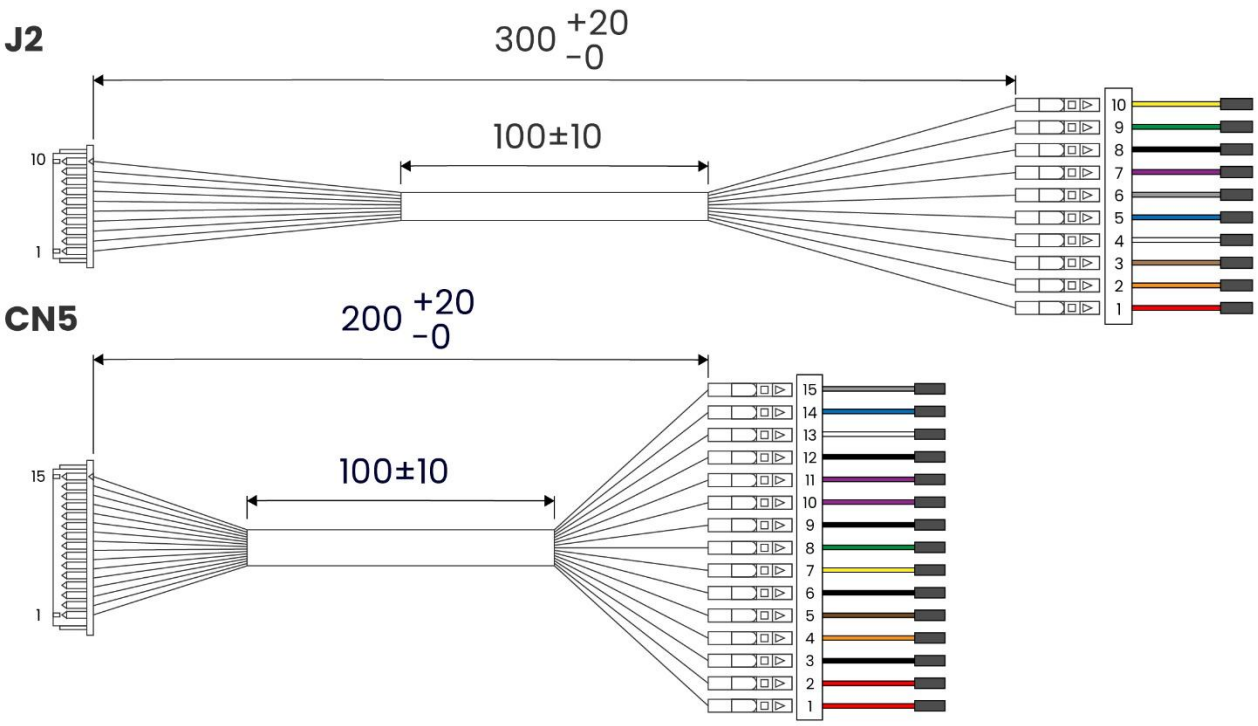


I/O Extension Connector (CN5)		Debug UART Pin		I/O Extension Connector (J2)	
1	5V	1	GND	1	RSV_3V3
2	5V	2	UART0_RXD	2	GPIO3
3	GND	3	UART_3V3	3	GPIO4
4	GPIO1	4	UART0_TXD	4	GPIO5
5	GPIO2	DIP Switch		5	GPIO6
6	GND	1	Boot Mode	6	GPIO7
7	UART_TX	2		7	NC
8	UART_RX	3	Enable power detection function	8	GND
9	GND	4	USB Port Host/Device mode	9	UART1_RX
10	I2C_SCL	Others		10	UART1_TX
11	I2C_SDA	RJ45 Port			
12	GND	Micro USB 2.0			
13	PWR_SW	Full-size mini PCIe			
14	RST_SW	Nano SIM slot			
15	PWR_DEF				

© 2025 Allxon. All rights reserved.

I/O Extension Cable

- Pitch 1.0 to Dupont Female 2.54 Jumper Wire Ribbon Cable



I/O Extension Cable (CN5)			I/O Extension Cable (J2)		
1	5V	Red	1	RSV_3V3	Red
2	5V	Red	2	GPIO3	Orange
3	GND	Black	3	GPIO4	Brown
4	GPIO1	Orange	4	GPIO5	White
5	GPIO2	Brown	5	GPIO6	Blue
6	GND	Black	6	GPIO7	Grey
7	UART8_TX	Yellow	7	NC	Purple
8	UART8_RX	Green	8	GND	Black
9	GND	Black	9	UART1_RX	Green
10	I2C_SCL	Purple	10	UART1_TX	Yellow
11	I2C_SDA	Purple			
12	GND	Black			
13	PWR_SW	White			
14	RST_SW	Blue			
15	PWR_DEF	Grey			

© 2025 Allxon. All rights reserved.

Ordering Information

Allxon Services Subscription

The table below only includes OOB Remote Management features. Contact us for full Allxon Service subscription features.

Out-Of-Band Functions & Communications		
Growth Plan Premium Plan	OOB Management Functions	● Allxon swiftDR for Power Cycling ● Allxon swiftDR for Thermo-Guard [1] ● Allxon swiftDR for Remote SSD Backup & Recovery [1]
	OOB Enabler Communications	● 10/100 Mbps Ethernet ● 4G LTE [2]

[1] Additional peripherals are required to utilize this feature.

[2] 4G LTE module support Quectel EC21 series, EC25 series, EG25-G.

Hardware & Peripherals

Part Number	Description	Quantity
3-1022-03100-02-00	Allxon OOB Enabler Bolt main board	1
	Pitch 1.0 to Dupont Female 2.54 Jumper Wire Ribbon Cable (J2, CN5)	2
	PCIe Bracket	1
	M3, 4mm, cross recessed, countersunk screws	2

© 2025 Allxon. All rights reserved.