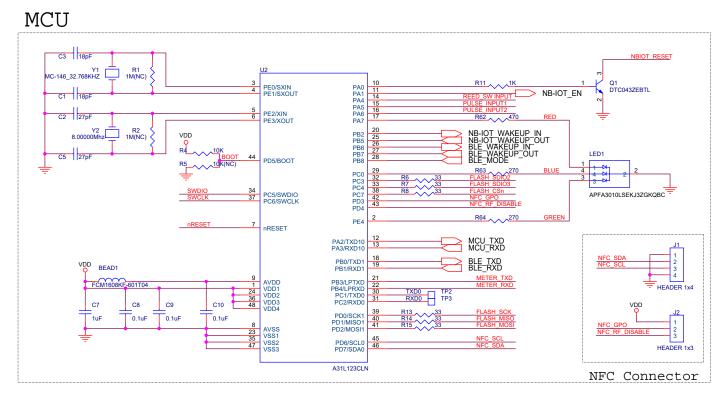
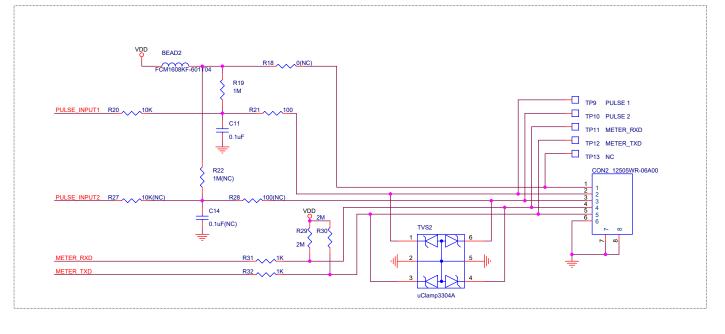
NB-IoT 32bit

Table of Contents	Revision History			
- MAIN BOARD - 00.TITLE 01.MCU 02.NB-IOT_MODULE 03.BLUETOOTH 04.POWER - NFC BOARD - 1.NFC	REV1.0 : 2025-05-22 1차보드			
PCB INFORMATION	Board Composition			
1. SIZE(mm) : 71 x 98.5 x 1.6T 2. LAYER : 2-layer 3. Color : 녹색 유광 / SILK : White,양면 4. 표면처리 : HAL	Subject: LGU+ NB-IoT 32bit Model Name: GAAM-NB-32 MCU: A31L123FNN(ABOV) NB-IoT Module: LGU+(QUECTEL)			

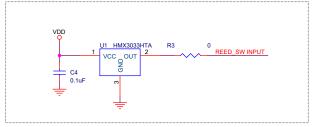
GAAM TECH Co., Ltd.						
Title	•					
	LGU+ NB-IoT 32bit					
Size	Document Number	Rev				
A3 00. TITLE						
Data:	Wodnesday July 20, 2026 Cheet 1 of	-				



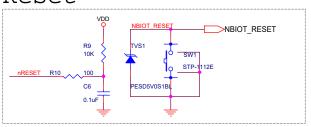
METER Communication



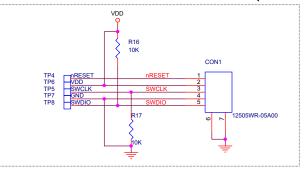
Magnetic Sensor



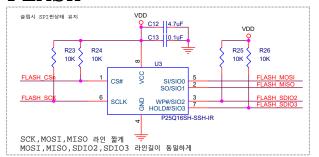
Reset



Firmware Download(SWD)

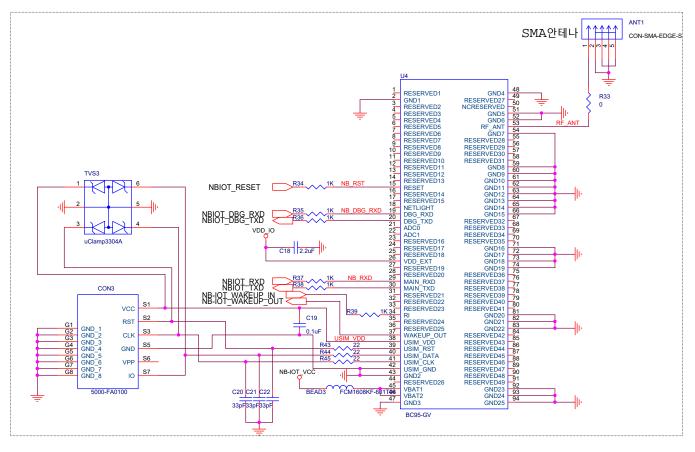


FLASH

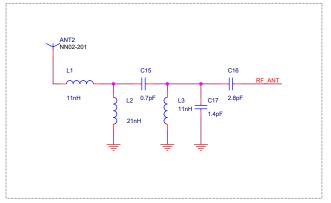


	GAAM TECH Co., Ltd.						
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	LGU+ NB-IoT 32bit						
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A3	01. MCU		1.0				
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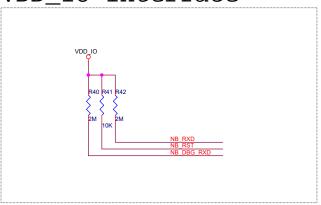
LGU+ NB-IoT Module



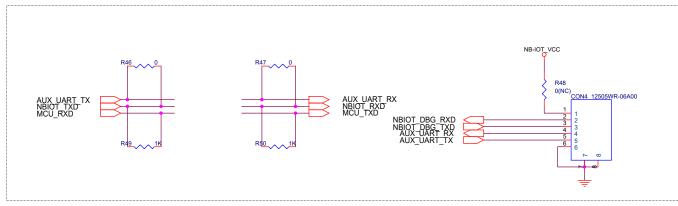
내장안테나



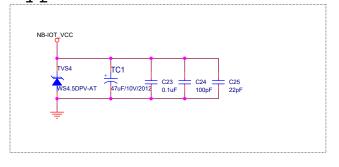
VDD_IO Interface



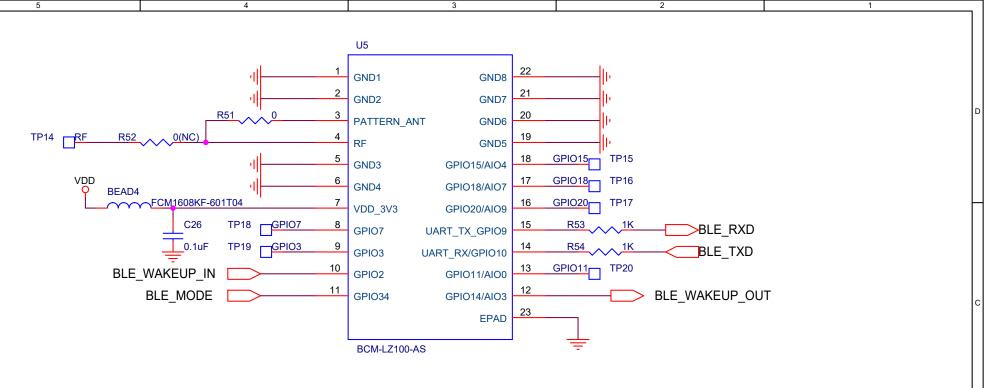
NB-IoT Module UART



Bypass CAP



	GAAM TE	CH Co.	Ltd			
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GPIO	Name	Direction	1/0	Description
PIO.14	Connected	Output	Low	BLE Device Disconnected.
	State		High	BLE Device Connected.
PIO.34	Command	Input	Low	Command Mode (상대 장치 연결이 되어 있는 경우.)
	Mode State		High	BLE Data Transfer Mode (상대 장치 연결이 되어 있는 경우.)
PIO.02	Sleep Wakeup	Input	Both	1. BT가 AT 명령을 통해 uart off sleep mode 동작 상태 일
		0.30	(default : Low)	때, Uart On.
				2. BT가 AT 명령을 통해 Deep sleep mode 동작 상태 일 때,
				Device Reset wake up.

Ex> BT Uart wake up : PIO.02 (default : LOW) -> PIO.02 (High) -> PIO.02 (LOW) = BT Uart Init

	GAAM TE	CH Co.	, Ltd	-		
Title	LOUI ND IST 20h	! 4				
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Batt Input & 3.0V Output **BATT** TP21 VDD **BATT PWR** U6 XC6215B302MR-G CON5 TP22 TC3 GND **GND** 100uF/16V/C TC2 C27 C28 **BYPASS** 12505WR-03A00 47uF/10V/2012 1uF 0.1uF NB-IoT Module Power Bypass CAP NB-IOT VCC **BATT** VDD U7 R55 C30 C29 0.1uF VOUT2 0.1uF C32 0.1uF 0.1uF Von/off VOUT1 R1,C1 R2 FDC6329L R57 1.2K NB-IOT EN C33 0.1uF **GAAM TECH Co., Ltd. LGU+ NB-IoT 32bit** Size Document Number Rev 1.0 03. Power

Wednesday, July 30, 2025