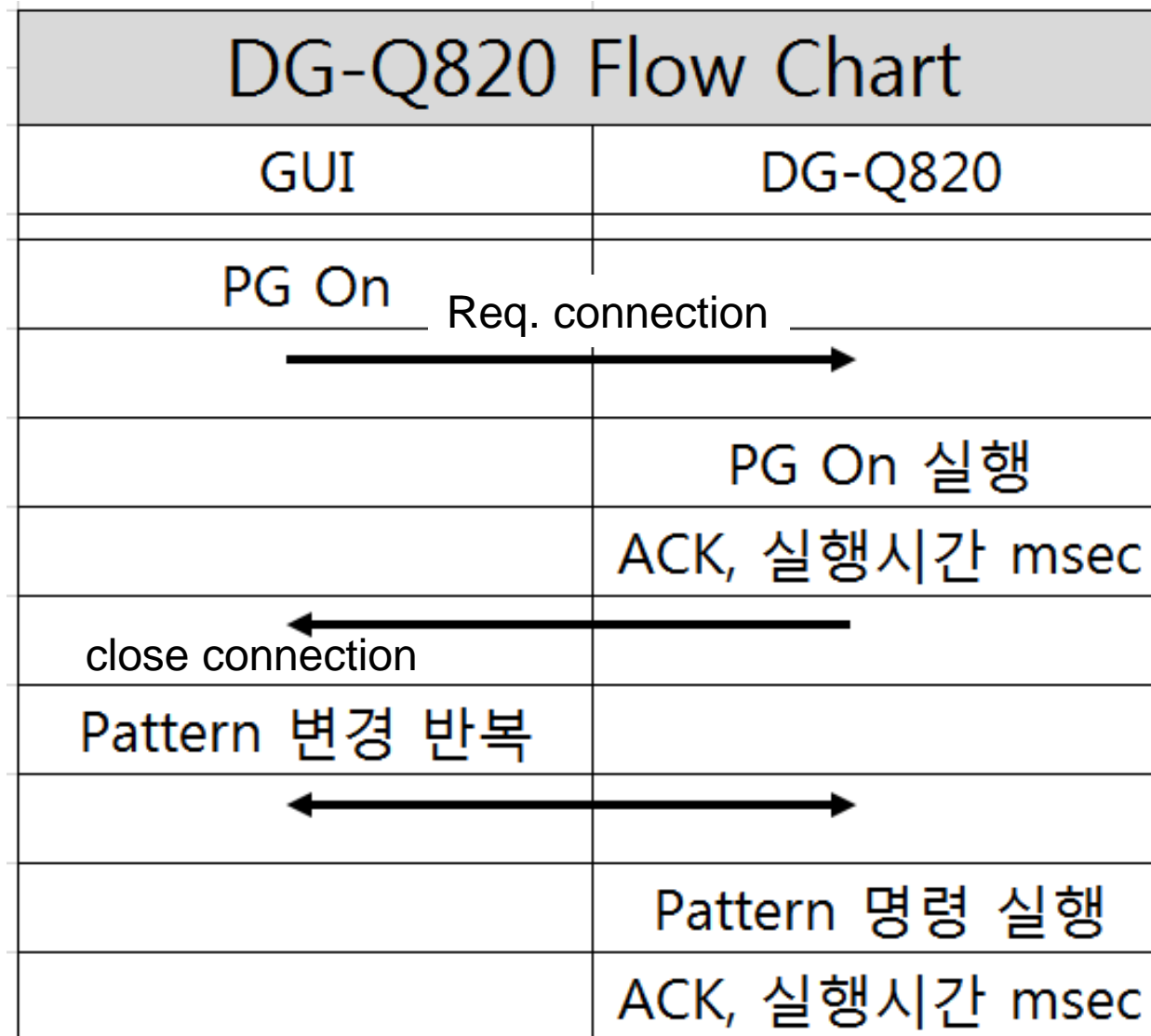


# DG-Q820 통신 프로토콜

Version 0.1



# DG-Q820 Flow Chart



1). TCP/IP 통신

GUI, DG-Q820

2). IP : GUI(192.168.xx.xx:2291), DG-Q820(192.168.xx.xx)



(Hex)

3). Port DG-Q820 (2291)

4). Request and Reply, Blocking Mode

1 Request 1 Reply 통신 방식으로 Blocking Mode로 시스템 안정화  
구현 및 에러처리에 유리

5) Time Out : 각 Request 별 별도 구현.

# Message Header

모든 메시지는 8byte의 헤더를 포함한다.

Message Size	Size Check Sum	Message
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	.....

Message Size는 자신을 포함한 전송될 Message Total Size이다.

Size Check Sum은 Message Size길이 재확인용 Check Sum,으로 Message Size 4개의 Byte를 Sum한 값으로 한다.

Size CheckSum은 아래와 같다.

$$\text{Int } n\text{Sizechecksum} = ((\text{size} \gg 24) \& 0\text{xff}) + ((\text{size} \gg 16) \& 0\text{xff}) + ((\text{size} \gg 8) \& 0\text{xff}) + (\text{size} \& 0\text{xff})$$

# GUI -> DG-Q820 [Recipe Load]



GUI -> DG-Q820						
Message Size	Size Check Sum	Command	구분자	Data Size	구분자	Data
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	"MODELCHG"	" "	"1234" (정수형문자/byte)	'0x00'	.....
			SPACE		NULL	(Binary)
DG-Q820 -> GUI						
Message Size	Size Check Sum	Command	구분자			
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	"ACK" or "NAK"	'0x00'			
			NULL			
				Time Out : 3sec		

Recipe change

샘플 소스 코드 별도 제공

# GUI -> DG-Q820 [PG On]



GUI -> DG-Q820				
<b>Message Size</b>	<b>Size Check Sum</b>	<b>Command</b>	<b>구분자</b>	
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	"PGON"	'0x00'	
			NULL	
DG-Q820 -> GUI				
<b>Message Size</b>	<b>Size Check Sum</b>	<b>Command</b>	<b>구분자</b>	
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	"ACK" or "NAK"	'0x00'	
			NULL	Time Out : 3sec

# GUI -> DG-Q820 [PG Off]



GUI -> DG-Q820				
<b>Message Size</b>	<b>Size Check Sum</b>	<b>Command</b>	<b>구분자</b>	
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	"PGOFF"	'0x00'	
			NULL	
DG-Q820 -> GUI				
<b>Message Size</b>	<b>Size Check Sum</b>	<b>Command</b>	<b>구분자</b>	
4Byte Binary (Little Endian)	4Byte Binary (Little Endian)	"ACK" or "NAK"	'0x00'	
			NULL	Time Out : 3sec

# GUI -> DG-Q820 [BMP]



GUI -> DG-Q820						
Message Size	Size Check Sum	Command	구분자	Data Size	구분자	Data
4Byte Binary	4Byte Binary	"BMPON"	" "	"1234"	'0x00'	.....
(Little Endian)	(Little Endian)		SPACE	(정수형문자/byte)	NULL	(Binary)
DG-Q820 -> GUI						
Message Size	Size Check Sum	Command	구분자			
4Byte Binary	4Byte Binary	"ACK" or "NAK"	'0x00'			
(Little Endian)	(Little Endian)		NULL		Time Out : 3sec	

BMP data 전송  
샘플 소스 코드 별도 제공



# GUI -> DG-Q820 [Grayscale 255] DGnT

GUI -> DG-Q820			
Message Size	Size Check Sum	Command	구분자
4Byte Binary	4Byte Binary	"PTNON 127" (정수)	'0x00'
(Little Endian)	(Little Endian)		NULL
DG-Q820 -> GUI			
Message Size	Size Check Sum	Command	구분자
4Byte Binary	4Byte Binary	"ACK" or "NAK"	'0x00'
(Little Endian)	(Little Endian)		NULL
			Time Out : 3sec

# GUI -> DG-Q820 [RGB 0 0 0]



GUI -> DG-Q820				
Message Size	Size Check Sum	Command	구분자	
4Byte Binary	4Byte Binary	"PTNON 255 255 255"	'0x00'	
(Little Endian)	(Little Endian)	(정수 R G B )	NULL	
DG-Q820 -> GUI				
Message Size	Size Check Sum	Command	구분자	
4Byte Binary	4Byte Binary	"ACK" or	'0x00'	
(Little Endian)	(Little Endian)	"NAK"	NULL	Time Out : 3sec



# Thank You !

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