ACKSYS EmbedAir1000(LTE) 설정 매뉴얼









LTE USIM이 탑재된 EmbedAir1000(LTE) 제품을 통해 PC가 인터넷에 연결되는 예시입니다. 가입한 LTE 상품에 따라 고정공인 IP 또는 사설유동 IP를 부여받을 수 있으며, 이에따라 EmbedAir1000 (LTE) 제품은 서버 또는 클라이언트로 동작되어 거리에 제한 없이 LTE망을 통해 적절한 네트워크망을 구축 하실 수 있습니다.

윈도우 PC에서는 기본적으로 방화벽에 의해 ping 응답이 비활성화 되어 있으므로 들어오는 ping 트래픽을 허용하는 규칙을 추가하세요.

가입된 LTE USIM을 EmbedAir1000 (LTE) SIM 슬롯1에 장착하고, 랜케이블을 EmbedAir1000 (LTE)의 LAN1과 PC의 랜포트에 연결합니다. LTE 안테나를 연결한 후 전원을 인가하여 설정을 시작합니다.

전원 ON 후에는 안테나를 만지지 마세요. 정전기 등으로 인하여 제품이 손상될 수 있습니다.



PC 설정



- 1. EmbedAir1000(LTE)의 원활한 설정을 위해 PC의 무선기능 OFF 후 로컬 영역 IP를 위와 같이 192.168.x.x 대역으로 설정합니다.
- 2. DNS 설정은 다음과 같이 합니다.

통신사	DNS 서버		
	기본	211.36.129.4	
LG O+	보조	117.111.29.4	



EmbedAir1000(LTE) 설정 - Cellular

1. PC에서 command 창을 통해 EmbedAir1000 (LTE)에 ping을 전송합니다. ping이 아래처럼 진행되지 않으면 로컬 네트워크 영역을 다시한번 확인해주세요.

💶 관리자: Windows 문	명령 처리	7 - ping 192.1	168.1.253 -t			-	x
192.168.1.253으	응답:	바이트-32	시간Kins	TTL-64			~
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간 (1 ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간 (1 ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간 (1ns	TTL-64			
192.168.1.253으	응답:	바이트-32	시간 (1ns	TTL=64			
192.168.1.253으	응답:	바이트-32	시간 (1ns	TTL-64			
192.168.1.253으	응답:	바이트-32	시간 <1ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간 <1ms	TTL-64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간 <1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간 <1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253 [©]	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간 (1ns	TTL=64			
192.168.1.253으	응답:	바이트-32	시간<1ms	TTL=64			
192.168.1.253으	응답:	바이트-32	시간<1ms	IIL-64			
							-

 인터넷 브라우저(반드시 크롬 사용)의 주소창에 192.168.1.253 입력하면 로그인 창이 표시되면 로그인을 클릭합니다. (추후 설정에서 암호 사용 가능)
 SETUP 메뉴를 클릭 후 Cellular 설정을 진행합니다.

	SETUP	TOOLS ST	ATUS					
HYSICAL INTERFACES OVERVIEW								
WIFI CELLULAR	You can set u	up to 8 simultaneous r	roles (wifi interface types) per radio card, among	the following cor	nbinations:		
LAN2		Channel selection Max number of int				Max number of inter	rfaces	
VIRTUAL INTERFACES		Combination	Multiplicity	Can use DFS	Access point	Infrastructure client	Mesh point	Ad-hoc
NETWORK	Mu	ultiple access points	single, auto, multiple	yes	8			
/PN		Portal	single	no	8		1	
BRIDGING		Client / bridge	single, auto, multiple, roaming	yes		1		
ROUTING / FIREWALL		Other / repeater	single	no	8	1 (non-roaming)	1	1
QOS	M/here university	an unand salah the unal	use the same shared at	annah in this anna tha a	lient rele must	the estimation of the	Incomine	
wi	Wi-Fi 4	(802.11n) Wireless	s interface					
wi	Wi-Fi A	(802.11n) Wireles: NNEL 802.11	s interface MODE SSID	ROLI	E	SECURITY	AC	TION S
W	Wi-Fi 4 Wi-Fi 4 CHAI Auto	(802.11n) Wireles: NNEL 802.11 matic 802.11	s interface MODE SSID b+g+n acksys	ROL Access Point (in	frastructure)	SECURITY none	AC1 Interfac	FION S e disabled
WI (WA	ILFI INTERFACE WI-FI 4 CHAI Auto	(802.11n) Wireless NNEL 802.11 matic 802.11	s interface MODE SSID b+g+n acksys	ROL Access Point (in	E frastructure)	SECURITY	AC ^T Interfac	FION S e disabled
	VI-FI INTERFACE WI-FI 4 CHAI Auto VAN INTERFACE 3G/4G/L	(802.11n) Wireles: NNEL 802.11 matic 802.11	s interface MODE SSID b+g+n acksys (Cellular)	ROLI Access Point (in	frastructure)	SECURITY	AC1 Interfac	FION S e disabled
	AN INTERFACE	(802.11n) Wireless NNEL 802.11 matic 802.11 TE Cellular radio	s interface MODE SSID b+g+n acksys (Cellular)	ROLI Access Point (in ENDLY NAME	E frastructure)	SECURITY	ACT Interfac	FION S e disabled
	WI-FI A WI-FI 4 CHAI Auto	(802.11n) Wireless NNEL 802.11 matic 802.11 	s interface MODE SSID b+g+n acksys (Cellular) FRI	ROL Access Point (in ENDLY NAME Cellular	rastructure)	SECURITY none	ACT Interfac	FIONS e disabled
GL	AN INTERFACE 3G/4G/L OBAL PAR	(802.11n) Wireless NNEL 802.11 matic 802.11 	s interface MODE SSID b+g+n acksys (Cellular) FRI	ROL Access Point (in ENDLY NAME Cellular	E (rastructure)	SECURITY none	AC' Interfac	FIONS e disabled
WI WA GLL RA	ILFI INTERFACE WI-FI 4 CHAI Auto AN INTERFACE 3G/4G/L 20BAL PAR ADIO REGULAT	(802.11n) Wireless NNEL 802.11 matic 802.11 	s interface MODE SSID b+g+n acksys (Cellular) FRi	ROLI Access Point (in ENDLY NAME Cellular	E frastructure)	SECURITY none	AC Interfac	FIONS e disabled

EmbedAir1000(LTE) 설정 - Cellular

M/ITrop Industrial M/irolass Loads	
vvirreeingustrial vvireless reage	eı

PHYSICAL INTERFACES WIFI CELLULAR LAN1 LAN2 VIRTUAL INTERFACES NETWORK VPN BRIDGING ROUTING / FIREWALL QOS
CELLULAR VIRTUAL INTERFACES NETWORK VPN BRIDGING ROUTING / FIREWALL QOS
VIRTUAL INTERFACES NETWORK General Setup SIM 1 SIM 2 Advanced Settings VPN Retwork description Cellular BRIDGING @ Friendly name for your network QOS Default SIM card Image: SIM 1
VPN Cellular BRIDGING @ ROUTING / FIREWALL @ QOS Default SIM card
ROUTING / FIREWALL QOS Default SIM card SIM 1
SERVICES SIM 2
(2) SIM slot selected at startup
Protocol DHCP
Default gateway metric
O Gateway priority when several o (Used only when a default gateway
Use peer DNS 🖉 🔞 Configure the local DNS sr

	SETUP TOOLS	STATUS		
PHYSICAL INTERFACES	WAN SETTINGS - CELL	ULAR		
CELLULAR LAN1	On this page you can confi	gure a WAN interface.		
LAN2 VIRTUAL INTERFACES	CELLULAR			
NETWORK VPN	General Setup SIM 1 SIM card 1 PIN code	SIM 2 Advanced Settings		PIN code : 0000
BRIDGING ROUTING / FIREWALL		2 Enter the	correct SLOT 1 PIN code or you r	
QOS SERVICES	SIM card 1 access point (APN)	m2m-stati	c-server.lguplus.co.kr	
	Authentication protocol	Required SIM only	APN	
			<lg u+=""></lg>	

	SETUP	TOOLS	STATUS	
PHYSICAL INTERFACES	WAN SETTI	NGS - CELLI	JIAR	
WIFI CELLULAR LAN1 LAN2	On this pa	ge you can confi	gure a WAN interface.	
VIRTUAL INTERFACES	CELLULAR			
NETWORK	General Set	up SIM 1 S	MM 2 Advanced Settings	
VPN	Always disable	ed at startup		
BRIDGING	State at startu	p		Default
ROUTING / FIREWALL				Default is
QOS				Use 'down' if t
SERVICES	Log AT transa	ctions at "debug" l	evel	🗌 😰 Use

V .	WITree
	INDUSTRIAL WIRELESS LEADER

SETUP > NETWORK

		SETUP	TOOLS	S STATUS				
PHYSICAL INTERFACES	١,			w				
VIRTUAL INTERFACES	L i							
NETWORK		NAME	ENABLED	IP ADDRESS	NETMASK	GATEWAY (METRIC)	PERSISTENCE	ACTIONS
LOCAL		LOCAL		192.168.1.253	255.255.255.0		Default	2
CELLULAR		Cellular		DHCP		DHCP (0)	Default	WAN config.
VPN		(m)	1					
BRIDGING		Add	d network					

DOL	ITIMC	/ EIDI	

	SETUP TOOLS STA	ATUS
PHYSICAL INTERFACES	NETWORK LOCAL	
VIRTUAL INTERFACES	NETWORK - LOCAL	
NETWORK	On this page you can configure the	network interfaces. You can bridge several interfaces by ticking the "bridge int
LOCAL	names of several network interface	S.
CELLULAR	COMMON CONFIGURATION	
/PN		
BRIDGING	General Setup Interfaces Settings	Advanced Settings
ROUTING / FIREWALL	Enable interface	
QOS	Network description	LOCAL
SERVICES		
		Priendly name for your network
	Protocol	static
	IPv4-Address	192.168.1.253
	IPv4-Netmask	255.255.255.0
	Default IPv4 gateway	
	Default gateway metric	0
		Gateway priority when several default gateways are configured; lowest is (Used only when a default gateway is defined on this interface)
	DNS server(s)	
		Veu con considu multiple DMC contert have proce potentia add a pour or

IP를 환경에 맞게 입력해주세요.

NETWORK - LOCAL

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "brid names of several network interfaces.

COMMON CONFIGURATION	
General Setup Interfaces Settings Ad	vanced Settings
Bridge interfaces	creates a bridge over specified interface(s)
Enable <u>STP/RSTP</u>	Enables the Spanning Tree Protocol on this bridge WARNING: Some cautions must be taken with wireless interface
Enable LLDP forwarding	Brables the LLDP frame forwarding.
bridge VLAN	Enable VLAN management in bridge. You must configure the option (setup->bridging)
Interface	 WiFi adapter: WiFi (currently disabled) - acks Ethernet adapter: LAN1 (network: LOCAL) Ethernet adapter: LAN2 (network: LOCAL)
MTU	1500

NETWORK - LOCAL

On this page you can configure the network interfaces. You can bridge names of several network interfaces.

COMMON CONFIG	URATION	
General Setup	Interfaces Settings	Advanced Settings
Network persistend	;e	Default ② Avoid the netwo
State at startup		Default
		Use 'down' if this ne



기본환경설정 값으로 진행합니다.

EmbedAir1000(LTE) 설정 – NETWORK ZONES

SETUP > ROUTING/FIREWALL > NETWORK ZONES

		SETUP	TOOLS STATU	s					
PHYSICAL INTERFACES	NE	ETWOR	K ZONES OVERVIEW						
VIRTUAL INTERFACES									
NETWORK		NAME	COVERED NETWORKS	FORWARD TO DESTINATION ZONE	NAT ENABLE	LOCAL SERVICES	ACTIONS		
VPN		LOCAL	"LOCAL"	LTE		All enabled	2 🗶		
BRIDGING		LTE	"Cellular"	-		All disabled	2 🗙		
ROUTING / FIREWALL DOS PROTECTION MULTICA ST ROUTING		Add zone							
NETWORK ZONES STATIC ROUTES									
						(설정이 완료	된 화면		

1. LOCAL 네트워크 영역을 아래와 같이 생성합니다.

	SETUP	TOOLS	STATUS							
PHYSICAL INTERFACES										
VIRTUAL INTERFACES	NETWORK 20	NE3-20	NE SETTINGS							
NETWORK	ZONE "LOCAL"									
VPN	This section define	es common pr	operties of "LOCAL".							
BRIDGING	Covered networks specifies which available networks are members of this zone.									
ROUTING / FIREWALL	General Settings	Advance	ed Settings							
DOS PROTECTION MULTICAST ROUTING	Name		LOCAL							
NETWORK ZONES	Enable IP Masque	erading	🔲 😰 Only on public zones. Warning: ir							
QOS	MSS clamping									
SERVICES	Default acceptance policy for local services			All enabled						
			You can restrict or open the local serv							
	Covered networks			LOCAL: 🗾 🗾 🌚						
				Cellular:						
	INTER-ZONE FOR	WARDING								
	Use this section only if NAT is disabled on this zone. The options below control the forwarding policies between this zone (LOCAL) and other zones. Des "LOCAL". The forwarding rule is <i>unidirectional</i> , e.g. a forward from lan to wan does <i>not</i> imply a per									
	Allow forwarding to destination zones:			LTE Cellular:						

이 부분은 LTE 네트워크 영역을 생성한 후에 나타납니다.

로컬영역을 먼저 생성하고 LTE 영역을 생성한 후에 체크합니다.



SETUP > ROUTING/FIREWALL > NETWORK ZONES

2. LTE 네트워크 영역을 아래와 같이 생성합니다.

	SETUP	TOOLS	S STATUS	\$					
PHYSICAL INTERFACES									
VIRTUAL INTERFACES									
NETWORK	ZONE "LTE"								
VPN BRIDGING	This section define Covered network	nes commo ks specifies	n properties of "LTE which available net	E". tworks are members	s of this zone.				
ROUTING / FIREWALL	General Settin	gs Adva	anced Settings						
DOS PROTECTION MULTICAST ROUTING	Name	с I.)		L	.TE				
NETWORK ZONES	Enable IP Mase	querading			🖞 😰 Only on public z	ones. Warn	ing: if usin		
QOS	MSS clamping								
SERVICES	Default acceptan	ice policy fo	r local services	All er	nabled				
	Covered network	(3			LOCAL:		2		
	INTER-ZONE FO Use this section The options belo The forwarding r	RWARDING n only if NA w control th ule is unidir	G AT is disabled on the forwarding policie rectional, e.g. a forw	his zone. es between this zon vard from lan to wan	e (LTE) and other z does <i>not</i> imply a p	ones. De ermissior	stination n to forw		
	Allow forwarding) to destinat	ion zones:		LOCAL LOCAL:	229	2		
TRAFFIC FORWARD									
Use this section only if NAT is This section allow to redirect the	s enabled on this zon e input traffic on this z	ne one to a devi	ice on other zone						
SOURCE NAME	SOURCE IP	FRAME PROTOCOL	PUBLIC PORT	PRIVATE PORT	DESTINATION IP	SORT			
	Blank any ip source		Blank, all ports	Blank, all ports		_			

Default acceptance policy for local services

로컬서비스 사용유무로 외부에서 EmbedAir1000 (LTE) 유심 고정공인 IP로 접근 시 All disabled : 웹설정X, Ping X, 데이타통신 O All enabled : 웹설정O, Ping O, 데이타통신 O

TRAFFIC FORWARD

특정 포트번호로 통신 시 프로토콜과 포트번호, 목적지 주소를 기입합니다.



STATUS > NETWORK

설정을 마치고 제품이 재부팅 되면 유심카드가 인식되어 외부로 접속 가능한 인터넷 환경이 구축됩니다.

	SETUP	TOOLS	STATUS										
DEVICE INFO	INTERFAC	ES											
NETWORK		20											
BRIDGES MULTICA ST ROUTES	iiii LOCAL												
ROUTES		IP CONFIGURATION											
WIRELESS		IPv4: 192.168.1.253 Netmask: 24 MTU: 1500											
CELLULAR	GRAPH	PHYSICAL INTERF	ACE	MAC ADDRESS	TX COUNT (IN BYTES)	RX COUNT (IN BYTES)	INTERFACE MODE	мти					
LOGS	îlîli	LAN1		00:09:90:01:1d:3b	28238693	2870564	Negotiated 1000 baseTX FD, link ok	1500					
	îlî	LAN2		00:09:90:01:1d:3c	0	0	no link	1500					
	CELLULAR												
		IP CONFIGURATION IPv4: : : Netmask: 28 MTU: 1500											
	DHCP info: Lease time: 7200s												
				DNS serve	r: 211.36.129.4 117.111.29	.4							
	GRAPH	PHYSICAL INTERF	ACE	MAC ADDRESS	TX COUNT (IN BYTES)	RX COUNT (IN BYTES)	INTERFACE MODE	MTU					
	ilili	Cellular		00:00:00:00:00:00	1183386	26006762	Operator (home): LG U+ LGU+ SIM: Password accepted	1500					
	L												

