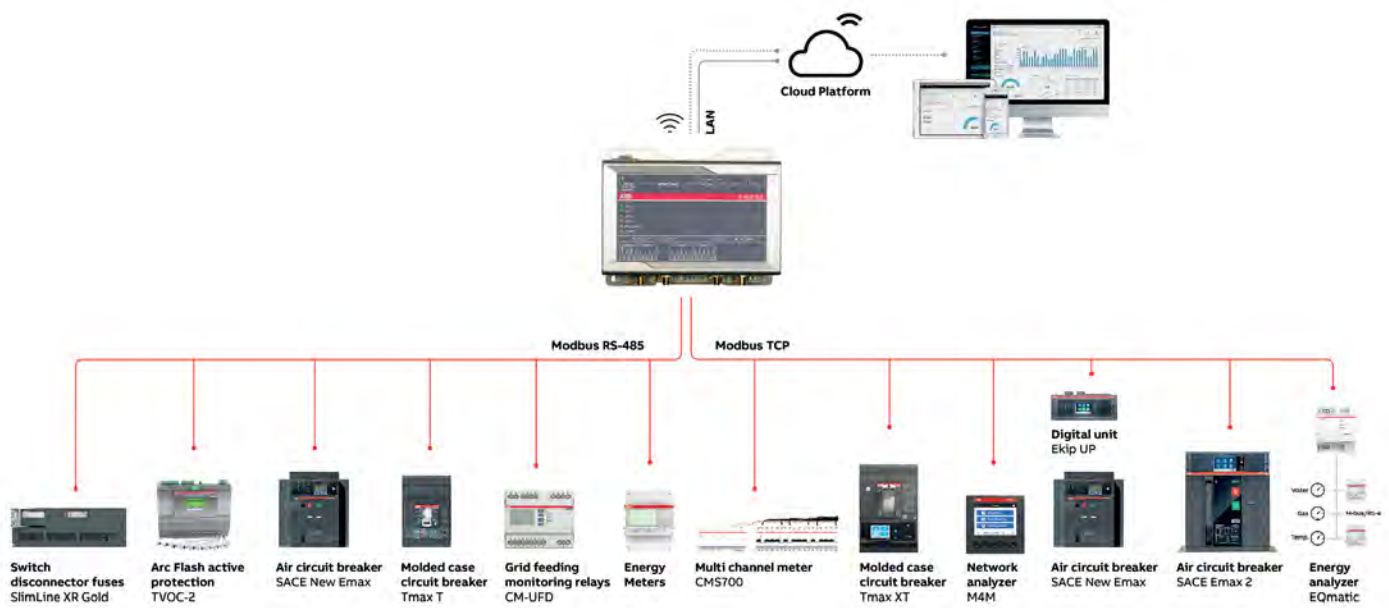# E-Hub 2.0
IoT gateway to Ability™ EDCS cloud

E-Hub 2.0 is an independent IoT gateway that gathers data from recognized field devices as well as pulse outputs (water/gas meters) and then connects with ABB Ability™ Electrical Distribution Control System (**EDCS**) cloud platform via Ethernet, Wi-Fi or cellular connectivity (GSM) for energy monitoring and measurement.

Where and why:

- E-Hub 2.0 is mainly intended to operate as a gateway to pull together multiple devices with the aim of mainly monitoring status as well as measurement of such downstream devices
- E-Hub 2.0 does not include any of the in-built network measurement or logical functions available in EkipUP, hence it is important to evaluate specific application requirements prior to ordering
- If the requirement is to have network measurement, especially in combination with basic/advanced circuit protection, special software functions, load management and/or energy management, then EkipUP range would be more suitable, please click here for more info on EkipUP
- E-Hub 2.0 is designed to work alongside EkipUP, in the same or parallel architectures/schemes depending on specific application requirement
- Typical applications for E-Hub 2.0 would be as a gateway/hub for a combination of devices like circuit breakers, gas/water meters, disconnects, etc., so they may be centrally monitored together in the Ability™ EDCS cloud environment
- E-Hub 2.0 does **not** carry CSA or UL approvals, however it is compliant with regulations of ISED Canada and FCC (USA); please click here for more details on this.

Fast facts:

- Directly connects to Ability™ EDCS
- Inbuilt Wi-Fi 2.4/5 GHz (antenna extra)
- Ethernet port (RJ45) for connection to existing IT infrastructure
- Inbuilt MicroSIM card slot (GSM 3G/4G) for direct and secure cloud connection without disturbing existing IT setup
- Inbuilt memory backup 1GB
- USB 2.0 port to connect additional external backup (memory medium not included)
- Side mounted I/O module optional
- Multiple communication ports standard
- DIN-rail mounts included
- FCC/IC approved
- Data traffic less than 5GB/year (estimated)
- Works directly with ABB Ability™ EDCS platform available on ABB Marketplace™
- Simple device commissioning; please refer our Getting Started manual online for details
- Technical specifications and details listed overleaf, please refer to the User Manual online for further details

Benefits of digital connectivity and relevance of EDCS

Ability™ EDCS keeps the solution simple at all levels, which translates to fast and safe implementation, rapid scalability and overall ease of use. This focus on simplicity in reality means an end-user can independently setup and startup the units and system in an hour or less.

Pre-configured widgets (currently 37 and counting) on EDCS platform immediately map and display the measured data in tabular and/or visual trends depending on the widget selected. More importantly, it removes the need for creating graphic, visualization components, etc. Inbuilt 3G/4G connectivity offers secure connection to cloud, independent of any existing IT network. Customer may switch to their own network anytime. Additional EkipUP units or other compatible devices can be easily introduced to the same EDCS cloud subscription at any point in future, with the same level of ease. It is important to note here that the end-user owns the solution as well as the data. Cybersecurity is given top priority at all levels from device to cloud, as it very well should be. Please click here for more info.

Product Code	Parts description
1SDA114031R1	E-Hub 2.0 standard
1SDA114032R1	E-Hub 2.0 with 3G for Europe (antenna not included)
1SDA114033R1	E-Hub 2.0 with 3G for NAM (antenna not included)
1SDA114038R1	Additional I/O module for E-Hub 2.0
1SDA114039R1	Wi-Fi/Bluetooth antenna E-Hub 2.0
1SDA114040R1	Cellular antenna E-Hub 2.0
1SDA114041R1	Wall Mounting brackets for E-Hub 2.0

Technical specifications and details by version			
Version	E-Hub 2.0 basic	E-Hub 2.0 NAM	E-Hub 2.0 EU
Processor	TI AM3352, 1 GHz, 1 Core		
Memory	1GB DDRC		
Storage	8GB eMMC		
Wired interfaces	2x Ethernet RJ45		
	2x USB 2.0		
	1x RS232		
	1x RS485		
Wireless interfaces	No modem	LTE Cat 1 (NA)	LTE Cat 1 (EU)
		3G Fallback	3G Fallback
WiFi/Bluetooth	802.11a,b,g,n / BLE 4.2		
Antennae (extra)	2x RP-SMA WiFi/Bluetooth	2x SMA Cellular	
		2x RP-SMA Wi-Fi/Bluetooth	
Onboard I/O (currently disabled)	2x digital inputs (36V, 1kV optoinsulated)		
	2x digital output (40V ac/dc, 1kV optoinsulated, 500mA, 1kHz max switching)		
Optional side-expansion I/O module	6x digital inputs (24Vdc)		
	2x 4-20mAanalog input		
	2x 0-36V analog input		
Internal hardware	RTC with supercap backup		
	System level watchdog		
	TPM 2.0		
	Internal temperature sensor		
	1x Reset button		
	1x programmable button		
LED indicators	1x Power		
	1x Cellular connection		
	4x Customizable functions		
SIM card holder	2 (enabled in NAM and EU version only)		
Inputvoltage	9-36Vdc with transient protection		
Power consumption	4W nominal; 15W maximum		
Temperature ranges	Operating -40°C to +70°C		
	Storage -40°C to +85°C		
Humidity range	5-95% (non-condensing) at 40°C		

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