

NOTE

- Network and installation requirements
1. Provide Ekip Com HUB with internet connectivity, either via LAN or via dedicated router with SIM card.
 2. Only during commissioning with Modbus TCP devices, it is necessary to connect all devices and Ekip Com HUB on the same network (see dotted ethernet line).
 3. If internet connection is via site network, the following ports shall be reachable:
 - 443/TCP: needed for the upload of the data via HTTPS
 - 53/UDP: needed for public DNS
 - 123/UDP: if connecting to public NTP server or ABB SNTP server
 4. Disable the firewall, if one is present on your laptop, before starting commissioning.
 5. For commissioning connect laptop to same ethernet network used for field devices (Ekip Com HUB). Laptop shall be able to connect to internet via LAN.

LEGENDA

- - - - - Modbus RTU RS485
 - Modbus TCP
 - Ethernet
 - - - - - M-Bus
- (1) Emax 2 equipped with Ekip Touch, Ekip HI-Touch, Ekip G-Touch or Ekip G-HI Touch and provided with Ekip Supply + Ekip Com HUB + Ekip Com Modbus RTU + Ekip Modbus TCP.
 - (2) Emax 2 equipped with Ekip Touch, Ekip HI-Touch, Ekip G-Touch or Ekip G-HI Touch and provided with Ekip Supply + Ekip Com Modbus TCP.
 - (3) Emax 2 equipped with Ekip Touch, Ekip HI-Touch, Ekip G-Touch or Ekip G-HI-Touch and provided with Ekip Supply + Ekip Com Modbus RTU.
 - (4) Emax New in one of the following configurations:
 - PR122 + PR120/DM
 - PR122 + PR120/DM + PR120V
 - PR123 + PR120/DM
 - (5) Tmax XT equipped with Ekip Touch, Ekip Touch Measuring, Ekip G Touch, Ekip M Touch, Ekip HI-Touch or Ekip G HI-Touch + auxiliary power supply + Ekip Com Modbus RTU mounted in dedicated slot in Tmax XT case.
 - (6) Tmax XT equipped with Ekip Touch, Ekip Touch Measuring, Ekip G Touch, Ekip M Touch, Ekip HI-Touch or Ekip G HI-Touch + Ekip Supply mounted on Ekip Cartridge + Ekip Com Modbus TCP mounted on Ekip Cartridge.
 - (7) Tmax T in one of the following configurations:
 - T4 - T5 - T6 con PR222/PO
 - T4 - T5 - T6 con PR2230S
 - T4 - T5 - T6 con PR2230S + VM210
 - T4 - T5 - T6 con PR223EF
 - T4 - T5 - T6 con PR223EF + VM210
 - T5 con Ekip E
 - T7 con PR332 + PR330/DM
 - T7 con PR332 + PR330/DM + PR330V
 - (8) Tmax XT in one of the following configurations:
 - XT2 con Ekip LSI or Ekip LSIG + Ekip COM
 - XT4 con Ekip LSI, Ekip LSIG or Ekip E+ Ekip COM
 - (9) Ekip Signalling TCP with 10 digital input.
 - (10) MV relays REF542plus
 - (11) M2M Network analyzer version with communication Modbus TCP.
 - (12) Ekip Up equipped with Ekip Supply + Ekip Com Modbus RTU.
 - (13) CM-UPD Interface monitoring.
 - (14) SimLine IT2.1
 - (15) TruOne equipped with OXE1 + Ekip Com Modbus TCP
 - (16) E-Hub
 - (17) Analog Signal
 - (18) Digital Signal
 - (19) EQ Meter, versions A41, A43, A44, B23, B24, B21.
 - (20) Eomatic Energy analyzer as modbus M-Bus master.
 - (21) Eomatic Energy analyzer as Modbus RTU master.
 - (22) Third party Water Meter with M-Bus communication.
 - (23) Third party Gas Meter with M-Bus communication.
 - (24) Third party Water Meter with Modbus RTU communication.
 - (25) Third party Gas Meter with Modbus RTU communication.
 - (26) E-Hub 2.0 with additional Digital + Analog I/O module and integrated SIM card for direct connection to the ABB Ability EDCS
 - (27) M4M 20 or M4M 30 Network Analyzer with Modbus TCP communication.
 - (28) M4M 20 or M4M 30 Network Analyzer with Modbus RTU communication.
 - (29) SCU100

1	Added devices	PS	MB	NS	11.06.20
1	Change / Review notes				
EM. Issue	DESCRIZIONE - Description	COMPL. Draw up	VERIFIC. Check	APPROV. App. S.	DATA Date
ABB QUESTO DOCUMENTO NON PUO' ESSERE UTILIZZATO IN ALCUN MODO DA TERZI: SENZA PREVENTIVA AUTORIZZAZIONE. This document cannot be used by others for any purpose, without prior written consent.		CODICE IDENTIFICAZIONE identification code Drawing N° 9AKK107045A6881		FOGLIO Sheet 004 EM. Issue XX	
TITOLO - Title REFERENCE ARCHITECTURE ABB ABILITY EDCS WITH THE GATEWAY E-HUB 2.0					
IMPANTO - Plant	DATA - Date	SCALA GRAFICA - Graphic scale	RIF. CLIENTE - Client ref.		
-	11/06/2020	-	-		

ABB ABILITY EDCS REFERENCE ARCHITECTURE COLLECTION

NOTES

Reference architectures provide examples of ABB Ability EDCS systems, showing which devices is possible to connect to cloud platform. In real instalation the mix of products can differ from examples.

COM HUB / E-HUB(1)

In order to ensure optimal data logging perfomance.

-Verify the correct balance between Master and Slaves Devices.

-Modbus TCP/IP Connectivity: the devices connected to each Ekip Com HUB / E-Hub with Modbus TCP communication protocol cannot exceeds 15 points.

-Modbus RTU (RS-485) Connectivity: the slave devices connected to each Ekip Com HUB / E-HUB with Modbus RTU communication protocol cannot exceed 15 points

(1) E-HUB is no longer available for sales, it has been replaces by E-HUB 2.0

TABLE Modbus TCP						
Device	Emax 2 / Ekip UP	M2M / M4M	TruOne	REF542plus	Tmax XT (new)	Ekip Signalling Modbus TCP
Weight	1	1	1	0,5	1	0,5

TABLE Modbus RTU										
Device	Emax 2 / Ekip UP	M2M / M4M	New Emax	TruOne	Tmax XT	Tmax XT (2019)	Tmax T	EQ Meters	ITS2	CM-UFD
Weight	3	3	3	3	1	3	1	2	1,5	3

Max 1 CMS700 + 96 sensors for both E-HUB and Com HUB

Max 1 SCU100 + 96 sensors for both E-HUB and Ekip Com HUB

Max 1 EQmatic* + 10 meters

***EQmatic compatible with ABB Ability EDCS as master of system with Modbus RTU and M-Bus systems, but only the 16 version (QA/S 3.16.1, M-bus ; QA/S 4.16.1, Modbus RTU)**

E-HUB 2.0

In order to ensure optimal data logging performance.

-Verify the correct balance between Master and Slave devices.

-Modbus TCP/IP Connectivity: the devices connected to each E-HUB 2.0 with Modbus TCP/IP communication protocol cannot exceed 30 points.

-Modbus RTU (RS-485) Connectivity: the devices connected to each E-HUB 2.0 with Modbus RTU communication protocol cannot exceed 30 points.


TABLE E-HUB 2.0									
Device	Emax 2 / Ekip UP	M2M / M4M	TruOne	REF542plus	Tmax XT (2019)	Ekip Signalling Modbus TCP	EQ Meters	CM-UFD	
Weight	1	1	1	0,5	1	0,5	1	1,5	

CMS700 + 32 sensors: 3 points and / or CMS700 + 96 sensors: 5 points

SCU100 + 32 sensors: 3 points and / or SCU100 + 96 sensors: 5 points

Max 2 EQmatic* + 15 meters

***EQmatic compatible with ABB Ability EDCS as master of Modbus RTU and M-Bus systems, but only the 16 version (QA/S 3.16.1, M-bus ; QA/S 4.16.1, Modbus RTU)**

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