

ABB Ability™ Symphony® Plus SCADA

S+ Operations SCADA version 3.3



Supervisory monitoring and control through Integrated Remote Operations of geographically distributed industrial plants and remote sites is crucial to maintain efficiency and mitigate the down time of the plant. With increasing compliance and regulations, generational shift of the operator workforce, increasing use of mobile operator stations and increasing cyber security needs, it is becoming ever more challenging.

ABB Ability™ Symphony® Plus SCADA offers a true state of the art SCADA system. It is designed and built on field proven features and functions. It is an open, flexible and scalable platform which serves as a platform for all SCADA applications.

Symphony Plus SCADA offers a high performance HMI as core of its Supervisory monitoring and control mechanism. The ergonomic HMI offers graphic page, superior trending capability based on real-time and historical data, advanced alarm management system compliant with ISA 18.2/ EEMUA 191 industry standards.

Its ergonomic design provides the operator with visualization of all the integrated information, personalized workplaces ensure that the operator is presented only the information required and in the proper context, leading to greater detection of abnormal situations.

Symphony Plus SCADA provides access to real-time & historical data from mobile devices, operators can see device status, process conditions, trends, alarms & events, performance dashboards etc. The fully web based, platform independent solution does not require any client-side software installation. Its touch based design is suitable to use from mobile devices.

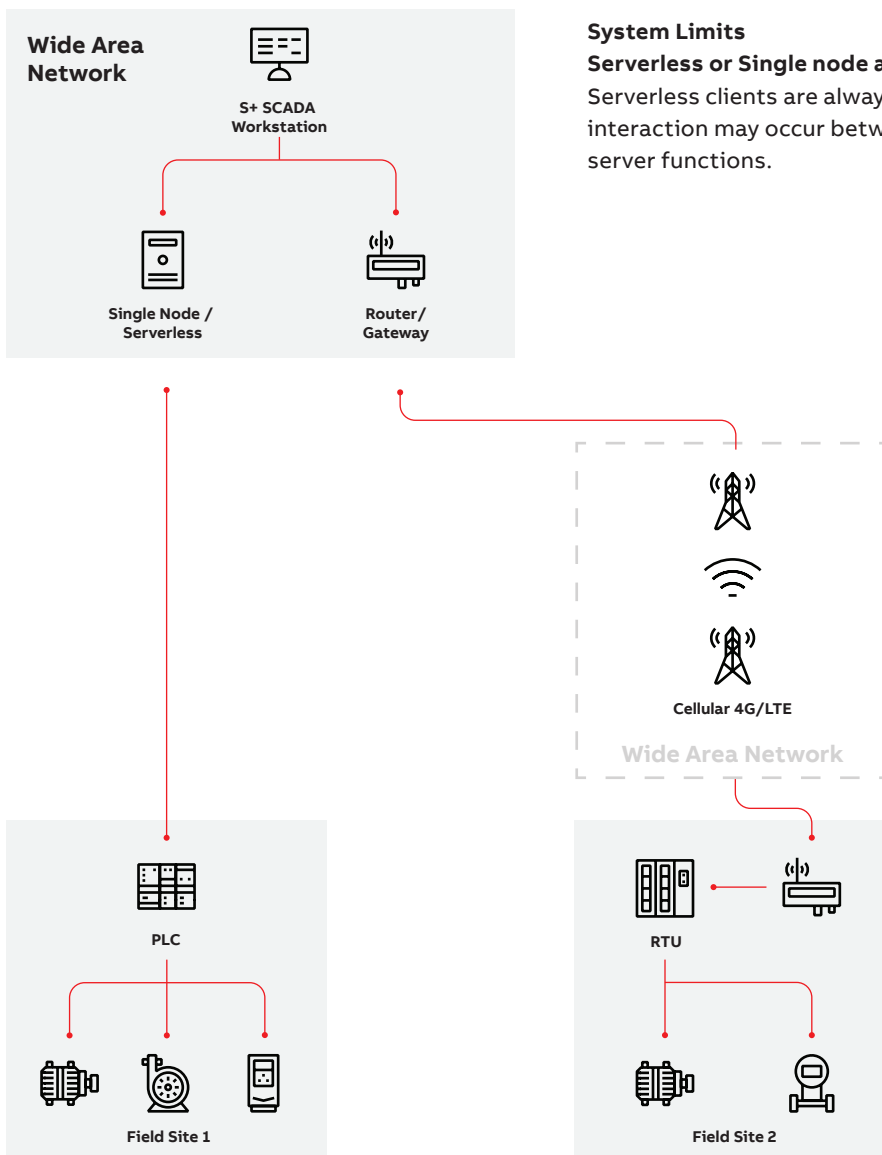
Mobile Apps are provided for live data visualization of SCADA information, Mobile app allows QR Code scanning with camera for maintenance personnel and possibility to report Hazards using SafetyAPP accessible from Smart Phones.

The open architecture design reduces life cycle costs by simplifying the task of integrating plant systems and devices. Additionally, the useful life is extended as the open architecture allows easy integration of new off-the-shelf applications and products.

Symphony Plus SCADA system architecture provides flexible and scalable configurations for small, medium and large process or SCADA applications.

Basically, Symphony Plus SCADA is a completely server-based system with every server having its own client included. Additionally, the complete system is enabled for multi system and multilevel redundancy, thus providing server-less as well as server-based architecture solutions.

Figure 01
Serverless or Single
Node Architecture



System Limits

Serverless or Single node architecture

Serverless clients are always stand-alone. No interaction may occur between clients for HMI server functions.

Table 02
Serverless or Single
Node architecture

Category	Parameter or Feature	Min.	Default	Max.
Clients	Number of Desktop Clients	1	1	1
	Number of Mobile Clients (Pocket Portal)	0	0	40
Tags	Tag Type	Single		
	Number of Analog Tags		5,000	256,000
	Number of Digital Tags	100	5,000	256,000
	Number of Database Tags per Server	200	10,000	512,000
	Number of Atoms per Tag	0	N/A	50
	Number of Atoms	0	N/A	1,000,000
Long Term History Process Data	Number of History Logs	0	N/A	100,000
Data Acquisition	Number of parallel drivers	0	N/A	200

System Limits

Server-Client architecture

For architectures following the server-based architectures following the server-based architecture, the below general limits apply.

Server based architecture limits are summarized in Table 3.

Figure 02
Serverless or Single
Node Architecture

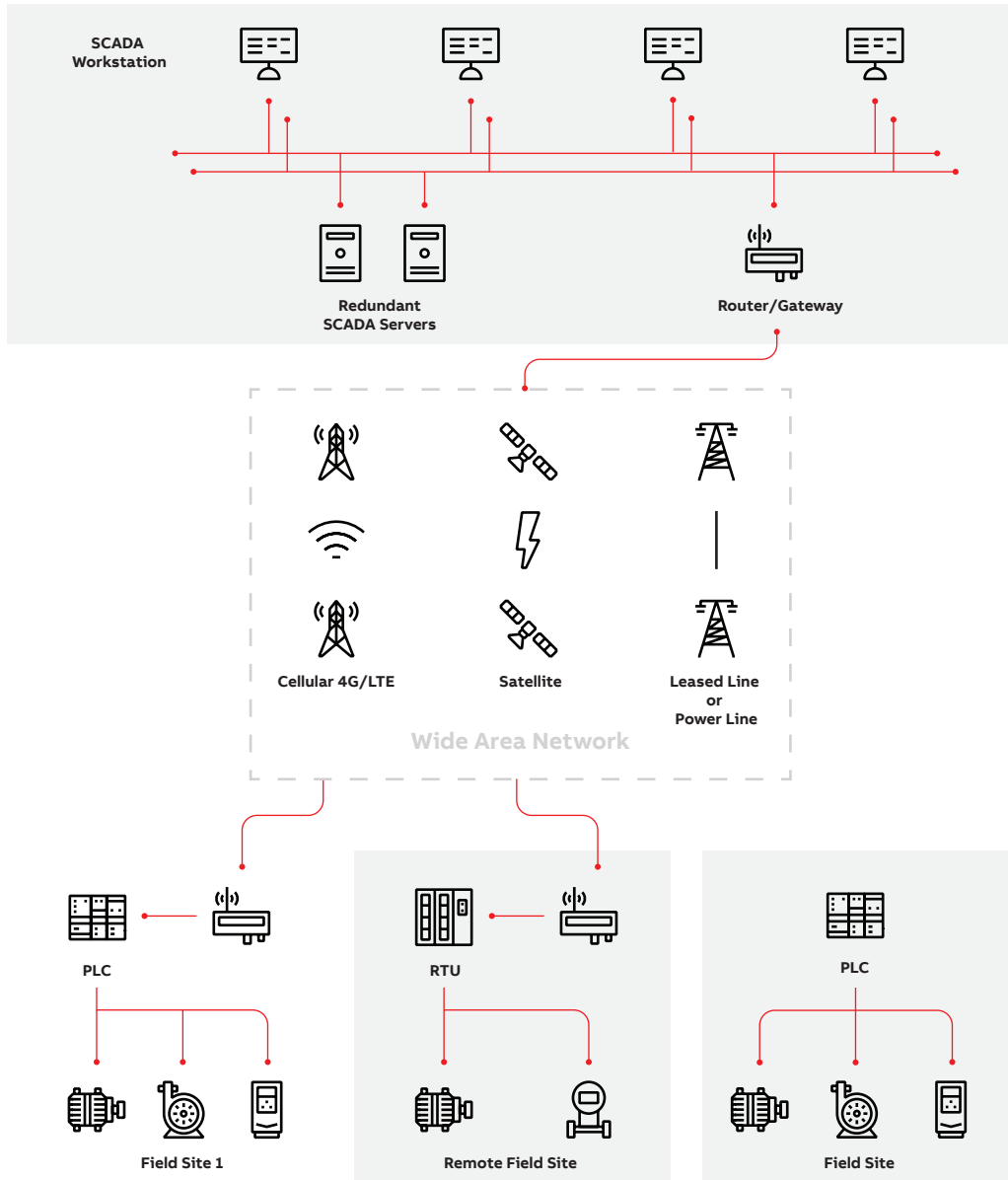


Table 03
Server-Client based
architecture

Category	Parameter or Feature	Min.	Default	Max.
Redundancy	RT Server	1	1oo2	1oo4
	History Server	0	1	1oo2
	Web Server	0	1	Parallel
Clients	Number of Desktop Clients per Server	1	1	32
	Number of Mobile Clients (Pocket Portal)	0	0	40
Servers	Number of Servers in One System	1	N/A	256
Tags	Tag Type	Single	Single	Multi-Redundant
	Number of Analog Tags per Server	100	5,000	256,000
	Number of Digital Tags per Server	100	5,000	256,000
	Number of Database Tags per Server	200	10,000	512,000
	Number of Atoms per Tag	0	N/A	50
	Number of Atoms per Server	0	N/A	1,000,000
	Long Term History Process Data	Number of History Logs	0	N/A
Data Acquisition	Number of parallel drivers	0	N/A	200

System Limits

Segregated architecture

For architectures following the segregated architecture, the below general limits apply.

Segregated architecture limits are summarized in Table 4.

Figure 03
Segregated Architecture

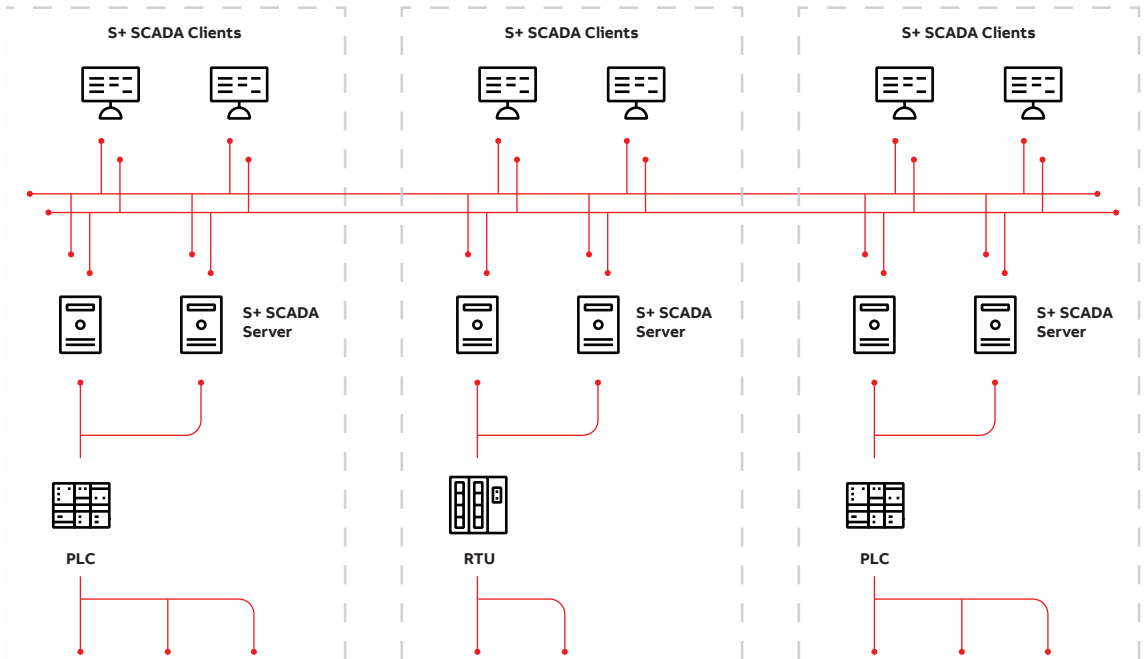


Table 04
Segregated architecture

Category	Parameter or Feature	Min.	Default	Max.
Redundancy	RT Server	1	1oo2	1oo4
	History Server	0	1	1oo2
	Web Server	0	1	Parallel
Clients	Number of Desktop Clients per Server	1	1	32
	Number of Mobile Clients (Pocket Portal)	0	0	40
Servers	Number of Servers in One System	2	2	256

System Limits

Composite architecture

For architectures following the composite architecture, the below general limits apply.

Composite architecture limits are summarized in Table 5.

Figure 04
Composite (Multi-Master) Architecture

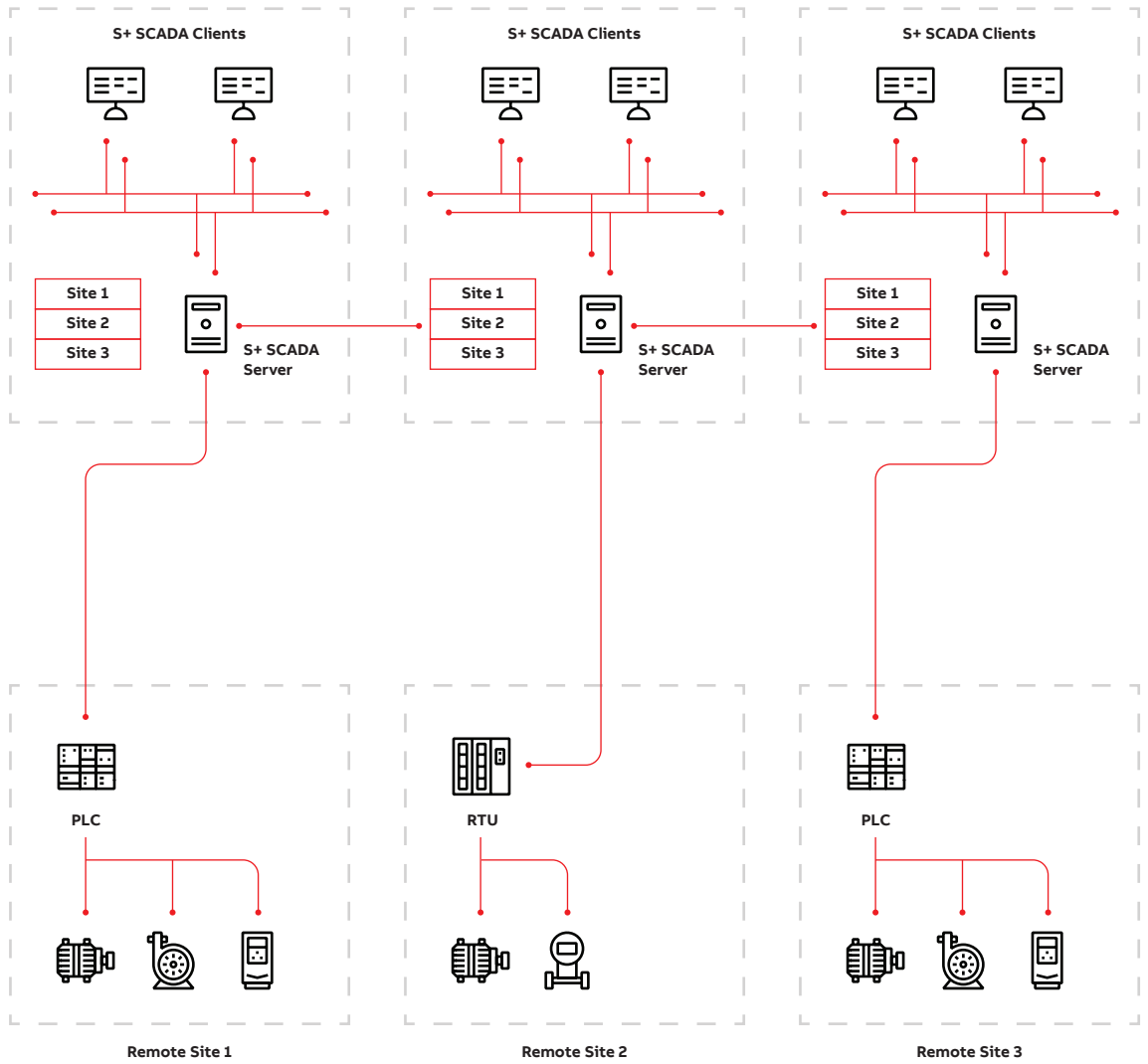


Table 05
Composite architecture

Category	Parameter or Feature	Min.	Default	Max.
Composite	Clusters	1	2	4
	Data exchange exceptions/second among Servers	300	1000	2000
Redundancy	RT Server	1	1oo2	1oo4
	History Server	0	1	1oo2
	Web Server	0	1	Parallel
Clients	Number of Desktop Clients per Server	1	1	32
	Number of Mobile Clients (Pocket Portal)	0	0	40
Servers	Number of Servers in One System	1	N/A	256
Tags	Tag Type	Single	Single	Multi-Redundant
	Number of Analog Tags per System	100	5,000	256,000
	Number of Digital Tags per System	100	5,000	256,000
	Number of Database Tags per System	200	10,000	512,000
	Number of Atoms per Tag	0	N/A	50
	Number of Atoms per System	0	N/A	1,000,000
Long Term History Process Data	Number of History Logs	0	N/A	100,000
Data Acquisition	Number of parallel drivers per Server	0	N/A	200

System Limits
Hierarchical (Multi-System)/Distributed
architecture

For architectures following the Hierarchical architecture, the below general limits apply.

Hierarchical architecture limits are summarized in Table 6. Minimum, default and maximum values of sized features of the package are summarized in Table 5. Most of unlimited maximum values are only limited by disk capacity or memory.

Figure 05
 Hierarchical (Multi-System) Architecture

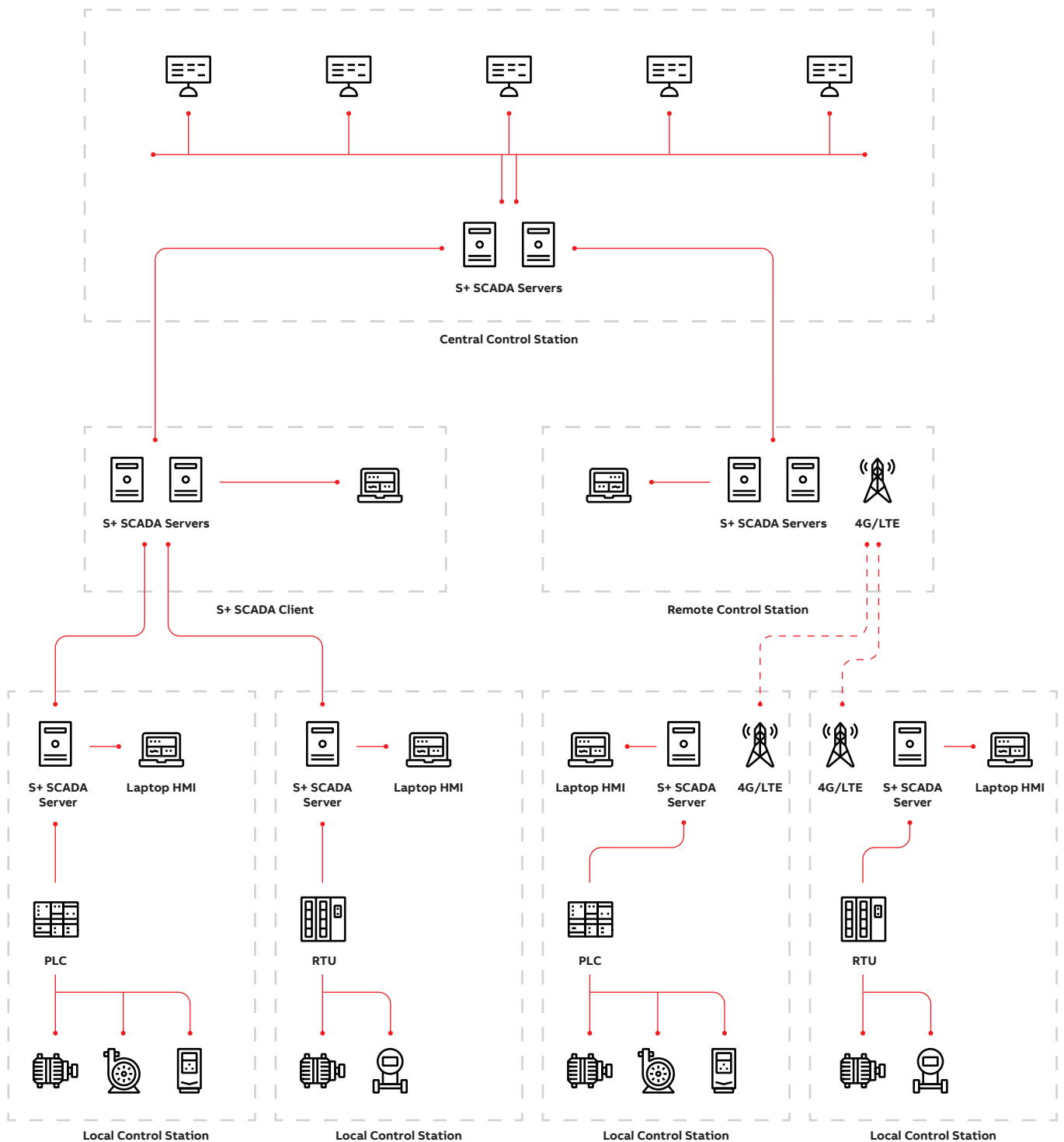


Table 06
Hierarchical architecture

Category	Parameter or Feature	Min.	Default	Max.
Hierarchical	Clusters	1	2	4
	Data exchange exceptions/second among Servers	300	1000	2000
Redundancy	RT Server	1	1oo2	1oo4
	History Server	0	1	1oo2
	Web Server	0	1	Parallel
Clients	Number of Desktop Clients per Server	1	1	32
	Number of Mobile Clients (Pocket Portal)	0	0	40
Servers	Number of Servers in One System	1	N/A	256
Tags	Tag Type	Single	Single	Multi-Redundant
	Number of Analog Tags per System	100	5,000	256,000
	Number of Digital Tags per System	100	5,000	256,000
	Number of Database Tags per System	200	10,000	512,000
	Number of Atoms per Tag	0	N/A	50
	Number of Atoms per System	0	N/A	1,000,000
Long Term History Process Data	Number of History Logs	0	N/A	100,000
Data Acquisition	Number of parallel drivers per Server	0	N/A	200