

STANDARD OPERATING PROCEDURE

Sysmex Analyzer Setup on Analyzer Interface

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Version	1.0
Prepared For	Analyzer Interface / Laboratory Team
Applies To	Sysmex XS-1000i, XS-500i, pocH-100i, XT-2000i, and generic SYSMEX TCP/IP setup
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1. Overview

This manual explains how to connect, register, verify, and maintain Sysmex analyzers in the Analyzer Interface. It is intended for laboratory users, IT support, and system administrators responsible for hematology analyzer integration. One registered Sysmex interface listener can accept multiple Sysmex analyzer connections, provided each analyzer is on the same reachable network and uses the configured listener port.

2. Before You Start

- Confirm the Sysmex analyzer model and communication mode.
- Confirm the analyzer IP address and TCP port.
- Confirm the Analyzer Interface PC is switched on and connected to the laboratory network.

Note: **The IP address of the computer where the analyzer interface is installed should be static.**

- Confirm the Windows firewall allows inbound traffic on the configured Sysmex port.
- Confirm you have permission to register analyzers and maintain mappings.

3. Connection Layout

Multiple Sysmex Analyzers on One Interface Listener

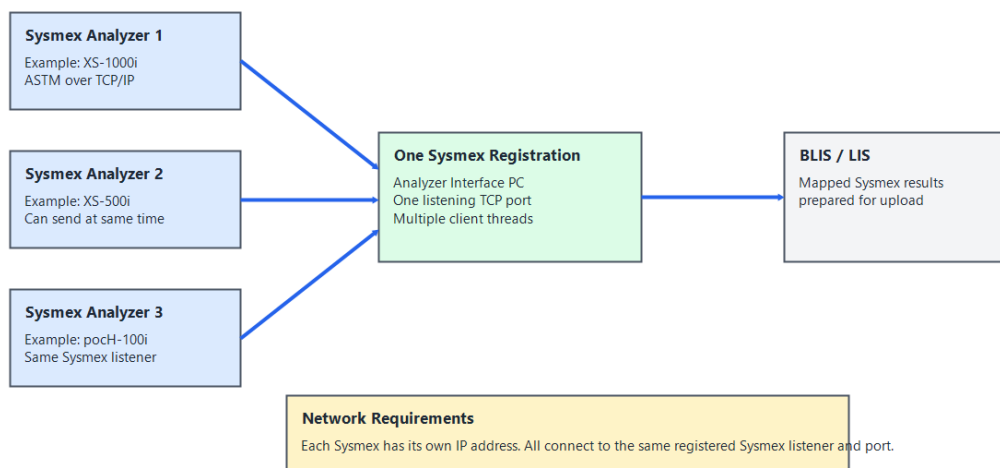
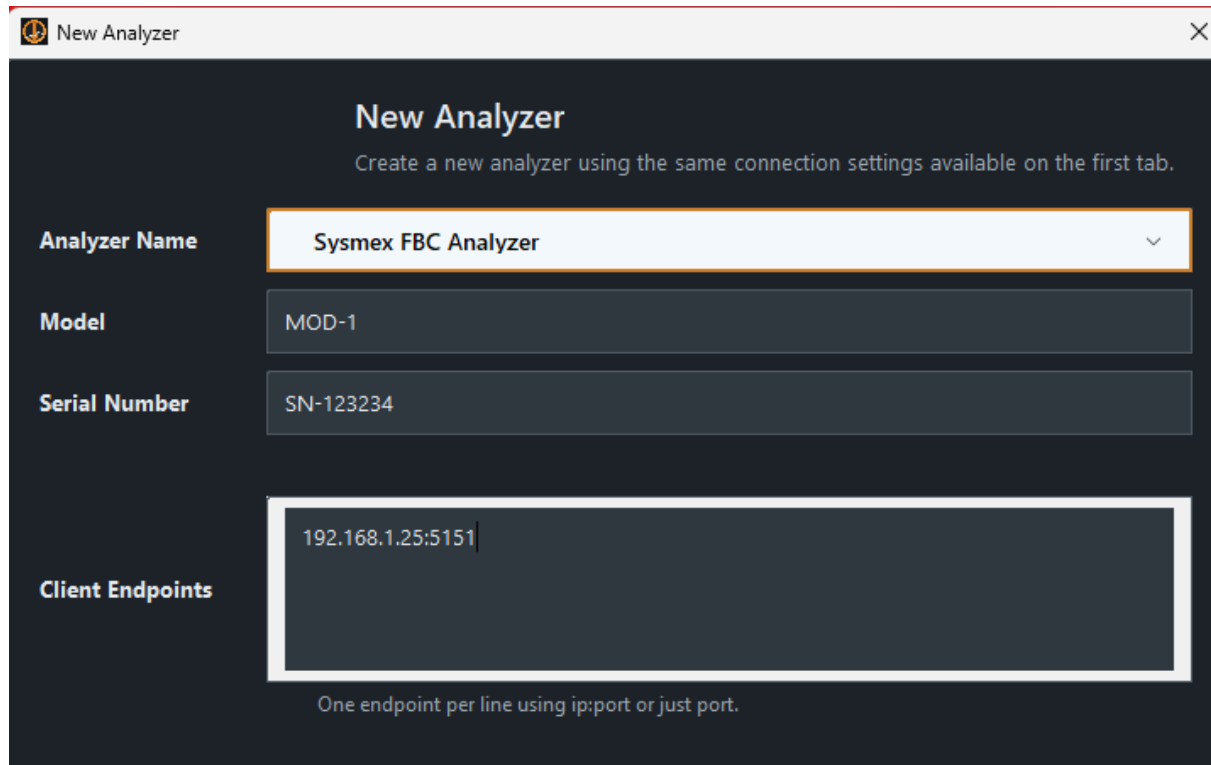


Figure 1. Sysmex TCP/IP communication layout.

Each Sysmex analyzer sends ASTM result messages to the same registered Sysmex listener on the Analyzer Interface PC. The interface creates a separate client thread for each connected analyzer, acknowledges messages, extracts results, saves them locally, and prepares mapped values for upload to BLIS or LIS.

4. Registering the Sysmex Analyzer



The screenshot shows a web application window titled "New Analyzer" with a close button (X) in the top right corner. The main heading is "New Analyzer" with a subtitle "Create a new analyzer using the same connection settings available on the first tab." Below this, there are four input fields:

- Analyzer Name:** A dropdown menu with "Sysmex FBC Analyzer" selected and a downward arrow icon.
- Model:** A text input field containing "MOD-1".
- Serial Number:** A text input field containing "SN-123234".
- Client Endpoints:** A large text area containing "192.168.1.25:5151". Below the text area is a note: "One endpoint per line using ip:port or just port."

Figure 2. Sysmex registration flow in Analyzer Interface.

- Open Analyzer Interface.
- Open the analyzers tab.
- Select the correct Sysmex model. Use generic SYSMEX only when the exact model is not listed.
- Enter the Model, Serial Number, and endpoint eg: **192.168.1.25:5151**.
- Save the analyzer record.
- Confirm that the interface starts listening immediately after saving.
- Send a test result from each Sysmex analyzer and confirm all are accepted without creating separate interface listeners.

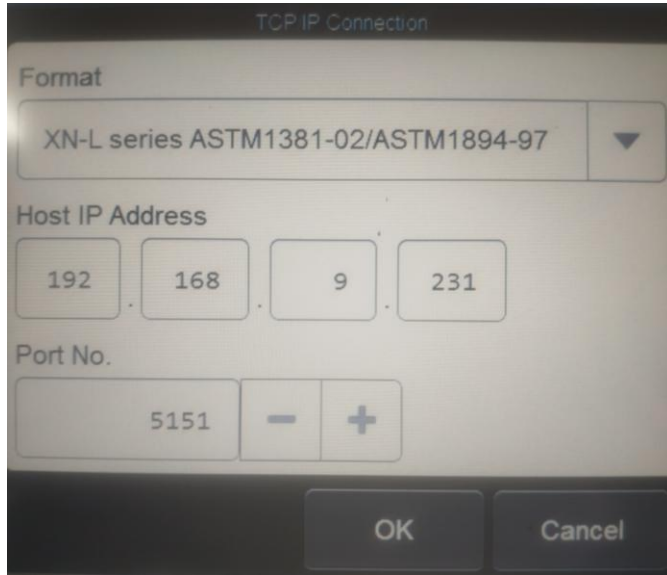
5. Multi-Analyzer Rule

When several Sysmex analyzers must report to the same Analyzer Interface PC, do not create a separate listener for each analyzer if they use the same Sysmex communication port. Create one Sysmex registration, then add each Sysmex analyzer IP address as a client endpoint. This allows all connected Sysmex analyzers to send results at the same time while the interface handles each analyzer connection separately.

Note: Setting up the Sysmex Analyzer

- On the Analyzer Select **Menu** → **Setting**
- Select **Output Setting**
- Select **Host Computer**
- Select **Connect To Host Computer** → **TCP/IP Connection**
- Select **Modify Settings**

Select the **3rd option of the format** | **Enter the Host IP Address** | **Port No**



TCP/IP Connection

Format

XN-L series ASTM1381-02/ASTM1894-97

Host IP Address

192 . 168 . 9 . 231

Port No.

5151 - +

OK Cancel

- Each Sysmex analyzer must have a unique static IP address.
- All Sysmex analyzers must be able to reach the Analyzer Interface PC.
- The configured listener port must be open on the Analyzer Interface PC firewall.
- All received results are still saved under the registered Sysmex machine configuration and mapped using the Sysmex parameter mappings.

6. Result Processing

When a Sysmex result message is received, the interface reads the patient or sample ID, extracts CBC parameters from result records, and saves each result into the results table. Common parameters include WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, lymphocyte values, monocyte values, and granulocyte values, depending on the Sysmex model.

7. Parameter Mapping

- Open the mapping screen after a Sysmex result has been received.
- Review the parameters detected from the analyzer.
- Map each Sysmex parameter to the correct LIS test or measure.
- Save the mapping.
- Send a fresh sample result and confirm the result uses the mapped system code.

8. Verification Checklist

- Each Sysmex analyzer connects to the same registered Sysmex listener.

- The interface displays Sysmex client connections or receives data from each analyzer.
- A sample result appears in the results table.
- The patient or sample ID is correct.
- CBC parameters appear with correct values.
- Mapped results are ready for LIS upload.

9. Daily Operation

- Start the Analyzer Interface before routine analyzer work begins.
- Confirm each Sysmex analyzer is online and connected.
- Run samples normally on the analyzer.
- Check that results appear in the interface results table.
- Review any unmapped parameters and map them before routine upload.

10. Troubleshooting

No connection	Check network cable, analyzer IP, interface PC IP, configured port, and firewall.
No results saved	Confirm the analyzer is sending ASTM results and that the interface is listening on the correct port.
Only one analyzer connects	Confirm the other Sysmex analyzers are listed as client endpoints and can reach the shared listener port.
Wrong patient ID	Check barcode/sample ID entry on the Sysmex analyzer and the ASTM patient record.
Parameter not mapped	Open mapping screen and map the analyzer parameter to the correct LIS measure.
Duplicate or repeated messages	Check analyzer resend settings and confirm results are not being manually resent.
Connection stops	Restart the Sysmex analyzer connection and confirm the interface listener is still running.