



SIMATIC IPC BX-35A

Technical slides

SIMATIC IPC BX-35A

Applications/Verticals

- High AI performance requirement OEM machine
- Design for Machine vision AI use case
- Optimized for Industrial embedded AI



Key features

- Compact size with diverse interfaces and expansion options
- Excellent price/performance ratio for cost-efficient implementation
- Industrial OS advanced experience



Performance

- Processor upgrade with latest NVIDIA Jetson Orin technology
- 12-24V wide range PSU
- 4x PoE for machine vision



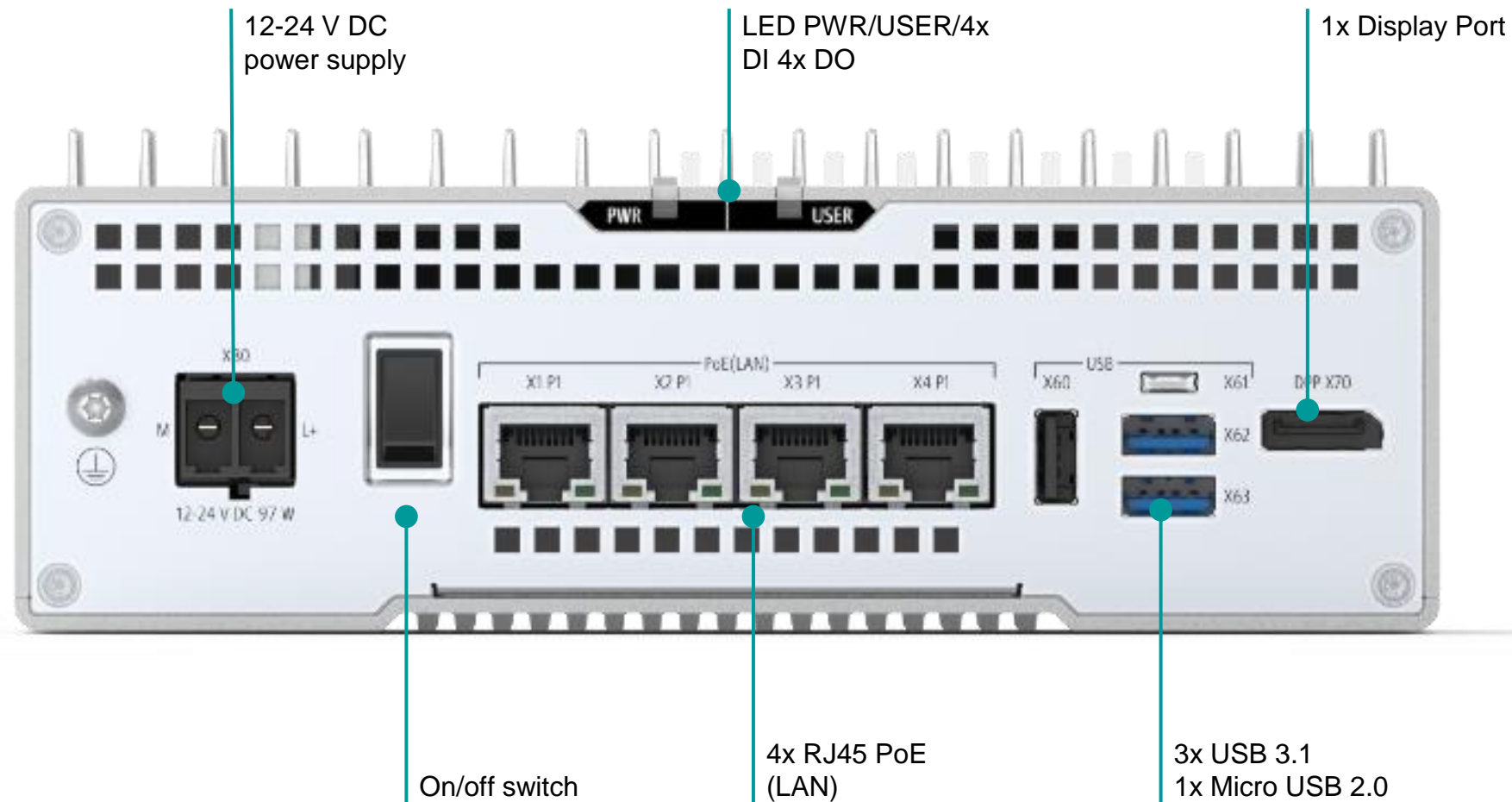
Flexibility & Scalability

FLEX MODULE for different IO expansion will bring more opportunities – under development



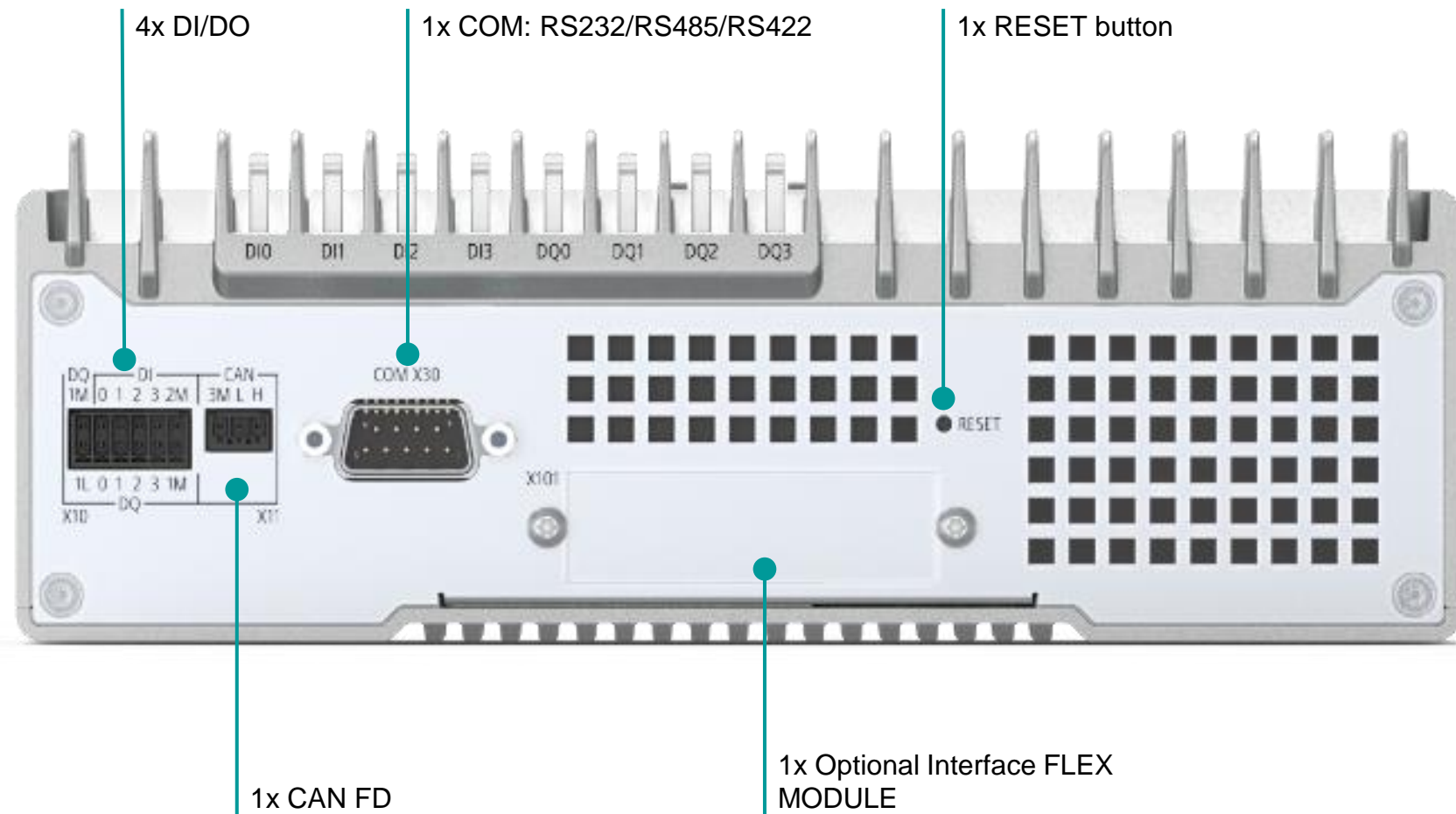
SIMATIC IPC BX-35A

Overview of front panel



SIMATIC IPC BX-35A

Overview of back panel



SIMATIC IPC BX-35A

Overview of side face



SIMATIC IPC BX-35A

Technical specifications

Design

| | Jetson™ Orin NX 16GB version | Jetson™ Orin NX 8GB version |
|------------------|--|--|
| Processor | 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU MB L2 + 4MB L3 | 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3 |
| Main memory | 16GB 128-bit LPDDR5 102.4GB/s | 8GB 128-bit LPDDR5 102.4GB/s |
| Chipset | Jetson Orin NX 16GB | Jetson Orin NX 8GB |
| Graphics | 1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores | |
| Operating system | <ul style="list-style-type: none">• NVIDIA® JetPack 5.1.2 for developing purpose• Industrial OS V3.4 based on JetPack 5.1.2 | |
| Power supply | <ul style="list-style-type: none">• DC rated 12-24 V, range 9-36 V• on/off switch | |



SIMATIC IPC BX-35A

Technical specifications

Design

| | |
|--------------|-----------------------------|
| M.2 NVMe SSD | NA or 256GB or 512GB or 1TB |
|--------------|-----------------------------|

Interfaces

| | |
|-------------|---|
| COM | 1 x RS232/RS422/RS485, max. 115 Kbps, D-sub connector, 9-pin |
| USB | <ul style="list-style-type: none">• 3x USB 3.1 Gen1 Type A• 1x USB 2.0 Micro USB |
| Ethernet | 4x Gbe RJ45 with PoE function |
| Graphics | 1x display port (DP1.4 capable, up to 4kp60) |
| Digital I/O | <ul style="list-style-type: none">• 4x DI• 4x DO |
| CAN BUS | 1x CAN FD |
| Layout | Interfaces on front and back panel |



SIMATIC IPC BX-35A

Technical specifications

Expandability

Expansion slots

1 x Nano SIM card slot

3 x M.2 expansion slot

- 1x M.2 2230 (E Key)
- 1x M.2 2242/3042/52/60 (B Key)
- 1x M.2 2242/2280 (M Key)

Support 1x FLEX MODULE (optional accessory) – under development

- M.2 to 4x COM
- M.2 to 24ch GPIO
- M.2 to 2x LAN
- M.2 to 2x USB3.2



SIMATIC IPC BX-35A

Technical specifications

Mounting options

- | | |
|-----------------------|--|
| Types of installation | <ul style="list-style-type: none">• Mounting on a DIN rail• Wall mounting |
|-----------------------|--|

Accessories

- | | |
|------------------------|--|
| Mounting accessory kit | <ul style="list-style-type: none">• One standard rail bracket• Two wall mounting brackets |
| Accessory kit | <ul style="list-style-type: none">• One DC connecting terminal block• One CAN plug• One DI/DQ plug• Six M3 screws |

Dimensions

| | |
|------------|---------------------------------------|
| Basic unit | W x H x D = approx. 196 x 131 x 69 mm |
|------------|---------------------------------------|



SIMATIC IPC BX-35A

Technical specifications

Ambient conditions

| | | |
|--|--|--|
| Vibration | Operation, Up to 1g@8.4-200Hz, according to IEC 60068-2-6 | |
| Shock | Operation, Up to 15g@11ms, according to IEC 60068-2-27 | |
| Ambient temperature during operation | <ul style="list-style-type: none">• 15W CPU, 30W PoE, 3W M.2 B key and E key module: 0°C to 50°C• 25W CPU, 15W PoE: 0°C to 40°C | |
| Protection class according to EN 60529 | IP20 | |
| Approvals | <ul style="list-style-type: none">• CE• UL• FCC | <ul style="list-style-type: none">• KCC• RCM• Etc. |
| Power consumption | Max. 97 W | |



Migration

SIMATIC IPC520A to IPC BX-35A

| Installation compatibility | | IPC520A | IPC BX-35A |
|----------------------------|--|---|---------------------------------------|
| Enclosure dimensions | | W x H x D = approx. 234 mm x 129 mm x 71 mm | W x H x D = approx. 196 x 131 x 69 mm |
| Mounting options | | Wall mounting, mounting on DIN rails | Wall mounting, mounting on DIN rails |

Interface compatibility

| | | |
|----------------------|-------------------------------------|-------------------------------------|
| Expansion (internal) | 1x B-key,1x E-key | 1x M-key, 1x B-key, 1x E-key |
| Ethernet interfaces | 4x LAN (2x POE) | 4x LAN (4x POE) |
| Graphics interface | 1x DP | 1x DP (support DP++) |
| USB ports | 3x USB 3.1 Type A, 1x Micro USB 2.0 | 3x USB 3.1 Type A, 1x Micro USB 2.0 |
| Serial ports | 1x COM RS485/422/232 | 1x COM RS485/422/232 |
| Digital I/O | 4x DI, 2x DO | 4x DI, 4x DO |
| CAN | NA | 1x CAN FD |
| Expansion (External) | NA | 1x FLEX MODULE (Optional) |



Migration

SIMATIC IPC520A to IPC BX-35A

| | IPC520A | IPC BX-35A |
|-------------------------------|----------------------------------|----------------------------------|
| System compatibility | | |
| Nvidia SOM | Nvidia® Jetson™ Xavier 16G | Nvidia® Jetson™ Orin 16G/8G |
| NVME Storage | 256G SSD (single PCIE lane) | Up to 1T SSD (4 PCIE lanes) |
| Software compatibility | | |
| Nvidia JetPack | Start from Nvidia® JetPack 5.0.2 | Start from Nvidia® JetPack 5.1.2 |
| Operating system | Industrial OS 3.4 | Industrial OS 3.4 |

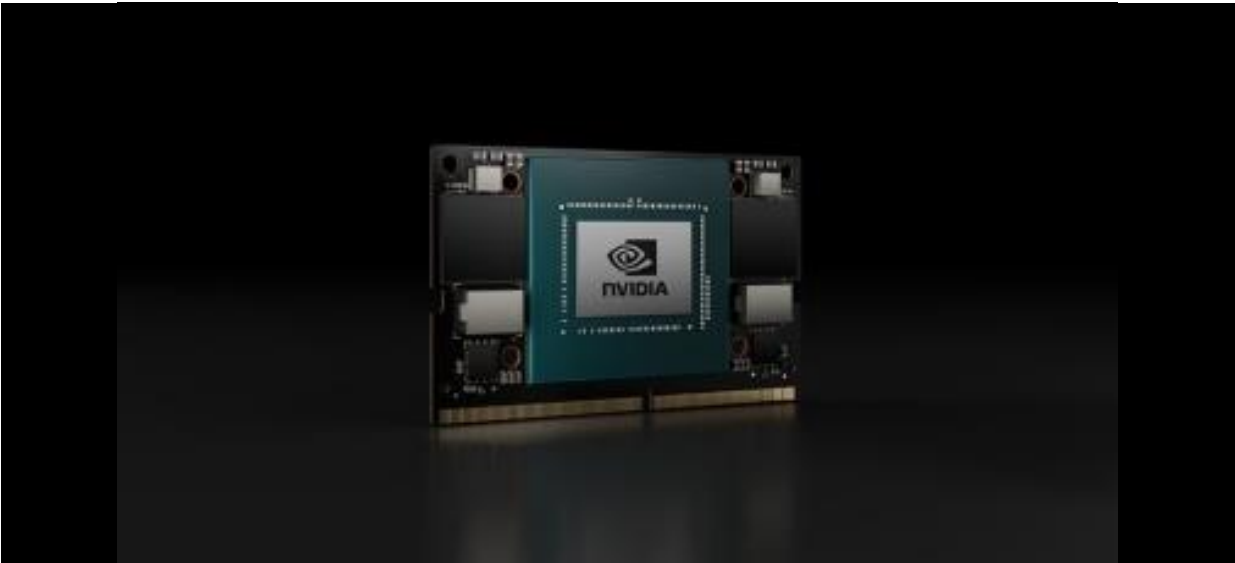


SIMATIC IPC BX-35A extensions

M.2 Modules/COM interfaces

Jetson Orin NX Series

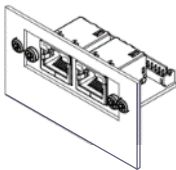
Jetson Orin NX modules deliver up to 100 TOPS of AI performance in the smallest Jetson form factor, with power configurable between 10W and 25W. This gives you up to 3X the performance of Jetson AGX Xavier and up to 5X the performance of Jetson Xavier NX. Jetson Orin NX is available in 16GB and 8GB versions.



Other Functionalities

FLEX MODULE

E.g., additional USB/COM/LAN/GPIO



Radio communication

- M.2 extension for WiFi/BT, or 4G/5G modules
- Antenna position reserved for better signal

Industrial OS

To optimize the industrial AI-Accelerator and security

SIMATIC IPC BX-35A

Use the best performance in its class

Errors excepted and subject to change without prior notice. The information provided in this document contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. The desired performance features are binding only if they are expressly agreed in the contract.

All product names can include registered trademarks or other rights of the Siemens group or third parties, the unauthorized use of which may infringe the rights of the owner.

SIMATIC IPC BX-35A

