

SIMATIC NET

Industrial Ethernet / PROFINET Industrial Ethernet

System Manual

Preface

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with Industrial Ethernet

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Appendix

A



Figure 4-14 SCALANCE XR324-12M

The managed switches SCALANCE X300 from SIMATIC NET are for use in high-performance plant networks.

With the HSR redundancy function and standby coupling of rings, high network availability can be achieved. If the connection between these switches is interrupted, the IE switch SCALANCE X-300 used as the redundancy manager acts like a switch and in a very short time forms a linear bus from the ring with redundancy manager. As a result, a functional, end-to-end structure is restored.

Support of IT standards such as VLAN, RSTP, IGMP, and GARP makes seamless integration of automation networks in existing office networks possible.

The IE Sswitches SCALANCE X-300 and XR300 are designed for use in switching cubicles and cabinets. The X300 models have a robust metal housing with IP30 protection for installation on a DIN rail, an S7-300 standard rail or for wall mounting. The XR300 models are intended for installation in the 19" rack.

All devices have C-PLUG to back up the configuration data and a signaling contact. They are suitable for the use of a redundant power supply.

4.4.8.2 Features and functions

Features

The individual devices have the characteristics shown in the following table:

	X310FE X306-1LD FE X320-1FE X320-3LD FE	X310X X307-3 X307-3LD X308-2 X308-2LD X308-2LH X308-2LH+ X308-2 X302-7EEC X307-2EEC	X308-2M XR324-12M XR324-4M EEC	X308-2M PoE
Modular design			•	•

Gigabit Ethernet		•	•	•
PoE Power over Ethernet				•
Diagnostics LED	•	•	•	•
Redundant power supply	•	•	•	•
On site display (Set button)	•	•	•	•
C-PLUG slot	•	•	•	•

- Suitable / available or according to the specified standard.

Functions

All devices have the following functions:

- PROFINET diagnostics
- SNMP / SNMP-supported diagnostics
- Topology support (LLDP)
- Command Line Interface
- Web-based management
- Configuration with STEP 7
- Ring redundancy including RM functionality
- Standby redundancy
- VLAN (Virtual Local Area Network)
- GVRP (Generic VLAN Registration Protocol)
- STP/RSTP (Spanning Tree Protocol/Rapid Spanning Tree Protocol)
- Passive listening
- IGMP snooping/querier (Internet Group Management Protocol)
- GMRP (Generic Multicast Protocol)
- Broadcast, Multicast, Unicast limiter
- Broadcast blocking
- Access Control List (ACL)
- IEEE 802.1x (Radius)
- Link aggregation

4.4.8.3 Interfaces

Table 4- 7

IE switch	Twisted pair			Fiber-optic cables				
	RJ-45 connectors 10 / 100 Mbps	RJ-45 connectors 10 / 100 / 1000 Mbps	RJ-45 connectors 10 / 100 / 1000 Mbps with PoE	Fiber-optic ports, 100 Mbps	Fiber-optic ports, 1000 Mbps	Max. seg- ment length / km	Multi- mode	Single mode
X304-2FE	4	-	-	2 (SC)	-	5	●	-
X306-1LD FE	6	-	-	1 (SC)	-	26	-	●
X307-3	7	-	-	-	3 (SC)	0.75	●	-
X307-3LD	7	-	-	-	3 (SC)	10	-	●
X308-2	7	1	-	-	2 (SC)	0.75	●	-
X308-2LD	7	1	-	-	2 (SC)	10	-	●
X308-2LH	7	1	-	-	2 (SC)	40	-	●
X308-2LH+	7	1	-	-	2 (SC)	70	-	●
X310	7	3	-	-	-	-	-	●
X310FE	10	-	-	-	-	-	-	-
X320-1FE	20	-	-	1	-	4** / 5***	●	-
X320-3LD FE	20	-	-	1	2 (SC)	5 / 26	●	●
X308-2M	-	4 and *	-	*	*	*	*	*
X308-2M TS	-	4 and *	-	*	*	*	*	*
XR324-12M	-	*	-	-	*	*	*	*
X308-2M PoE	-	-	4	*	*	*	*	*
XR324-4M PoE	-	8 and *	8	*	*	*	*	*
X302-7 EEC	-	2	-	7	-	4** / 5***	●	-
X307-2 EEC	5	2	-	2	-	4** / 5***	●	-

● Suitable / available or according to the specified standard.

* 2 x 100/1000 Mbps slots for 2-port media modules, electrical or optical.

** with a core diameter of 50 µm

*** with a core diameter of 62.5 µm

Article numbers

X304-2FE	2 x 100 Mbps, SC ports, optical (single mode glass), up to max. 26 km 4 x 10/100 Mbps RJ-45 ports, electrical	6GK5304-2BD00-2AA3
X306-1LD FE	1 x 100 Mbps SC port, optical (single mode glass), up to max. 26 km 6 x 10/100 Mbps RJ-45 ports, electrical	6GK5306-1BF00-2AA3
X307-3	3 x 1000 Mbps SC ports optical (multimode glass), up to max. 750 m 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5307-3BL00-2AA3
X307-3LD	3 x 1000 Mbps, SC ports, optical (single mode glass), up to max. 10 km 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5307-3BM00-2AA3
X308-2	2 x 1000 Mbps SC ports, optical (multimode glass), up to max. 750 m 1 x 10/100/1000 Mbps RJ-45 port, electrical, 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5308-2FL00-2AA3
X308-2LD	2 x 1000 Mbps, SC ports, optical (single mode glass), up to max. 10 km 1 x 10/100/1000 Mbps RJ-45 port, electrical, 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5308-2FM00-2AA3
X308-2LH	2 x 1000 Mbps, SC ports, optical (single mode glass), up to max. 40 km 1 x 10/100/1000 Mbps RJ-45 port, electrical, 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5308-2FN00-2AA3
X308-2LH+	2 x 1000 Mbps, SC ports, optical (single mode glass), up to max. 70 km 1 x 10/100/1000 Mbps RJ-45 port, electrical, 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5308-2FP00-2AA3
X310	3 x 10/100/1000 Mbps RJ-45 ports, electrical, 7 x 10/100 Mbps RJ-45 ports, electrical	6GK5310-0FA00-2AA3
X310FE	10 x 10/100 Mbps RJ-45 ports, electrical	6GK5310-0BA00-2AA3
X320-1FE	1 x 100 Mbps SC port optical (multimode, glass), up to max. 5 km 20 x 10/100 Mbps RJ-45 ports, electrical	6GK5320-1BD00-2AA3
X320-3LD FE	1 x 100 Mbps SC port optical (multimode, glass), up to max. 5 km 2 x 100 Mbps SC ports, optical (single mode glass) up to max. 26 km 20 x 10/100 Mbps RJ-45 ports, electrical	6GK5320-3BF00-2AA3
X308-2M	4 x 10/100/1000 Mbps RJ-45 ports, electrical 2 x 10/100/1000 Mbps slots for 2-port media modules, electrical or optical	6GK5308-2GG00-2AA2
X308-2M TS	4 x 10/100/1000 Mbps RJ-45 ports, electrical 2 x 10/100/1000 Mbps slots for 2-port media modules, electrical or optical, with extended temperature range and approval EN50155 for railway applications	6GK5308-2GG00-2CA2
X308-2M PoE	4 x 10/100/1000 Mbps RJ-45 ports with PoE, electrical, 2 x 10/100/1000 Mbps slots for 2-port media modules, electrical or optical	6GK5308-2QG00-2AA2