

## Highlights

#### **Easy Management**

A multilingual Web UI, a Full CLI, and a variety of management features allow the switches to integrate with your existing network

#### Expand your Network

All models include high-speed 4 x 10G SFP+ uplink ports, enabling easy expansion of your network

#### **Power over Ethernet**

Support for IEEE 802.3af/at and a higher PoE budget allow the PoE models in the series to power more devices with greater port density



# DGS-1250 Series Smart Managed Switches

#### Features

#### Green Technology

- Link status detection
- Port and LED shut-off
- System hibernation
- Time-based PoE (PoE models only)

#### **Security Features**

- Access Control Lists (ACLs)
- D-Link Safeguard Engine helps the CPU resist broadcast/multicast/unicast flooding
- Port Security supports up to 64 MAC addresses per port
- ARP Spoofing Prevention
- IMPB Support

#### Intuitive Management

- D-Link Network Assistant (DNA) utility
- Multi-lingual Web UI
- Built-in SNMP MIB for remote NMS (D-View 7.0)
- Full command line support via console port

#### **Advanced Features**

- Static routing
- Surveillance Mode
- Auto Voice VLAN
- Dual software images
- Dual configuration files
- Embedded 6kV surge protection on all Gigabit Ethernet access ports

The D-Link DGS-1250 Series Smart Managed Switches are the latest generation of switches to provide increased Power over Ethernet (PoE) output, high port density, multiple management interfaces, and advanced Layer 2 features. With all of these features combined, the DGS-1250 Series provides a cost-efficient and flexible solution for expanding any business network.

#### **Seamless Integration**

The DGS-1250 Series includes a wide range of port and media types. All models in the DGS-1250 Series feature four 10G SFP+ ports, allowing you to choose the most suitable media type for your requirements. All DGS-1250 Series PoE switches include support for IEEE 802.3af/at and higher power budgets, allowing more PoE devices to be powered by the switch and for devices to be installed in remote locations without immediate access to power outlets. Furthermore, the DGS-1250-28XMP and DGS-1250-52XMP can supply PoE power up to 370 W providing even more power for connected devices.

## **Advanced Features**

The DGS-1250 Series comes equipped with a complete lineup of L2 features, including IGMP snooping, port mirroring, Spanning Tree Protocol (STP), and Link Aggregation Control Protocol (LACP). The IEEE 802.3x Flow Control function allows servers to directly connect to the switch for fast, reliable data transfers. The DGS-1250 Series also supports advanced features such as static routing, which allow network administrators to divide the network into VLANs, increasing network efficiency. Network maintenance features include loopback detection and cable diagnostics. Loopback detection significantly speeds up troubleshooting by automatically detecting and shutting down switching loops. The cable diagnostics feature, designed primarily for administrators and customer service representatives, determines the cable quality and quickly discovers errors, allowing for swift diagnostics and maintenance.



#### Surveillance Mode

The DGS-1250 Series supports Auto Voice VLAN and Surveillance Mode, which allows voice and video traffic to be automatically identified and handled differently than regular network traffic. Auto Voice VLAN detects Voice over IP (VoIP) traffic and automatically segments it from the rest of the network, adding a layer of isolation and allowing Quality of Service (QoS) to be applied. Surveillance Mode detects compatible ONVIF cameras and places them in a surveillance VLAN, allowing a single switch to be used for voice, video, and data, removing the need for dedicated hardware and reducing maintenance costs. Surveillance Mode also includes its own Web UI, making surveillance features easily accessible and simplifying management of your surveillance network.

### **Advanced Access Control**

D-Link's innovative Safeguard Engine helps to protect the switches against traffic flooding caused by malicious attacks. The DGS-1250 Series supports 802.1X port-based authentication, allowing clients to be authenticated through external RADIUS servers. The Access Control List (ACL) feature helps to enhance network security and helps to protect the internal IT network. The DGS-1250 Series also features Address Resolution Protocol (ARP) spoofing prevention, which helps to provide protection from attacks on the network that could allow an intruder to sniff data frames, modify traffic, or bring traffic to a halt altogether by sending fake ARP messages. To help prevent ARP spoofing attacks, the switch uses packet control ACLs to block invalid packets that contain fake ARP messages. The DHCP server screening filters DHCP replies on unauthorized ports to prevent them from being assigned an IP address.

#### **Versatile Management**

The DGS-1250 Series comes with the D-Link Network Assistant (DNA) utility that enables administrators to remotely control their network down to the port level. The D-Link Network Assistant utility furthermore allows customers to easily discover multiple D-Link Smart Managed Switches within the same L2 network segment and display them onscreen for instant access. With this utility, users do not need to change the IP address of their PC. This allows for simultaneous configuration and setup of all discovered devices, including password changes and firmware upgrades. The DGS-1250 Series supports Command Line Interface (CLI) through console port. SNMP is also supported which allows for the central management of network assets, remote configuration, and logging functions.

#### **6kV Surge Protection**

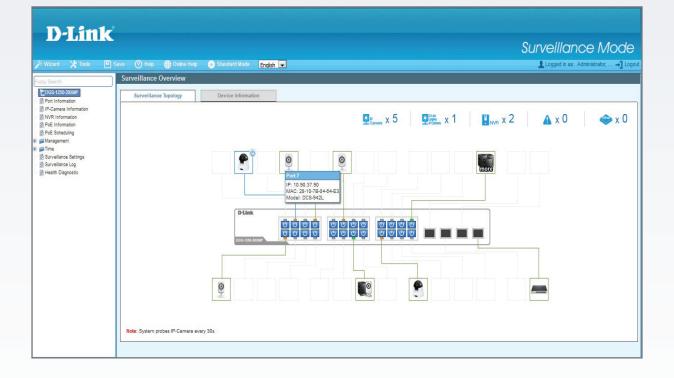
The DGS-1250 Series switches feature built-in 6kV surge protection on all PoE and non-PoE Ethernet access ports. This helps protect the switches against sudden electrical surges such as lightning strikes or unstable electrical current. Built-in 6kV surge protection helps reduce the chances of equipment being damaged from electrical surges, and effectively lowers maintenance costs by minimizing the need for expensive equipment repairs or replacement.

#### **Lifetime Warranty**

D-Link offers a Lifetime Warranty and Next Business Day (NBD) hardware replacement for the DGS-1250 Series Smart Managed Switches to further its commitment to product quality and long-term customer confidence.<sup>1</sup>



## Surveillance Topology Web Interface



## **D-Link Network Assistant (DNA)**

2	 Type / Status	Auth. 🗘	System Name 🗘	IP Address 🗘	MAC	Model 0	SNMP	FW Ver.	SN	System Time	IP Mode	HW Ver.	Protocol Ve
	8	ę	Switch	172.18.190.210	00-00-15-10-02-06	DGS-1510-20	-	1.20.011		2000/01/04 02:08:08	Static	A1	DDP V2 0.2
	•	ę	DGS-1210-08	172.17.7.15	c2-18-8b-0b-af-c3	DGS-1210-08		1.12	sn123456	2012/01/17 00:40:11	DHCP	A1	DDP V2 0.2
	8	ę	DGS-1210-52P/ME	172.17.6.153	28-10-8b-0b-ab-c3	DGS-1210- 52P/ME	-	1.12	sn123456	2012/01/17 00:40:11	DHCP	A1	DDP V2 0.2
P	8	ę	DGS-1210-20/ME	172.17.5.135	28-10-7b-0b-9d-95	DGS-1210-20/ME		1.06	sn123456	2013/01/14 15:37:00	DHCP	B1	DDP V2 0.2
Θ	•	ę	DGS-1210-28X/ME	182.17.7.16	22-18-8b-0b-af-83	DGS-1210- 28X/ME		1.12	sn123456	2012/01/17 00:40:11	DHCP	C1	DDP V2 0.2
	8	ę	DGS-1210-20P/ME	172.17.7.153	28-18-8b-0b-ab-c3	DGS-1210- 20P/ME	-	1.12	sn123456	2012/01/17 00:40:11	DHCP	A1	DDP V2 0.2
Ð	8	ę	DGS-1210-10	172.17.7.113	28-18-8b-0b-af-c3	DGS-1210-10		1.12	sn123456	2012/01/17 00:40:11	DHCP	B1	DDP V2 0.2
9	8	ę		172.18.190.199	1c-7e-e5-29-ed-07	DGS-1500-20		2.50.008	QBH91BC000001	2012/01/08 08:55:41	Static	Al	DDP V2 0.2
)	8	ę	DGS-1210-52/ME	172.17.5.153	28-10-7b-0b-ab-c3	DGS-1210-52/ME		1.12	sn123456	2012/01/17 00:40:11	DHCP	A1	DDP V2 0.2
2	8	ę	DGS-1210-10P/ME	172.17.5.135	f0-7d-68-0f-e4-de	DGS-1210- 10P/ME		0.0.0.0	sn123456	2013/07/30 19:20:09	DHCP	B1	DDP V2 0.2
2	8	ę	DGS-1210-20	172.17.7.111	a8-18-8b-0b-af-c3	DGS-1210-20		1.12	sn123456	2012/01/17 00:40:11	DHCP	Al	DDP V2 0.2
	8	e	DGS-1210-52	172.17.7.11	a2-18-8b-0b-af-c3	DGS-1210-52	-	1.12	sn123456	2012/01/17	DHCP	B1	DDP V2 0.2



Model Number	• DGS-1250-28X-6KV	• DGS-1250-28XMP-6KV	• DGS-1250-52X-6KV	• DGS-1250-52XMP-6KV			
Hardware Version	• A1						
General							
Interfaces	<ul> <li>24 x 10/100/1000BASE-T</li> <li>4 x 10G SFP+ ports</li> </ul>	• 24 x 10/100/1000BASE-T PoE • 4 x 10G SFP+ ports	• 48 x 10/100/1000BASE-T • 4 x 10G SFP+ ports	• 48 x 10/100/1000BASE-T Poe • 4 x 10G SFP+ ports			
Port Standards	<ul> <li>IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)</li> <li>IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)</li> <li>IEEE 802.3u 100BASE-FX 100 Mbps over fiber optic</li> <li>IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)</li> <li>IEEE 802.3z 1000BASE-X 1 Gbps over fiber optic</li> <li>IEEE 802.3az Energy-Efficient Ethernet (EEE)</li> <li>IEEE 802.3x Flow Control</li> <li>IEEE 802.3ae 10 Gigabit Ethernet</li> <li>IEEE 802.3af/at</li> </ul>						
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)						
Duplex Mode		<ul> <li>Full/Half-duplex for 10/100 Mbps</li> <li>Full-duplex for 1000 Mbps</li> </ul>					
Media Interface Exchange		Auto MDI/MDIX adjustme	ent for all twisted-pair ports				
Performance							
Switching Capacity	• 128 Gbps	• 128 Gbps	• 176 Gbps	• 176 Gbps			
Transmission Method	Store-and-forward						
MAC Address Table	• 16K	• 16K • 32K		• 32K			
Static MAC Addresses	• 256		entries				
Maximum 64 Byte Packet Forwarding Rate	• 95.24 Mpps	• 95.24 Mpps	• 130.95 Mpps	• 130.95 Mpps			
Packet Buffer Memory • 12 Mbits		• 12 Mbits	• 16 Mbits	• 16 Mbits			
CPU Memory	• 2G DDR3						
Flash Memory	• 64 MB						
PoE							
PoE Standard		• IEEE 802.3af/at		• IEEE 802.3af/at			
PoE Capable Ports		• 24		• 48			
PoE Power Budget		• 370 W • 30 W per port		• 370 W • 30 W per port			
LEDs							
Power (per device)		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	(				
Link/Active/Speed (per RJ-45 port)	√						
Link/Active/Speed (per 10G SFP+ port)		v	(				



Physical							
Power Input		• 100 to 240 V AC 50/60 Hz i	nternal universal power supply				
Maximum Power Consumption	• 30.6 W/100 V • 29.6 W/240 V	<ul> <li>PoE On:</li> <li>455.1 W/100 V</li> <li>431.5 W/240 V</li> <li>PoE Off:</li> <li>38.6 W/100 V</li> <li>39.1 W/240 V</li> </ul>	• 51 W/100 V • 51.2 W/240 V	<ul> <li>PoE On:</li> <li>467.3 W/100 V</li> <li>443.6 W/240 V</li> <li>PoE Off:</li> <li>56.4 W/100 V</li> <li>57.2 W/240 V</li> </ul>			
Standby Power Consumption	• 8.7 W/100 V • 9.3 W/240 V	• 18.5 W/100 V • 19 W/240 V	• 23 W/100 V • 23.5 W/240 V	• 27.8 W/100 V • 28.4 W/240 V			
Surge Protection	6kV surge protection on all Ethernet access ports						
Acoustics	• Max: 47.6 dB(A) • Min: 33.2 dB(A)	• Max: 50.8 dB(A) • Min: 42.0 dB(A)	• Max: 50.7 dB(A) • Max: 39.0 dB(A)	• Max: 51.2 dB(A) • Min: 43.0 dB(A)			
Heat Dissipation	• 104.346 BTU/hr (100 V) • 100.936 BTU/hr (240 V)	<ul> <li>PoE On:</li> <li>1551.891 BTU/hr (100 V)</li> <li>1471.415 BTU/hr (240 V)</li> <li>PoE Off:</li> <li>131.626 BTU/hr (100 V)</li> <li>133.331 BTU/hr (240 V)</li> </ul>	• 173.91 BTU/hr (100 V) • 174.592 BTU/hr (240 V)	<ul> <li>PoE On:         <ul> <li>1593.493 BTU/hr (100 V)</li> <li>1512.676 BTU/hr (240 V)</li> </ul> </li> <li>PoE Off:         <ul> <li>192.324 BTU/hr (100 V)</li> <li>195.052 BTU/hr (240 V)</li> </ul> </li> </ul>			
MTBF	• 743,482.45 hours	• 463,430.16 hours	• 589,984.72 hours	• 309,053.10 hours			
Operating Temperature	• -5 to 50°C (23 to 122°F)						
Storage Temperature	• -20 to 70°C (-4 to 158°C)						
Operating Humidity	• 0% to 95% relative humidity						
Storage Humidity		• 0% to 95% r	elative humidity				
Dimensions (L x W x H)	• 440 x 140 x 44 mm (17.32 x 5.51 x 1.73 in)	• 440 x 250 x 44 mm (17.32 x 9.84 x 1.73 in)	• 440 x 210 x 44 mm (17.32 x 8.27 x 1.73 in)	• 440 x 250 x 44 mm (17.32 x 9.84 x 1.73 in)			
Weight	• 1.75 kg (3.86 lbs)	• 3.46 kg (7.63 lbs)	• 3.01 kg (6.63 lbs)	• 3.85 kg (8.49 lbs)			
Certifications							
Safety		• CB, UL	, BSMI, CCC				
EMI		CE Class A, VCCI Class	ss A, FCC Class A, IC, BSMI				
Software							
MAC Address Table <ul> <li>16K entries</li> <li>32K entries (DGS-1250-52X/5</li> <li>IGMP Snooping</li> <li>IGMP v1/v2/v3 Snooping</li> <li>Supports 256 IGMP groups</li> <li>Supports at least 64 static mu</li> <li>IGMP per VLAN</li> <li>Supports IGMP Snooping Qu</li> <li>Loopback Detection</li> <li>802.3ad Link Aggregation:</li> <li>Supports maximum 8 groups</li> <li>LLDP</li> <li>LLDP</li> <li>LLDP-MED</li> <li>Jumbo Frame</li> <li>Up to 12,000 bytes</li> </ul>		ulticast addresses	<ul> <li>Spanning Tree Protocol</li> <li>802.1D STP</li> <li>802.1W RSTP</li> <li>802.1s MSTP</li> <li>Flow Control</li> <li>802.3x Flow Control</li> <li>HOL Blocking Prevention</li> <li>Port Mirroring</li> <li>One-to-One</li> <li>Many-to-One</li> <li>Supports Mirroring for Tx/Rx/Both</li> <li>Multicast Filtering</li> <li>Forwards all registered groups</li> <li>Filters all unregistered groups</li> <li>Configurable MDI/MDIX</li> <li>MLD snooping v1/v2 awareness (256 groups)</li> <li>PD-Alive</li> <li>DDM support for optics</li> </ul>				



VLAN	<ul> <li>802.1Q</li> <li>VLAN Group</li> <li>Max. 4094 static VLAN groups</li> <li>Configurable VID from 1 - 4094</li> <li>Asymmetric VLAN</li> </ul>	<ul> <li>Auto Voice VLAN</li> <li>Max. 10 user-defined OUI</li> <li>Max. 8 default OUI</li> <li>Auto Surveillance VLAN</li> </ul>
Quality of Service (QoS)	<ul> <li>802.1p Quality of Service</li> <li>8 queues per port</li> <li>Queue Handling</li> <li>Strict</li> <li>Weighted Round Robin (WRR)</li> <li>Bandwidth Control</li> <li>Port-based (ingress/egress, min granularity 10/100/1000 is 16 Kbps)</li> </ul>	<ul> <li>QoS based on:</li> <li>802.1p priority queues</li> <li>DSCP</li> <li>MAC address</li> <li>EtherType</li> <li>IP address</li> <li>Protocol type</li> <li>ToS</li> <li>IP preference</li> <li>IPv6 Traffic Class</li> <li>TCP/UDP port</li> </ul>
L3 Features	<ul> <li>IP interface</li> <li>Supports 4 interfaces</li> <li>IPv6 Neighbor Discovery (ND)</li> </ul>	<ul> <li>Static routing</li> <li>124 IPv4 static route entries</li> <li>50 IPv6 static route entries</li> </ul>
Access Control List (ACL)	<ul> <li>Max. 50 access lists</li> <li>Max. 768 rules shared by IPv4, MAC, and IPv6</li> <li>Each rule can only be associated with a single port</li> <li>ACL based on <ul> <li>MAC address</li> <li>802.1p priority mask</li> <li>VID mask</li> <li>Source/destination MAC address mask</li> <li>EtherType mask</li> <li>IP address</li> <li>Source/destination IP address mask</li> <li>DSCP mask</li> <li>Protocol type mask</li> <li>TCP/UDP port number mask</li> </ul> </li> </ul>	<ul> <li>IPv6 address</li> <li>Source/destination IP address mask</li> <li>DSCP mask</li> <li>Protocol type mask</li> <li>TCP/UDP port number mask</li> <li>IPv6 traffic class mask</li> </ul>
Security Features	<ul> <li>Broadcast/Multicast/Unicast Storm Control</li> <li>D-Link Safeguard Engine</li> <li>Traffic segmentation</li> <li>SSH v2</li> <li>TLS v.1.2</li> <li>DoS attack prevention</li> <li>802.1X Port-based Access Control</li> <li>Port Security <ul> <li>Supports up to 64 MAC addresses per port</li> <li>ARP Spoofing Prevention</li> <li>Max. 127 entries</li> </ul> </li> </ul>	<ul> <li>DHCP Server Screening</li> <li>IP-MAC-Port Binding (Smart Binding)</li> <li>ARP Inspection <ul> <li>Max. 64 entries</li> <li>IPv4 Inspection</li> <li>Max. 127 entries</li> <li>IPv6 Inspection</li> <li>Max. 63 entries</li> <li>DHCP Snooping</li> <li>Max. 512 entries</li> </ul> </li> <li>AAA support for RADIUS/TACACS+</li> <li>Password encryption</li> <li>MAC authentication</li> </ul>
AAA	<ul> <li>802.1X Authentication</li> <li>Supports local/RADIUS database</li> <li>Supports port-based access control</li> <li>Supports host-based access control</li> <li>Supports EAP, OTP, TLS, TTLS, PEAP</li> </ul>	<ul> <li>IPv6 RADIUS server</li> <li>Support MD5 authentication</li> <li>Max. 128 entries when using local database</li> </ul>
OAM	Cable diagnostics	Factory reset
Management	<ul> <li>Web-based GUI</li> <li>D-Link Network Assistant</li> <li>Full CLI</li> <li>Telnet Server</li> <li>TFTP Client</li> <li>Configurable MDI/MDIX</li> <li>SNMP <ul> <li>Supports v1/v2c/v3</li> <li>SNMP Trap</li> <li>Backup/upgrade firmware</li> <li>Smart Wizard</li> <li>Upload/download configuration file</li> <li>BootP/DHCP Client</li> </ul> </li> </ul>	<ul> <li>System Log</li> <li>Max. 500 log entries</li> <li>SNTP</li> <li>ICMP v6</li> <li>IPv4/v6 Dual Stack</li> <li>DHCP Auto Configuration</li> <li>Time setting <ul> <li>SNTP</li> </ul> </li> <li>RMONv1</li> <li>Trusted host</li> <li>Dual image</li> <li>Dual configuration</li> </ul>

Green V3.0 Technology	<ul> <li>Power Saving by:</li> <li>Link Status</li> <li>Time-based PoE: PoE ports can be turned on/off by port or system through schedule</li> </ul>	<ul> <li>System hibernation</li> <li>Port shut off</li> <li>Cable length detection</li> </ul>		
MIBs	<ul> <li>RFC1212 Concise MIB Definitions</li> <li>RFC1213 MIBII</li> <li>RFC1215 MIB Traps Convention</li> <li>RFC1493 Bridge MIB</li> <li>RFC1157, RFC2573, RFC2575, RFC2576 SNMP MIB</li> <li>RFC1442, RFC1901, RFC1902, RFC1903, RFC1904, RFC1905, RFC1906, RFC1907, RFC1908, RFC2578, RFC3418 SNMPv2 MIB</li> <li>RFC271, RFC1757, RFC2819 RMON MIB</li> <li>RFC2021 RMONv2 MIB</li> <li>RFC1398, RFC1643, RFC1650, RFC2358, RFC2665 Ether-like MIB</li> </ul>	<ul> <li>RFC2674 802.1p MIB</li> <li>Interface Group MIB</li> <li>RFC2618 RADIUS Authentication Client MIB</li> <li>RFC4022 MIB for TCP</li> <li>RFC4113 MIB for UDP</li> <li>RFC2389 MIB for Diffserv.</li> <li>RFC2620 RADIUS Accounting Client MIB</li> <li>Private MIB</li> <li>PoE MIB</li> <li>DDP MIB</li> <li>LLDP-MED MIB</li> </ul>		
RFC Standards	<ul> <li>RFC791 IP</li> <li>RFC768 UDP</li> <li>RFC793 TCP</li> <li>RFC792 ICMPv4</li> <li>RFC2463, RFC4443 ICMPv6</li> <li>RFC826 ARP</li> <li>RFC1321, RFC2284, RFC2865, RFC2716, RFC3580 Extensible Authentication Protocol (EAP)</li> </ul>	<ul> <li>RFC2573 SNMP Applications</li> <li>RFC2461, RFC4861 Neighbor Discovery for IPv6</li> <li>RFC2462, RFC4862 IPv6 Stateless Address Auto-configuration (SLAAC)</li> <li>RFC2464 IPv6 over Ethernet and definition</li> <li>RFC2469 IPv6 Addressing Architecture</li> <li>RFC2893, RFC4213 IPv4/IPv6 dual stack function</li> </ul>		
Order Information				
DGS-1250-28X-6KV	24 Ports 10/100/1000 Mbps + 4 Ports 10G SFP+ Smart Managed Sw	itch		
DGS-1250-28XMP-6KV	24 Ports 10/100/1000 Mbps PoE + 4 Ports 10G SFP+ Smart Managed Switch			
DGS-1250-52X-6KV	48 Ports 10/100/1000 Mbps + 4 Ports 10G SFP+ Smart Managed Switch			
DGS-1250-52XMP-6KV	48 Ports 10/100/1000 Mbps PoE + 4 Ports 10G SFP+ Smart Managed	d Switch		
Optional SFP Transo	ceivers			
DGS-712	1000BASE-T copper			
DEM-310GT	1000BASE-LX, single-mode, 10 km			
DEM-311GT	1000BASE-SX, multi-mode, 550 m			
Optional SFP+ Tran	sceivers			
DEM-410T	10GBASE-T SFP+ transceiver, 30 m			
DEM-431XT	10GBASE-SR SFP+ transceiver (without DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF			

<sup>1</sup>Limited lifetime warranty is available in the USA only. The warranty is void when not purchased from an authorized US D-Link reseller. Please visit us.dlink.com for a list of authorized US resellers.

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# For more information

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