

# Nile Zero Trust Fabric Secure Switch Portfolio



## Overview

Nile delivers a family of high-performance access and distribution switches engineered for consistent, high-performance wired connectivity across many environments.

Each switch operates within a standardized, centrally managed architecture that eliminates configuration drift and reduces operational overhead. Automated provisioning, continuous verification, and policy-driven enforcement are delivered through a Digital Twin framework, which is part of Nile's autonomous operations.

Nile's AI-powered Services Cloud, along with the Nile Portal, a unified management and visibility console, provide insights, software lifecycle automation, and outcomes-based performance assurance.

Designed for enterprise-class performance in offices, healthcare facilities, classrooms, manufacturing, warehouse and industrial environments, and public venues, the portfolio includes high-performance gigabit and multigigabit switches. Each switch enforces Zero Trust authentication before IP assignment, with MACsec-secured uplinks.

## Secure NaaS Architecture

Nile switches operate exclusively within Nile's secure Network-as-a-Service. This eliminates traditional on-device configuration and manual tuning—delivering a simplified IT operating model for predictable, reliable connectivity across all locations.

## Architectural Elements



### Zero Trust Security

Self-configuring switches with no console, SSH, or device-level configuration required. All endpoints and fabric elements must authenticate before passing traffic. Zero Trust per-endpoint isolation replaces VLANs to eliminate lateral movement immediately reducing risk and traditional switch vulnerabilities.



### Autonomous Operations

Focusing on the entire lifecycle from Day-0 to Day 2 operations, AI-driven telemetry and cloud-based Digital Twin continuously optimize traffic forwarding, detect deviations, and trigger corrective actions without manual intervention.



### Cloud-Delivered Services

Configuration, software lifecycle, policy enforcement, and performance measurements are orchestrated centrally—ensuring consistent outcomes across all sites while facilitating easy change management without truck rolls.

## Switch Portfolio Features

### Performance

Gigabit and Multigigabit switch ports with high-bandwidth uplinks (10G, 25G, 40G, and 100G) for high performance and low latency.

### Power & Throughput

High-capacity stacking with up to 200 Gbps throughput. Includes PoE and PoE++ (30W, 60W, 90W).

### Always-On Guarantee

Redundant PSUs, hot-swappable fans, front-to-back airflow, and ring-based stacking provide continuous operation without complexity.

## Autonomous Operations

Software-defined orchestration, continuous integrity validation, and automated configuration ensure stable performance as networks scale and endpoints move across the environment.

## Built-in Zero-Trust

Each port enforces authentication and authorization before assigning an IP address. Includes secure boot, TPM, and mutual device authentication with MACsec-enabled uplinks available on select models.

## The Nile Difference

### Unified Operating Model

To enhance operational efficiency, every switch runs the same standardized firmware version, ensuring predictable performance, telemetry behavior, and operating characteristics across all environments.

### Secure Out of the Box

Default MACsec, console-less design, secure BLE onboarding, and tamper-proof cloud control establish a Zero Trust-aligned posture.



### Zero-Config Deployment

QR-code activation via the Nile Nav app eliminates traditional requirements. Ensures error-free deployment with deviation detection at install.

### Guaranteed Performance

Financially-backed capacity and availability SLA via intelligent monitoring and autonomous optimization.

## Technical Specifications

Attribute	NSW100	NSW200	NSW250	NSW1000	NSW1500
					
Role	Compact Access	Access	Compact Access/ Distribution Multigigabit	Access Multigigabit/ Distribution Multigigabit	Distribution Multigigabit
Access Ports	24×1G	48×1G	16× 1G, 2.5G, 5G	48×1G, 2.5G, 5G	Distribution Multigigabit
Uplinks	6×10G	6×10G	4×10/25G + 2×100G	4×10/25G + 2×100G	28 × 10/25GE SFP28 3× 25/40/100 GE SFP28 4× 1/10GE SFP+ 1 × 10/40GE QSFP+
Fabric Ring	-	-	200 Gbps	200 Gbps	
PoE Options	30W/90W	30W/90W	60W	60W	N/A
Security	Zero Trust, TPM, Secure Boot	Zero Trust, TPM, Secure Boot	Zero Trust, MACsec, TPM, Secure Boot	Zero Trust, MACsec, TPM, Secure Boot	Zero Trust, MACsec, TPM, Secure Boot
Regulatory and Compliance	Core Global Safety and EMC Certifications FCC, CE, IC, CSA, plus several country specific certifications available				

## Management and Operations



### Installation - Nile Nav

Mobile-app onboarding and guided activation for faster, deviation-free deployment by a Nile-qualified technician.



### Operations - AI Command Center

Autonomous monitoring, optimization, and Digital Twin validation for lean IT operations.



### Visibility - Nile Portal

Easily viewable switch status, inventory, performance monitoring, and required troubleshooting data.

## Switch Capabilities and Details

### ✓ Zero-Trust Access, Segmentation, And Security Telemetry

Identity-based access control, micro-segmentation, and security-relevant visibility.

- **Unified Zero-Trust Fabric**

VLAN-free architecture that automatically isolates individual devices and eliminates lateral movement.

- **Integrated Security Telemetry**

Flow-level visibility and events that feed threat modeling, anomaly detection, and micro-segmentation posture.

- **Port-Level Identity & Policy Enforcement**

Each wired client lands in the right micro-segment based on identity, with no manual ACLs/VLANs/NAC complexity.

- **Secure Boot & Chain-of-Trust Firmware**

Ensures only authorized software runs on the switch, protecting hardware integrity in sensitive environments.

## ✓ Cloud-Native Fabric Operations And Lifecycle Automation

Switch deployment, management and service updates.

- **Cloud-Native, Tamper-Proof Management**

Secure, cloud-enforced image and config; no CLI, local management, and configuration drift.

- **Automated Software Lifecycle (Secure Updates)**

Fully managed, tested update pipeline via Nile Cloud; eliminates manual upgrades and keeps software consistent.

- **Zero-Touch Activation**

Switches self-onboard when powered and uplinked; Nile Cloud applies identity, segmentation, and service policies automatically.

- **Simplified Fabric Topology (No MLAG, No STP)**

Fabric forwarding is deterministic and self-orchestrated; removes operational overhead from MLAG, STP, and VLAN requirements.

## ✓ Wired Performance, Capacity, And Power

Physical ports, throughput, PoE budgets, and non-blocking forwarding.

- **All-in-One Fabric Access Switch (Wired Aggregation + Edge Control)**

Eliminates separate edge GW/controller appliances; handles policy enforcement, aggregation, segmentation, and telemetry in the Nile Zero Trust Fabric.

- **Multi-Gigabit Access Ports**

High-density multigig for IoT, cameras, workstations, and Wi-Fi 6/6E/7 AP backhaul without port-speed bottlenecks.

- **Up to 90W PoE++ (802.3bt)**

Full-power PoE++ per port for APs/cameras/IoT, simplifying cabling and external power bricks.

- **25G/100G Uplink Ports (Fabric Distribution Connectivity)**

High-bandwidth uplinks for spine/leaf or access-distribution connectivity, enabling lossless fabric forwarding.

- **Line-Rate Switching With Non-Blocking Architecture**

Predictable performance under heavy load, critical for dense IoT and high-bandwidth uplinks.

## ✓ Autonomous monitoring, assurance, and digital twin

Continuous telemetry, AI-driven health checks, and predictive validation of the wired fabric.

- **Always-On Telemetry Collection**

Per-port/per-flow metrics into the Nile Digital Twin for anomaly detection, performance guarantees, and proactive preventive actions.

- **Digital Twin Monitoring & Health Validation**

Continuous validation of switch state, cabling, ports, and power against the Digital Twin to autonomously prevent outages.

- **AI-Driven Wired Monitoring, Incident Detection, Alerting and Remediation**

Analyzes port stability, errors, power draw, link health, and device behavior to catch cable faults, speed mismatches, and client anomalies quickly.

- **Fan & Temperature Monitoring with Predictive Health**

Environmental signals feed AI Command Center to pre-empt overheating, blocked airflow, or fan issues before they affect service.

## Warranty & Support

All Nile infrastructure is supported by 24×7 AI-driven cloud monitoring, proactive incident detection, and automated remediation through Nile's autonomous operations and AI Command Center. An optional performance-based subscription adds a financially backed performance guarantee. Hardware replacement options include expedited RMAs aligned to the selected tier and region.

Ready to Get Started?

[Request a Demo](#)